

UXE SPRING 2025 - MILESTONE 3

Team No: BO2

Team Name: TFC



Member Names & Roll Numbers:

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Section 1: Needs Finding Report

Target Population

Our primary users for ZenQuest are university students who experience moderate to high stress and are seeking an engaging way to integrate mindfulness into their daily lives. These users are tech-savvy and open to gamified self-care approaches.

Study Participants

We interviewed 3 university students:

1. **Participant 1:** 21-year-old male Computer Science student. Experiences stress during coding projects. Has tried and abandoned meditation apps. Uses mobile games as stress relief.
2. **Participant 2:** 20-year-old female Computer Science student and teaching assistant. Finds existing mindfulness apps boring. Enjoys strategy games.
3. **Participant 3:** 22-year-old male Business School student with leadership roles. Experiences anxiety before presentations. Limited experience with mindfulness apps.

Findings from the Study

User Needs

1. Quick Relief When It Matters Most

"When I'm debugging code before a deadline, I need something I can do for like 2 minutes to clear my head." - Participant 1

"Right before a presentation is when I'm most stressed, and that's exactly when I don't have time for lengthy relaxation." - Participant 3

2. Something That Doesn't Feel Like Another Assignment

"I downloaded Headspace with good intentions, but after a week it started feeling like another assignment." - Participant 1

"Meditation apps feel too serious. I need something that actually feels like a break." - Participant 2

3. Show Me I'm Making Progress

"If I can't see that I'm improving, I lose motivation super fast." - Participant 3

"I get satisfaction from seeing streaks in my fitness app. Why can't mindfulness apps give me that same feeling?" - Participant 2

4. Flexible Integration into Daily Routines

"Some days I might have 10 minutes between classes, other days just 1 minute before a lab. I need something that works for both." - Participant 2

5. Immediate Application During Stressful Moments

"When my code keeps failing and I'm getting frustrated, I need something I can do right then." - Participant 1

"I wish I had a quick mental reset button before presentations." - Participant 3

Current Practices

What's Working (Sort Of)

- **Mobile Games:** All three turn to games when stressed. "Crushing candy is weirdly therapeutic when my code won't compile," noted Participant 1.
- **Sporadic Breathing:** Two mentioned doing deep breathing before high-pressure situations.
- **Music:** All three use music to zone out between classes.
- **Physical Movement:** Two participants take walks when feeling overwhelmed.

What's Not Working

- **Abandoned Mindfulness Apps:** All had tried and abandoned at least one mindfulness app within weeks.
- **Inconsistent Practice:** All struggled to remember stress management techniques during high-stress periods.
- **The "I'll meditate tomorrow" syndrome:** All postponed self-care, with Participant 1 joking, "I keep telling myself I'll start meditating after this assignment... but there's always another assignment."
- **Ineffective Breaks:** Current breaks (social media, random browsing) often didn't actually reduce stress.

Affinity Diagramming Process

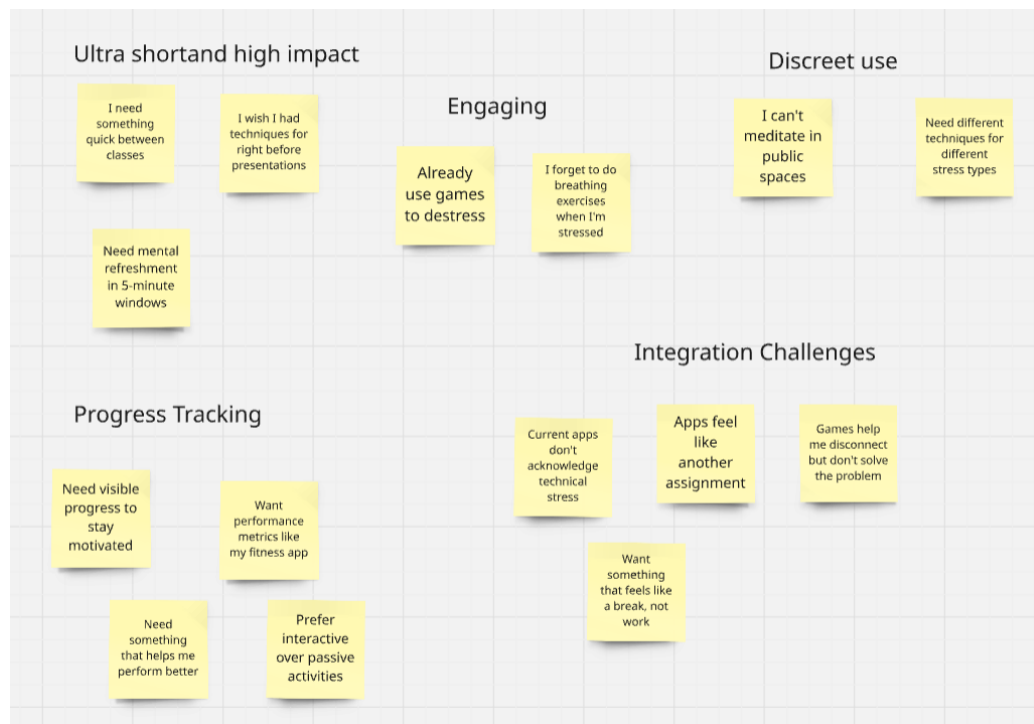
Phase 1



Phase 2



Phase 3 (clustering)



Requirements and Constraints

Requirements:

1. Provide very short (1-3 minute) stress-relief options
2. Include engaging game mechanics that motivate regular use
3. Offer clear progress tracking and achievement features
4. Provide activities suited to different contexts
5. Include audio and visual feedback confirming effectiveness
6. Design for one-handed operation in various environments

Constraints:

1. Avoid requiring extended, uninterrupted focus
2. Avoid complex tutorials or onboarding processes
3. Minimize text-heavy instructions
4. Avoid notification overload
5. Prevent feeling like "yet another responsibility"
6. Limit sounds inappropriate in academic settings

Implications for Design

1. **Emphasis on Quick-Relief Tools:** Prioritize "emergency" stress-relief tools (under 2 minutes).
2. **Flexible Session Lengths:** Include activities ranging from 1-minute exercises to more extended sessions.
3. **Progress Visualization:** Develop comprehensive progress tracking with immediate feedback and long-term trends.
4. **Context-Aware Design:** Create options appropriate for public use with discreet visual and audio elements.
5. **Discipline-Specific Stress:** Different academic disciplines need tailored approaches (debugging frustration vs. presentation anxiety).
6. **Integration with Existing Habits:** Find ways to integrate with students' existing routines rather than creating new ones.

Section 2: Empathy Maps and Personas

Empathy Maps

Empathy Map 1: Male Computer Science Student (Participant 1)

SAYS:

- "I don't have time for lengthy meditation sessions"
- "I need something I can use while code compiles"
- "I've tried meditation apps but they're too boring"

THINKS:

- "Is this worth my limited time?"
- "Will this help with my coding focus?"
- "Traditional meditation seems too passive"

DOES:

- Downloads and abandons wellness apps
- Plays mobile games during breaks
- Codes late into the night, sacrificing sleep

FEELS:

- Overwhelmed by programming assignments
- Frustrated by debugging challenges
- Anxious about technical interviews

PAIN POINTS:

- Limited time between coding sessions
- Needs immediate relief from debugging frustration
- Existing solutions feel disconnected from technical challenges

GOALS:

- Find quick ways to manage stress during coding sessions
- Improve problem-solving abilities
- Reduce burnout from technical challenges

Empathy Map 2: Female Computer Science Student (Participant 2)

SAYS:

- "I need breaks that actually refresh my brain"
- "I want something fun that doesn't feel like work"
- "I'm constantly switching between my own work and helping others"

THINKS:

- "How can I fit self-care between classes and TA responsibilities?"
- "I wish relaxation was more engaging"
- "I need mental breaks that still feel productive"

DOES:

- Teaches programming while managing coursework
- Uses breathing techniques inconsistently
- Plays strategy games during breaks

FEELS:

- Pressured to excel while helping others
- Tired from balancing multiple responsibilities
- Bored by traditional mindfulness approaches

PAIN POINTS:

- Multiple demanding roles create time pressure
- Difficulty finding engaging mindfulness tools
- Struggles to prioritize self-care over helping others

GOALS:

- Balance teaching and studying efficiently
- Find mentally refreshing breaks
- Develop sustainable stress management habits

Empathy Map 3: Business School Student (Participant 3)

SAYS:

- "I need tools that help me perform better under pressure"
- "I need something that helps before presentations"
- "If it doesn't show benefits, I won't stick with it"

THINKS:

- "Will this improve my performance?"
- "Is this making a measurable difference?"
- "Can I use this discreetly in professional settings?"

DOES:

- Uses productivity apps and habit trackers
- Prepares extensively for presentations
- Networks with industry contacts

FEELS:

- Anxious before presentations
- Pressured to maintain high performance
- Motivated by visible achievements

PAIN POINTS:

- Performance anxiety during presentations
- Needs evidence and metrics to maintain motivation
- Wants immediate benefits for high-pressure situations

GOALS:

- Build confidence for presentations
- Manage performance anxiety effectively
- Find tools with measurable improvement

Personas

Persona 1: CS Student

"I need something that helps me clear my head when I'm stuck in debugging hell."

Demographics: 21-year-old male CS student, participates in hackathons, shares apartment with roommates

Background: Third-year CS student who lives on energy drinks and deadline adrenaline. Brilliant with code but terrible at self-care. Stress peaks during debugging sessions and project deadlines. Has tried and abandoned meditation apps.

A Day in This Student's Life:

- Checks GitHub notifications immediately upon waking
- Attends classes while fixing bugs in side projects
- Spends hours debugging in the computer lab
- Uses gaming breaks as stress relief
- Often loses track of time when coding

Pain Points:

- "Meditation apps don't understand the stress of a failing build."
- "I forget self-care during hackathons - exactly when I need it most."
- "Traditional mindfulness feels disconnected from technical problems."

Needs from ZenQuest:

- Ultra-short activities for immediate mental refreshment
- Techniques designed for problem-solving blocks
- Clear progress tracking to maintain motivation

Persona 2: CS Student

"I need mental breaks that are as stimulating as they are relaxing."

Demographics: 20-year-old female CS student/TA, active in Women in Tech club

Background: CS student who works as a teaching assistant. Organized and efficient but struggles to find time for herself between helping students and managing coursework. Finds traditional mindfulness too passive for her analytical mind.

A Day in This Student's Life:

- Balances classes with TA responsibilities
- Holds office hours for struggling students

- Works on assignments between commitments
- Participates in club activities
- Squeezes in quick breaks when possible

Pain Points:

- "I'm helping everyone else but neglecting my own needs."
- "Most relaxation techniques are too passive for my brain."
- "I need mental refreshment that works in 5-minute windows."

Needs from ZenQuest:

- Mentally stimulating activities that reduce stress
- Quick techniques usable between teaching sessions
- Features that help establish boundaries for self-care

Persona 3: Business Student

"I want something that helps me perform better under pressure and tracks my progress."

Demographics: 22-year-old male Business student, leadership roles in student organizations

Background: Business student who approaches everything like a strategic plan. Appears confident during presentations but battles anxiety internally. Measures success in quantifiable metrics and wants tools that will give him a performance edge.

A Day in This Student's Life:

- Prepares meticulously for presentations
- Leads student organization meetings
- Networks with professors and industry contacts
- Updates progress trackers daily

Pain Points:

- "I need something that works in the 5 minutes before a presentation."
- "Most mindfulness apps don't show if I'm actually improving."
- "I want something that speaks my language – performance and metrics."

Needs from ZenQuest:

- Performance-oriented stress management techniques
- Clear metrics and progress tracking
- Quick pre-presentation confidence boosters

Section 3: Reflection on Bias

Confronting Our Biases

1. Selection Bias

Our participant pool was limited to university students, with stronger representation from CS. We mitigated this by:

- Including a Business School student for perspective outside technical disciplines
- Ensuring gender diversity
- Selecting students with varied extracurricular involvement

Future research should include more diverse age groups, fields, and educational backgrounds.

2. Confirmation Bias

As designers of a gamified mindfulness app, we might favor evidence supporting our concept. We mitigated this by:

- Including open-ended questions about current practices
- Specifically asking about negative experiences
- Having team members independently review transcripts before collaboration

3. Question Wording Bias

We refined our approach by:

- Piloting and refining questions
- Using open-ended rather than yes/no questions
- Avoiding terms like "gamification" until later in interviews

4. Small Sample Reality Check

With only three students, we recognize our limited perspective. A larger, more diverse sample would reveal additional insights across different disciplines and backgrounds.

Appendix

Needs Finding Study Plan

Study Goals:

1. Understand how university students currently manage stress using digital and traditional methods
2. Identify challenges with existing mindfulness apps and stress-relief practices

3. Explore what gamified elements would be most engaging and useful for stress management
4. Investigate how students integrate stress-management into their daily routines

Participant Criteria:

- University students aged 18-30
- Experience with at least one stress management or mindfulness app
- Comfortable with mobile applications
- Mix of academic disciplines (with focus on high-stress programs)

Interview Protocol:

1. Current Practices:

- "How do you currently manage stress on a daily basis?"
- "Which digital tools or techniques do you use for mindfulness and stress relief?"
- "Do you use any non-digital methods for stress management?"

2. Challenges & Pain Points:

- "What aspects of your current stress management routine do you find challenging?"
- "Have you found existing mindfulness apps repetitive or unengaging?"
- "What barriers prevent consistent practice, especially during high-stress periods?"

3. Gaming Habits:

- "What types of mobile or video games do you play, if any?"
- "What game elements do you find most engaging (rewards, challenges, etc.)?"
- "How much time do you spend on games or relaxation activities daily?"

4. Reactions to Gamification:

- "How would you feel about a game that integrates mindfulness with interactive challenges?"
- "Which features would most motivate you to use such an app?"
- "How might you use a stress-reduction game during high-stress moments?"

5. Integration into Daily Life:

- "When during your day would you be most likely to use a stress-management app?"
- "How would you prefer to be reminded to practice stress-management?"
- "What would make it easier to incorporate stress-relief into your routine?"

Observational Component: Participants will be asked to:

1. Use their current stress-relief app for 5 minutes while thinking aloud
2. Try a simple breathing exercise on a popular mindfulness app
3. Play a casual mobile game they enjoy for 2-3 minutes

Changes to Study Plan

Based on feedback from Milestone 2, we made these adjustments:

1. Focused on university students for deeper understanding of this context
2. Simplified observation tasks for academic settings
3. Added questions about non-digital stress management techniques
4. Developed better follow-up prompts for vague answers

Team Dynamics

Aasir Farrukh coordinated the project, interviewed Participant 1 (male CS student), led affinity mapping, created the first CS student persona, and compiled the final report.

Hamza Saeed interviewed Participant 2 (female CS student), developed observation protocols, created CS student empathy maps, and drafted the bias reflection section.

Qazi Mohib-Un-Nabi interviewed Participant 3 (Business student), created the Business student empathy map and persona, and synthesized key findings and requirements.

Our most productive session was our collaborative affinity mapping workshop, where we identified patterns across all three interviews.