# **Product Requirements Document: P3 Situational Learning Sandbox - Practice Module**

## **1. Introduction**

This document outlines the requirements for the "Practice" module of the P3 Situational Learning Sandbox, an AI-driven platform for skill development. The Practice module is the core of the platform, where learners engage in dynamic, AI-powered role-play simulations to apply skills learned in the Prepare phase and receive real-time, personalized feedback.

**Project Goal:** To create an immersive and effective practice environment where learners can rehearse, make mistakes, and improve their soft skills in a safe, judgment-free setting.

**Target Audience:** Vocational learners and professionals in Southeast Asia, as outlined in the core platform PRD.

## **2. Core Features**

### **2.1. Scenario Selection & Briefing**

* **Feature:** Scenario Selection.
  + **Description:** The user can select a simulation scenario from a dropdown menu. The scenarios should be categorized based on industry (e.g., Retail, Sales), skill (e.g., Negotiation, Customer Service), or learning journey. For the initial phase, these scenarios will be pre-written and stored in the database. A future enhancement will allow for dynamic, LLM-generated scenario options based on a general topic or user input.
* **Feature:** Pre-Simulation Briefing.
  + **Description:** Before a simulation begins, the system will present a dedicated screen with a scenario briefing. This briefing, generated by the LLM, will outline the context, the user's persona, and the primary AI character. A "Start Simulation" button will initiate the session.

### **2.2. Interactive Simulation Engine**

* **Feature:** Dynamic Role-Play with Adaptive Characters.
  + **Description:** The user engages in a real-time, text-based conversation with an AI. The AI will act as a specific persona (e.g., Hiring Manager, Upset Customer) and will dynamically adapt its responses based on the user's input, maintaining the context and progressing the simulation logically.
* **Feature:** Conversation Log.
  + **Description:** The main interface will be a scrollable chat log, displaying the full history of the conversation between the user and the AI. AI responses will be visually distinct from user inputs with different colored chat bubbles, alignment (AI on the left, user on the right), and a small avatar displayed next to the AI's responses. A timestamp will be included with each message to provide a clear timeline of the conversation.
* **Feature:** User Input & Real-Time Feedback.
  + **Description:** A large, clear text input box will allow the user to type their responses. As the conversation progresses, the system will provide real-time, non-intrusive feedback cues next to user inputs. This feedback will offer concise, actionable suggestions (e.g., "Good use of active listening!"). The system will use the LLM to analyze the user's sentiment, tone, and intent in real-time to determine when and what type of feedback to provide.
* **Feature:** Session Control.
  + **Description:** The user will have a "Try Again" button to "rewind" the simulation to the immediately preceding AI response. This feature is intended for the learning aspect of the module, enabling users to experiment without consequence. When used, the old conversation path will be discarded, and a new one will begin from the point of the rewind. An "End Simulation" button will be available to conclude the session at any time.

### **2.3. Assessment & Feedback**

* **Feature:** Assessment Criteria.
  + **Description:** At the end of the simulation, the user's performance will be evaluated based on the following seven criteria, each rated on a scale of 1 to 5:
    1. Relevance
    2. Structured (STAR method)
    3. Specific
    4. Honest
    5. Confident (but not arrogant)
    6. Aligned with the role
    7. Outcome-Oriented

*Note:* To ensure consistency and fairness for subjective criteria like "Honest" and "Confident (but not arrogant)," the LLM will be provided with specific, pre-defined rubrics and definitions for each criterion during the assessment process.

* **Feature:** Quantitative and Qualitative Feedback.
  + **Description:** A detailed session summary will be provided upon completion. This report will include:
    - The quantitative scores for each of the seven assessment criteria.
    - Descriptive, qualitative feedback and suggestions for improvement, generated by the LLM based on the user's entire session transcript.
* **Feature:** Session History & Replay.
  + **Description:** The system will save each completed simulation session. Users can access a "Session History" to replay the conversation. Options to download the conversation as a text transcript or an audio recording (if using voice-based input/output) will be available.

### **2.4. Future Enhancements**

* Feature: "What If" Scenario Exploration.
  + Description: This feature will be considered for a future release. It would allow users to explore different conversation branches after a simulation has concluded, providing a deeper understanding of the impact of their choices.

## **3. Technology & Architecture**

* **AI/Cloud Services:** We will continue to leverage AWS Bedrock with the Claude 3.5 Sonnet model as the primary LLM for scenario generation, dynamic responses, and feedback. We will also integrate a SEA-lion LLM to handle the specific cultural and linguistic nuances of Southeast Asia, serving as the "Cultural Intelligence Engine."
* **Database:** Raw interaction data (user inputs, AI responses, timestamps) will be captured and stored for future analysis, as per the core platform PRD.
* **Front-end:** The Practice module will be implemented using the existing React 18, Tailwind CSS, and Shadcn/ui stack.
* **API:** A new set of RESTful API endpoints will be created to manage simulation sessions, handle real-time interactions, and process post-session assessment data.

## **4. Success Criteria**

* The module can successfully generate and run a variety of role-play simulations.
* The AI's responses are consistently contextually appropriate and logical.
* Pilot users find the real-time feedback and final assessment valuable and actionable.
* The platform can handle at least 10 concurrent users without significant performance degradation (e.g., average AI response time < 3 seconds).
* All user interactions and feedback are captured for data analytics.