

# Reflecta AI System: User-Centered AI Design Plan

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October 16, 2025

## Abstract

The goal of this assignment is to develop a plan for integrating user-centered design principles into the development of the “Reflecta” AI system project. This plan outlines how we will engage with potential users (students and counselors) to understand their needs, behaviors, and challenges to ensure Reflecta is effective, useful, and ethically designed.

## 1. Part 1: Target Users

### 1.1 Overview

**Reflecta** is a user-centered AI system designed to support student self-reflection and assist school counselors managing heavy caseloads. The system serves two interconnected user groups whose experiences inform its dual functionality: student journaling and counselor prioritization.

### 1.2 Target Population (User Group)

#### 1.2.1 Students

- **Definition/Background:** Students within academic environments seeking a private, accessible tool to manage well-being, track personal growth (academic, emotional, physical), and cultivate self-awareness. This group includes individuals who may find traditional counseling intimidating or difficult to access. Many students struggle with traditional journaling methods, which can feel unstructured and make it difficult to track progress or identify meaningful patterns over time.
- **Goals:** Foster personal growth through structured self-reflection, achieve goals using tools like Mandal-Art, and engage with a platform that makes introspection tangible and trackable.
- **Technical Skills:** Moderate digital literacy; familiar with mobile or web apps but often unaccustomed to structured journaling tools.
- **Potential Challenges:** Struggling with traditional journaling and hesitation to access human support often hinders reflection and self-awareness. Reflecta addresses these challenges by digitizing and organizing the journaling process, making progress visible and engaging. By incentivizing traditional-style journaling through digital means, the platform provides deeper insights into emotional and behavioral patterns. This allows counselors or well-being staff to better understand who may need support most urgently, enabling early intervention and personalized care.

#### 1.2.2 School Mental Health Counselors and Psychologists

- **Definition/Background:** Professionals responsible for the well-being of a large student population, overseeing large caseloads with limited time for proactive student outreach.

- **Goals:** Effectively prioritize their attention; offer timely support to students who may be at risk; manage large caseloads proactively.
- **Technical Skills:** Moderate to advanced comfort with dashboards or case management systems.
- **Potential Challenges:** Difficulty proactively identifying students who may be struggling silently due to large caseloads and the need for confidentiality in data-driven alerts.

### 1.2.3 Justification

The Reflecta project is specifically designed to address both sets of needs: making daily reflection accessible for students, while simultaneously providing a privacy-first mechanism to help counselors prioritize care for those most in need. Input from both groups is critical to ensure that the user experience fosters student autonomy and comfort, while the counselor alert system is genuinely useful and ethically sound. Including both users ensures co-design across the entire interaction chain—reflective journaling, pattern analysis, and counselor response.

## 2. Part 2: User Research and Engagement Plan

The objective of this section is to detail the methods utilized to gather insights from our target users—Students and School Mental Health Counselors—to understand their needs, behaviors, and challenges, and thereby inform the necessary features for Reflecta. We will utilize a mixed-method approach, leveraging interviews and digital traces to ensure the AI tool is effective, useful, and ethically designed.

### 2.1 Research Method: User Interviews and Focus Groups (Target: Students and Counselors)

We will conduct interviews and focus groups targeting both key user groups to determine Reflecta’s necessary features.

#### 2.1.1 Student Focus Groups/Interviews

This research is necessary to validate the user experience and, critically, the comfort level with the privacy features. Since Reflecta is built on the core principle of user control and privacy (students must explicitly opt-in for the counselor alert feature), we must ensure the interface is intuitive and trusted.

- **Expected Information:** We expect to gather feedback on the clarity and intuitiveness of the conversational journaling interface, the usability of the Mandal-Art goal planning feature, and the level of comfort and trust regarding the opt-in proactive well-being support.

#### 2.1.2 Counselor and Expert Interviews

We will conduct one-on-one interviews with School Mental Health Counselors and Psychologists. Detailed discussions are necessary to collect high-level, specialized feedback and refine the features.

- **Expected Information:** The information gathered will be essential for building the functional backbone of the system, including:
  - Detailed criteria for analyzing text patterns within private diary entries for signs of “significant distress” (**Risk Detection**).

- Ethical guidelines for implementing non-diagnostic suggestions, known as “AI Nudges,” ensuring the system acts as a bridge, encouraging students to seek professional human support.
- Requirements for the format and content of the confidential, high-level summary that will be sent to the counselor. This summary must adhere to the principle that data shared is masked and summary-based to protect sensitive details.

## 2.2 Research Method: Collecting Digital Traces of Users (Target: School Counseling Center Google Reviews)

Analyzing existing school counseling center Google reviews falls under the category of Collecting digital traces of Users.

- **Method Justification:** This method will be employed to identify the existing problems and pain points students encounter when attempting to seek support, reinforcing the need for Reflecta. Many students may find traditional counseling intimidating or difficult to access, and analyzing digital feedback will provide insights into these current challenges that the proposed AI tool is designed to address.
- **Expected Information:** We expect to uncover current behaviors, needs, and expectations related to the problem the AI system addresses, such as issues with accessibility, waiting times, or concerns regarding privacy and confidentiality at existing counseling centers.

## 3. Part 3: Data Collection Instruments (Interview Questions)

### 3.1 A.1. Interview Questions for School Mental Health Counselors

#### 3.1.1 Purpose and Target Goal

- **Purpose:** Understand the practical, ethical, and operational needs of counselors managing large caseloads. Insights will refine Reflecta’s risk detection, alert design, and summary presentation to improve proactive, privacy-preserving student support.
- **Target Goal:** Refine risk detection criteria and design ethically actionable counselor-facing summaries that enhance support without compromising confidentiality.

### Section 1: Current Workflow and Identification Practices

1. Can you describe how you currently identify students who may be struggling silently or at risk, particularly when navigating large caseloads?
2. What tools, data, or interactions do you rely on most to recognize early signs of student distress?
3. Which specific cues—behavioral, linguistic, or relational—signal that a student needs proactive outreach rather than routine monitoring?

### Section 2: Information and Alert Design

4. If Reflecta were to send an AI-generated alert about a student, what are the three most essential pieces of information you would need to facilitate an effective follow-up?
5. Reflecta’s summaries are designed to be masked and aggregated to protect privacy. How can these summaries remain actionable and useful while still maintaining confidentiality?

6. What level of detail (e.g., general emotional patterns, frequency of concerning phrases, notable shifts over time) would be most helpful for decision-making?
7. How frequently—and in what format—would you prefer to receive well-being summaries (e.g., weekly digest, threshold-triggered alerts, or on-demand dashboard)?
8. Imagine Reflecta flags three students at once—how would you decide which to contact first?

### **Section 3: Ethical and Practical Safeguards**

9. What ethical guidelines should govern an AI system that provides non-diagnostic suggestions or alerts about potential distress?
10. What risks or unintended consequences should Reflecta avoid when generating or sharing well-being summaries?
11. How can Reflecta best complement your professional judgment—supporting, rather than replacing, the human relationship between counselor and student, while keeping the student’s overall well-being central?

## **3.2 A.2. Interview Questions for Psychologists**

### **3.2.1 Purpose and Target Goal**

- **Purpose:** Understand how psychologists conceptualize and respond to student well-being data to refine Reflecta’s risk detection, alerting, and summary design.
- **Target Goal:** Define ethically sound, psychologically valid, and practically useful criteria for risk assessment and alert design in Reflecta’s well-being ecosystem.

### **Section 1: Context & Current Practice**

1. Can you describe how you currently identify which students or patients may need immediate attention or support?
2. What are the biggest challenges you face in managing a large caseload or monitoring multiple individuals at once?

### **Section 2: Understanding and Defining Risk Levels**

3. When assessing emotional or linguistic cues that indicate distress, what specific patterns or tone shifts help you distinguish between immediate and potential risk—and how do contextual factors like exams, life transitions, or other stressors influence your interpretation of those signals?
4. What kinds of recurring or emerging patterns would you want Reflecta to track or highlight—and how consistent or frequent would they need to be for you to consider someone high risk versus potential risk?
5. Can you share a recent situation where you had to decide between immediate intervention and continued monitoring—and what guided that decision?

### **Section 3: Data, Summaries, and Decision Support**

6. What contextual factors (academic stress, social issues, major life events) should always be included in a well-being summary?

7. How much detail is appropriate in a summary without breaching privacy—for example, should it show general trends or specific excerpts?
8. How important are time-based trends (e.g., “increased sadness or isolation over 2 weeks”) compared to one-time summaries for understanding student well-being—and how should Reflecta present this information to balance clarity and nuance to help you interpret risk most effectively without oversimplifying it? For example, through predefined risk levels, narrative explanations, or visual indicators like charts or trendlines.

#### **Section 4: Ethical, Privacy, and Boundary Considerations**

9. What boundaries should guide Reflecta’s use and sharing of personal well-being data—for example, what data use feels acceptable versus invasive, and who should have permission to access summaries or alerts?
10. From a psychological and ethical standpoint, how should Reflecta define and maintain clear boundaries between offering supportive nudges or insights and crossing into prescriptive or therapeutic territory?
11. How can Reflecta ensure its well-being summaries are used ethically for care prioritization rather than surveillance—and, relatedly, what responsibilities come with labeling someone at risk to ensure that information is communicated without stigma or harm?
12. Under what circumstances is it appropriate for Reflecta to send an alert to a counselor without explicit student consent, if at all, balancing potential benefits and risks?

#### **Section 5: AI Trust, Validation, and Effectiveness**

14. How comfortable would you be relying on AI-generated summaries to help prioritize support? What kinds of validation or research evidence would you need—and what specific qualities, such as transparency, expert oversight, or evidence-based reasoning—would help you personally trust Reflecta’s AI-generated insights in real-world use?
15. What outcomes or metrics would best demonstrate Reflecta’s positive impact on both student well-being and your professional workflow?

#### **Section 6: Psychological and Reflective Design Feedback**

17. From your perspective, what psychological principles or design approaches should guide Reflecta’s journaling system to foster authentic self-awareness and emotional growth, rather than superficial engagement or reflection done just to ‘get results’?
18. What potential opportunities and risks do you see in integrating AI into reflective or therapeutic tools? (For example, how AI might influence or bias a user’s self-perception)

#### **Closing Questions**

19. Are there any other features, safeguards, risks, or unintended consequences or comments that we might not have discussed for an AI-assisted well-being system?

### **3.3 B. Interview Questions for Students**

#### **3.3.1 Purpose and Target Goal**

- **Purpose:** Explore students’ current reflection habits, motivation, and privacy expectations to ensure Reflecta feels supportive, secure, and engaging. Insights will refine the conversational journaling flow, Mandal-Art goal feature, and opt-in counselor alert system.

- **Target Goal:** Understand how students reflect, what sustains consistent engagement, and which privacy, design, and feedback factors build comfort and trust in Reflecta.

### **Section 1: Current Reflection & Goal-Setting Habits**

1. Can you walk me through how you currently reflect on your thoughts, emotions, or personal challenges, and how it helps you make thoughtful decisions or track growth (if at all)?
2. How do you usually keep track of your goals or progress over time—for example, academic, personal, or emotional?
3. Do you journal? If yes, could you go through how you do it, and if not, why not?
4. What do you find most difficult about traditional journaling or self-reflection methods?

### **Section 2: Motivation & Digital Engagement**

5. What might motivate you to use a digital journaling tool regularly?
6. How could Reflecta make reflection feel more natural and rewarding—rather than like an extra task?
7. Reflecta includes a Mandal-Art goal-planning feature that helps break big goals into smaller steps. How do you feel about this kind of structured approach to self-improvement?

### **Section 3: Privacy, Trust, and Personalization**

9. How important is privacy to you when expressing your thoughts or emotions in a journaling app?
10. What would make you feel confident that Reflecta keeps your information secure and private?
11. Imagine Reflecta as a chatbot you talk to at the end of the day—what would make that conversation feel safe, personal, and genuinely supportive?

### **Section 4: Counselor Opt-In & Support Features**

12. Reflecta offers an optional feature that can send a confidential, summarized alert to a counselor if it detects signs of distress.
  - a. What information or transparency would you need about this process to feel comfortable opting in?
  - b. How would you feel knowing a counselor might be notified through this system?
1. Many students find traditional counseling intimidating or hard to access. What are the biggest barriers for you when considering reaching out for support?
2. Have you gone to a school mental health counselor? Why or why not?

### **Section 5: Feedback & Visualization**

17. Reflecta includes a visual dashboard to help track progress and mood patterns over time. What kind of visual feedback or insights would you find most motivating or helpful?
18. If Reflecta could help you improve one thing about your academic or emotional well-being, what would you want it to be?

### 3.4 C. Digital Traces: School Counseling Center Google Reviews

#### 3.4.1 Purpose and Outcome

- **Purpose:** Identify student pain points, expectations, and barriers when accessing counseling services.
- **Outcome:** Highlight unmet needs to inform Reflecta features such as opt-in alerts, structured journaling, and privacy-first design.