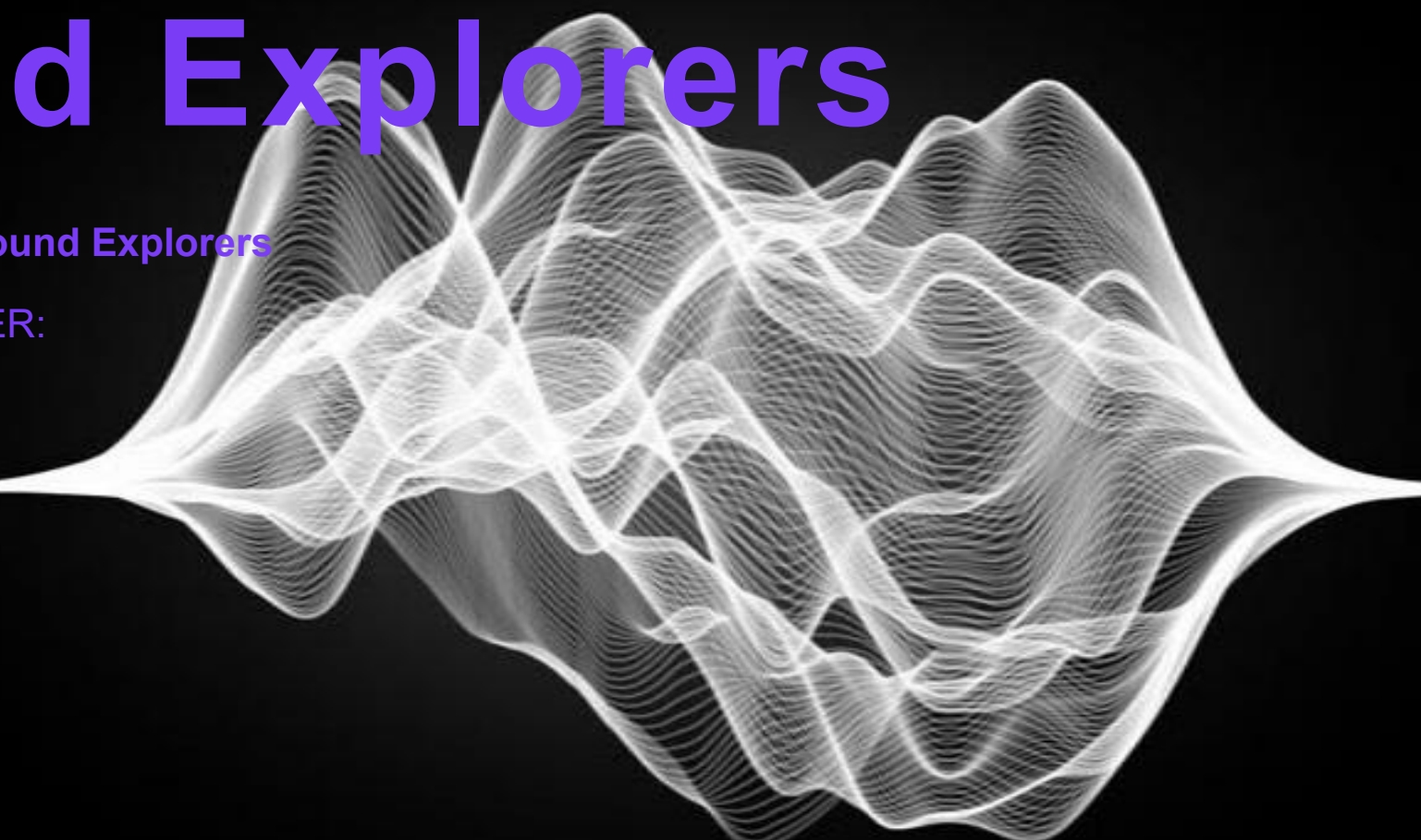


Sound Explorers

An abstract visualization of sound waves, rendered in a vibrant orange color. The waves are complex and layered, creating a sense of depth and movement. They are centered horizontally and extend across most of the width of the slide. The background is a solid dark blue.

FINAL PROJECT: **Sound Explorers**

PROJECT DESIGNER:
HAO ZHANG

Project Background

In family education, voice is the most common yet often overlooked form of communication. Parents' tone, volume, and intonation not only influence children's behavior but also profoundly impact their emotional development and parent-child relationships. Traditional "disciplining" voices often convey an invisible power dynamic, teaching children to suppress and conform. This project aims to design an interactive platform for children and adolescents to help them explore the relationship between voice, emotion, and communication.

Background research



The Role of Voice in Education

Voice is not only a medium for conveying information but also a tool of emotion and power. In family education, parents' tone, pitch, rhythm, and volume directly influence children's psychological and behavioral responses. Research shows:

A gentle, encouraging tone can reduce children's anxiety and enhance their sense of security and attachment (Developmental Psychology, 2019).

A sharp, commanding tone often triggers confrontation or repression, leading to emotional problems and behavioral conflicts in children (Child Development Research, 2020).

This suggests that voice is an "invisible rule" in family education, playing a central role in children's emotional development.

Harsh parenting can affect children's emotional regulation, leading to increased aggressive behavior in the classroom or at school:

The regression coefficient between mothers' harsh behavior and children's aggressive behavior was $\beta = 0.35$;

for fathers, $\beta = 0.27$.

Secondary Research

Project analysis

Target Users

Children (6–12 yrs): playful learning, building awareness of emotions through voice.

Teenagers (13–18 yrs): reflection, self-regulation, and identity in communication.

Parents: gain insight into their vocal patterns, reduce harsh tone, and strengthen emotional bonds.

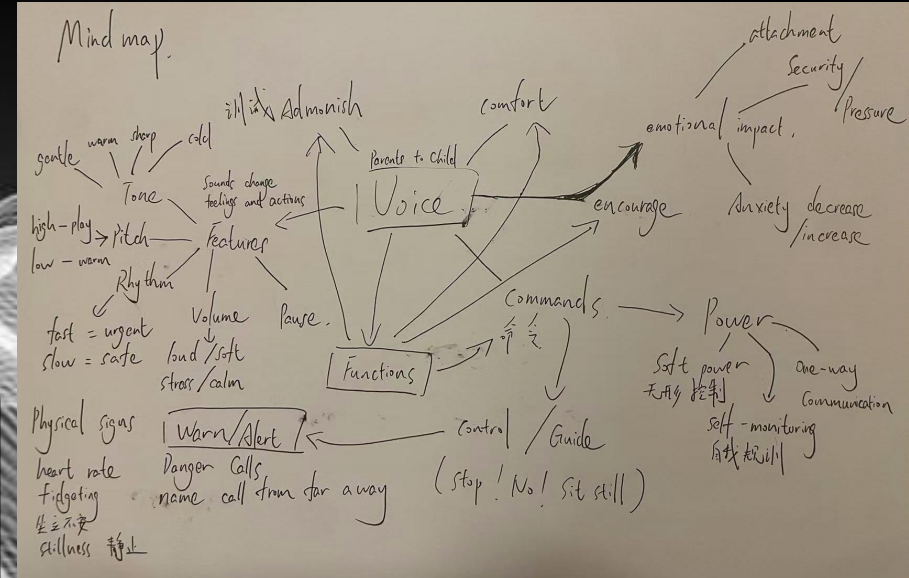
Key Findings from Research

45–50% of parents use harsh or moderate harsh tones, linked to children's anxiety, low self-esteem, and aggression.

Mother's voice activates multiple brain regions in children, supporting emotional security.

Verbal aggression increases risk of insecure attachment in over 60% of cases.

Gamification improves motivation and learning outcomes in children and teenagers.



The A/B Manifesto Selection

Pick one row (a&b) from each group - four in total.
Do this when setting out your project proposal.

	[a]	[b]
1	affirmative problem solving design as process provides answers in the service of industry for how the world is	critical problem finding design as medium asks questions in the service of society for how the world could be
2	science fiction futures fictional functions change the world to suit us narratives of production anti-art	social fiction parallel worlds functional fictions change us to suit the world narratives of consumption applied art
3	research for design applications design for production fun concept design	research through design implications design for debate satire conceptual design
4	consumer user training makes us buy innovation ergonomics	citizen person education makes us think provocation rhetoric

Critical Design (A/B) Manifesto
(Dunne & Raby, 2013)

critical
instead of affirmative
social fiction
instead of science fiction
research through design
instead of research for design
education
instead of training

Reason for selection

My project doesn't simply offer solutions; it questions the power structures of sound in the home, revealing how sound influences education and emotions.

My project engages with a social imagination: if we recalibrate the home sound environment, how will future education and parent-child relationships change?

My project itself is a process of research through design (sound experiments, games, app prototypes), not aimed solely at producing products but at exploring new understandings.

The core audience is children, adolescents, and parents, and the underlying goal is to cultivate sound education and emotional regulation.

Personas Create

Name: Li Mei

Age: 38

Occupation: Elementary School Teacher

Family: Has a 10-year-old daughter



Goal

I want to develop healthier communication styles with my child.

I want to reduce scolding and improve my child's confidence.

I'm looking for tools to help me manage my emotions and tone of voice.

Pain Points

I get easily tired after work, and when I'm stressed, I tend to use an imperative tone of voice.

I realize my tone of voice has a significant impact on my child, but I lack direct feedback.

I'm worried that scolding will alienate my child.

Needs

A tool that analyzes my voice.

Provides suggestions for alternative ways to express myself.

Interactive activities I can participate in with my child.

Name: Chen Kai

Age: 15

Status: Middle School Student

Family: Lives with parents



Goal

I want my parents to understand my thoughts and emotions.

I want a space to practice expressing myself vocally.

I want to learn emotional regulation through gamification.

Pain Points

I feel my parents often use a "commanding tone" and lack communication.

Sometimes I feel anxious or rebellious because of my parents' voice.

I don't like direct criticism and crave to be heard.

Needs

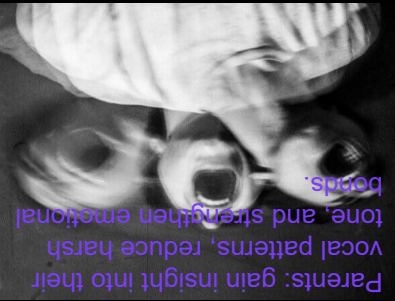
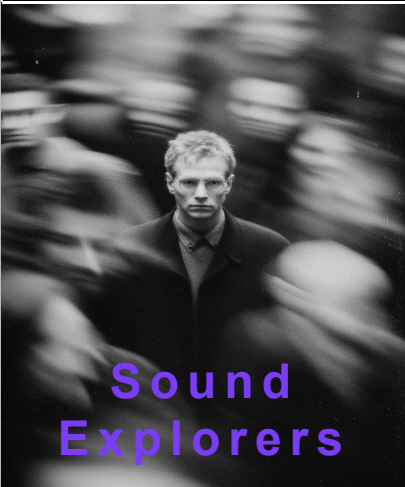
A "safe space" where I can express my thoughts and emotions.

Gamified interaction makes expression and learning easier and more fun.

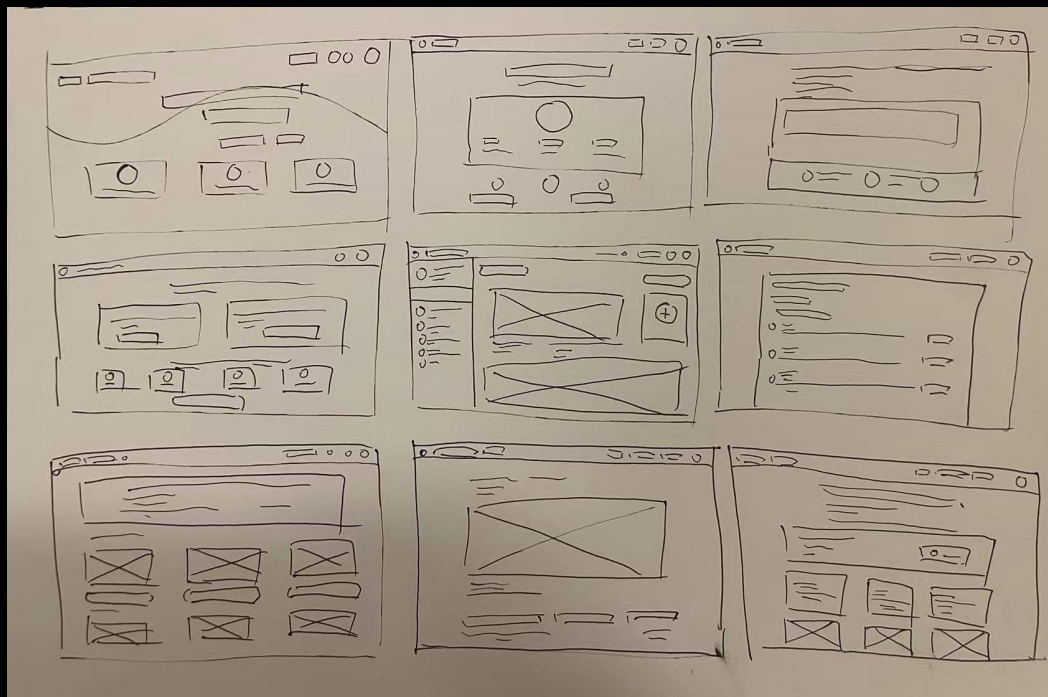
A tool for equal communication with parents, rather than one-way control.

ZINE

It aims to transform voice from a "tool of control" to a "bridge of emotion" and help family members establish healthier and more equal communication methods through interactive design and gamification learning.

INSPIRATION Mother's voice activates multiple brain regions in children, supporting emotional security. Verbal aggression increases risk of insecure attachment in over 60% of cases. Gamification improves motivation and learning outcomes in children and teenagers.	DIFFERENT VERSION The mobile app is specially designed for teenagers and parents who own mobile phones.	Target Users Children (6-12 yrs): playful learning, building awareness of emotions through voice. Teenagers (13-18 yrs): reflection, self-regulation, and identity in communication. Parents: gain insight into their vocal patterns, reduce harsh tone, and strengthen emotional bonds. 	DESIGNER:HAO ZHANG EMAIL:HZ4G24@SO TON.AC.UK 
 Sound Explorers In family education, voice is the most common yet often overlooked form of communication.	Project Summary This project is an interactive design project for children, adolescents, and parents, aiming to explore and reshape the "voice relationship" within the family. In daily education and communication, voice is not only a carrier of information but also a tool for emotional regulation and a power mechanism. Research shows that parents' tone and vocal style have a profound impact on their children's emotional development, self-esteem, and parent-child attachment.	Background Voice is not only a medium for conveying information but also a tool of emotion and power. In family education, parents' tone, pitch, rhythm, and volume directly influence children's psychological and behavioral responses.	

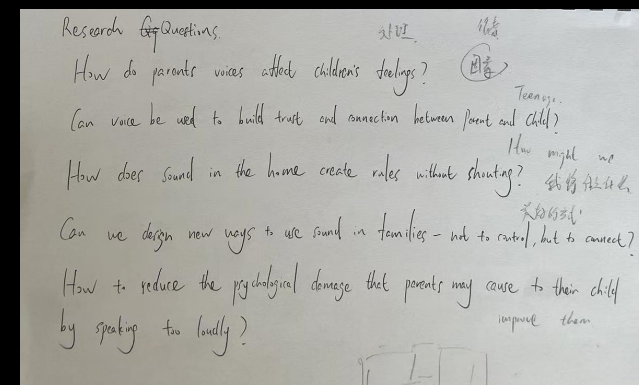
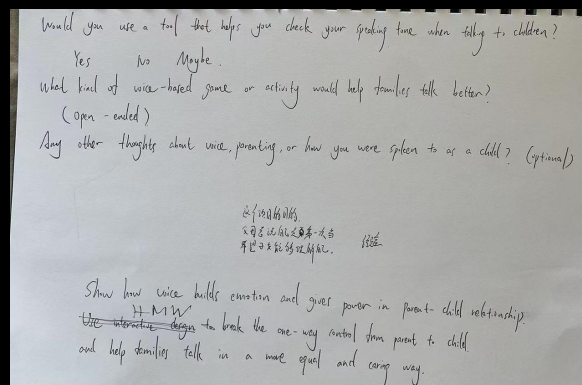
DRAFTS



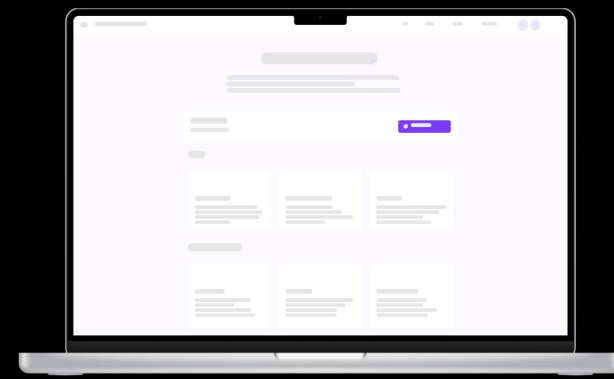
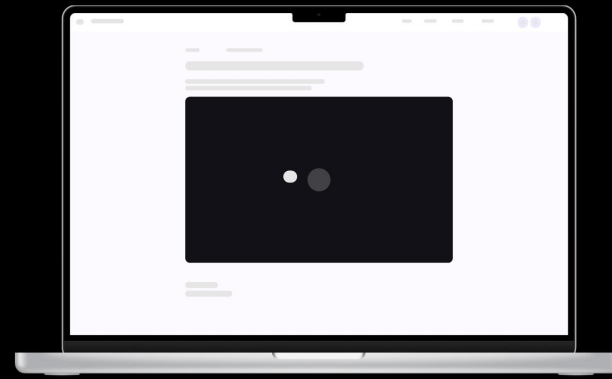
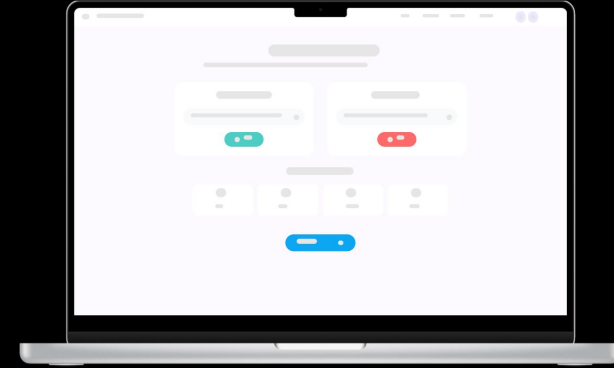
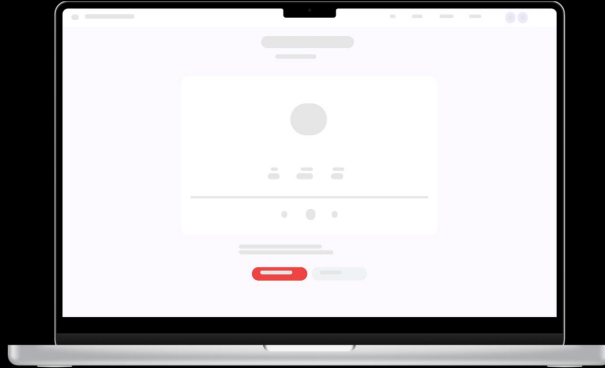
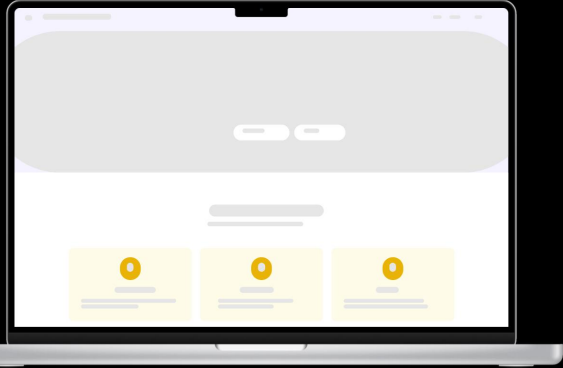
WIREFRAME

Home Page

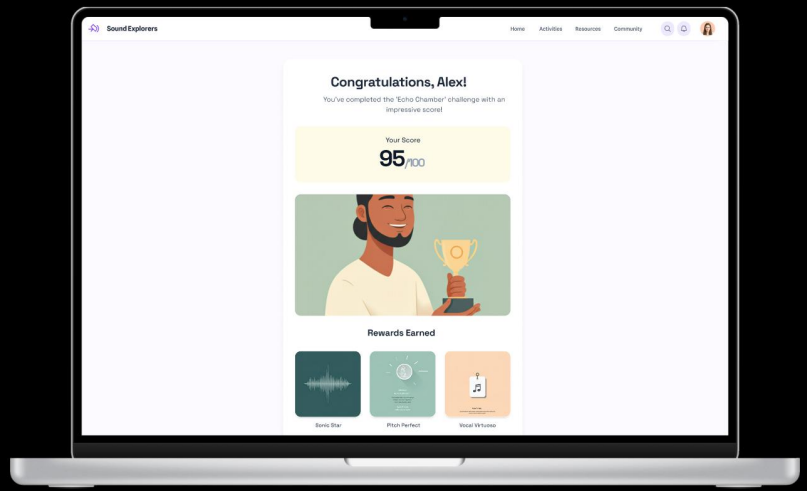
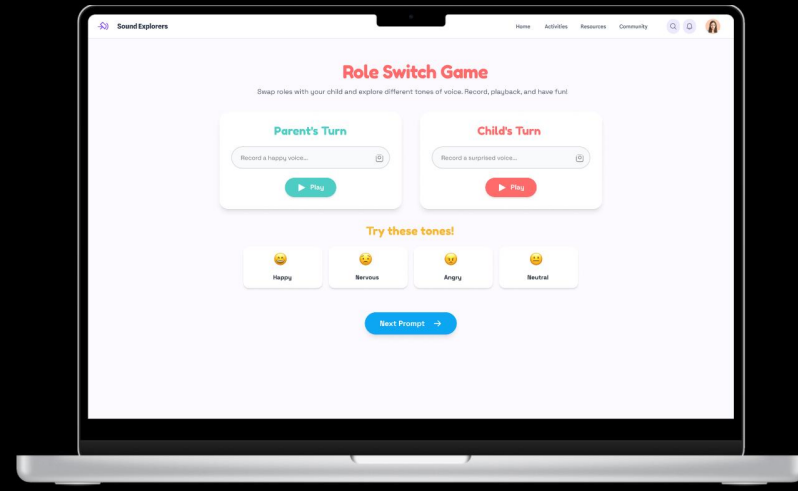
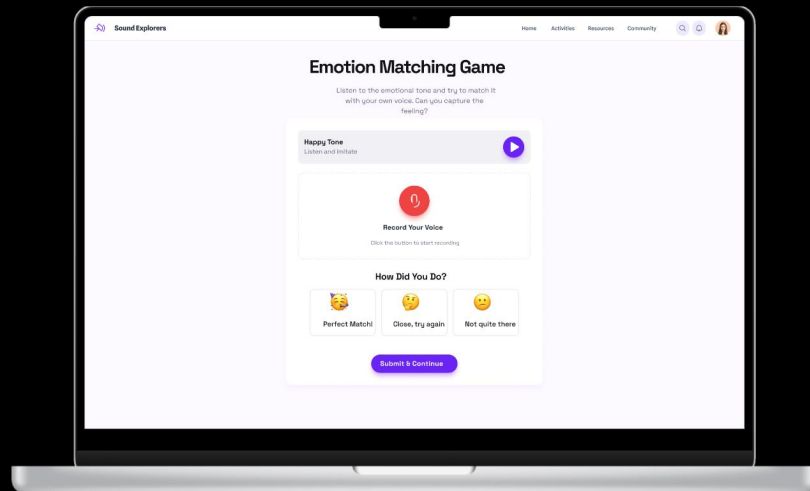
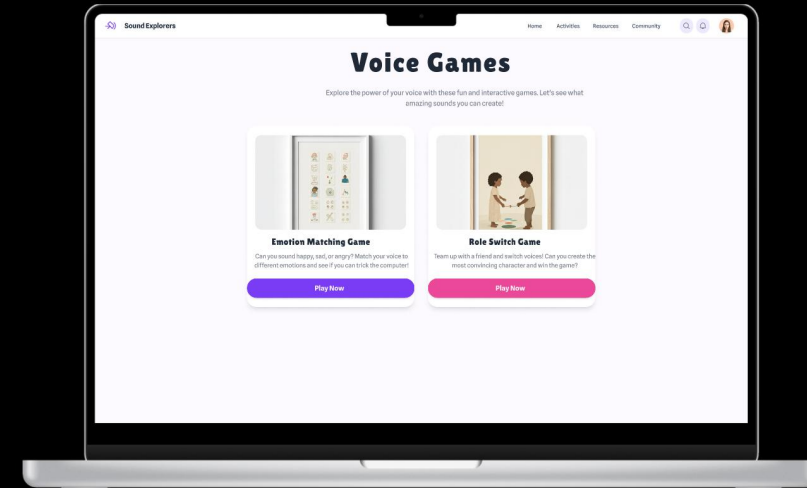
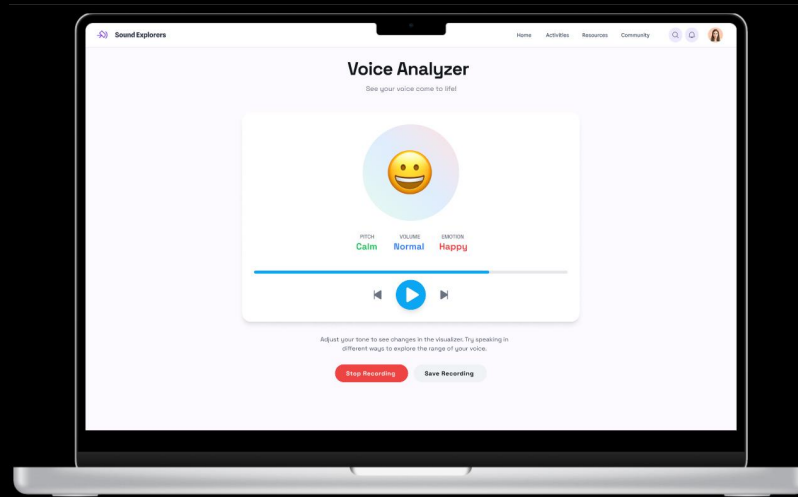
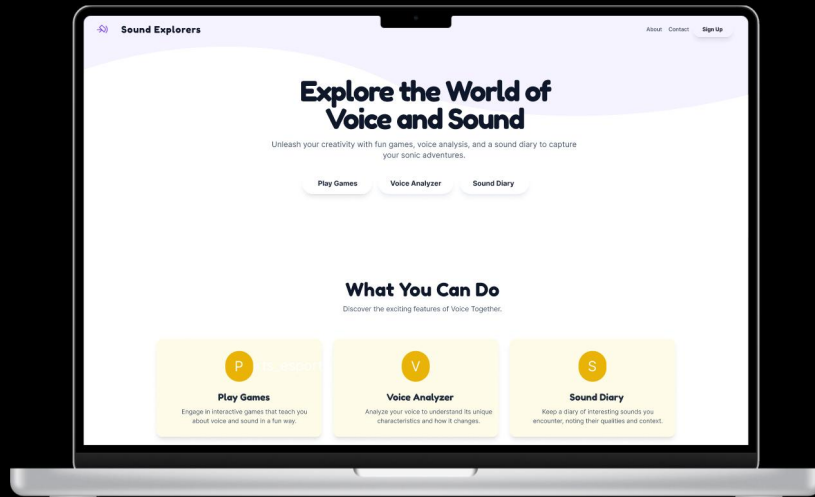
- Voice Analyzer → Record → Feedback → Save → Back
- Voice Games
 - Emotion Match → Result
 - Role Switch → Reflection
 - Rhythm Talk → Result
- Sound Diary → Record Today → History → Mood Map
- Youth Zone → Challenge → Rewards → Avatar → Emotion
- Parent Zone → Reports → Advice
- Progress → Charts + Badges
- Settings → Adjust Options



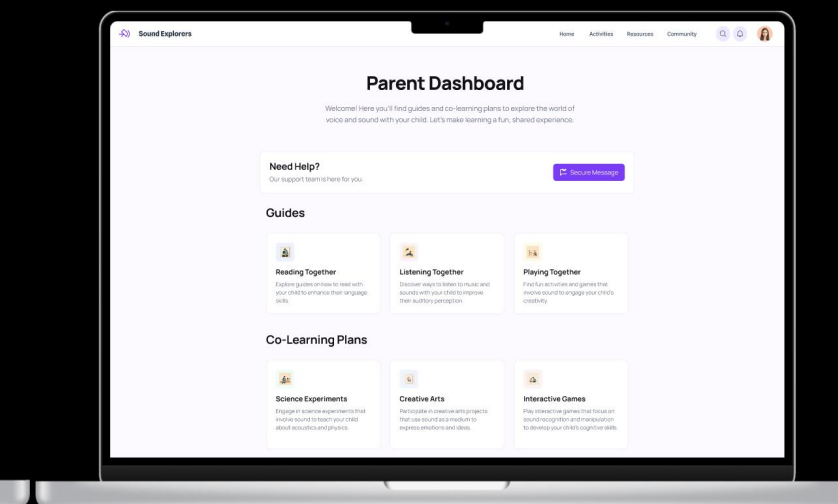
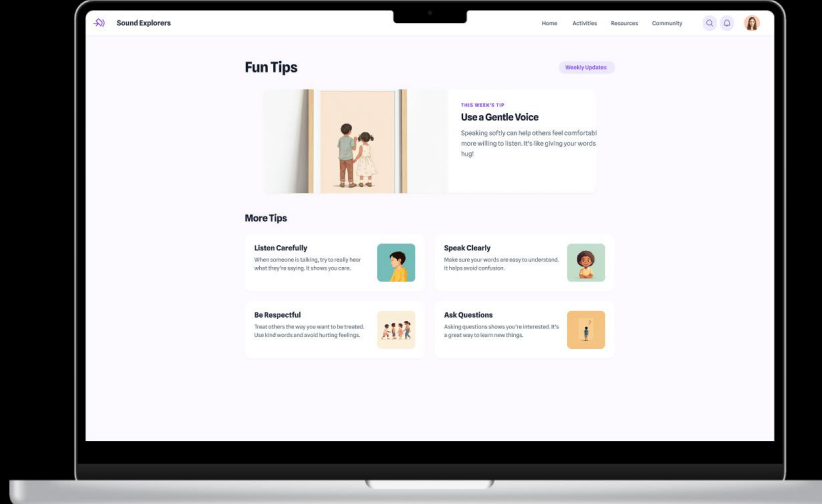
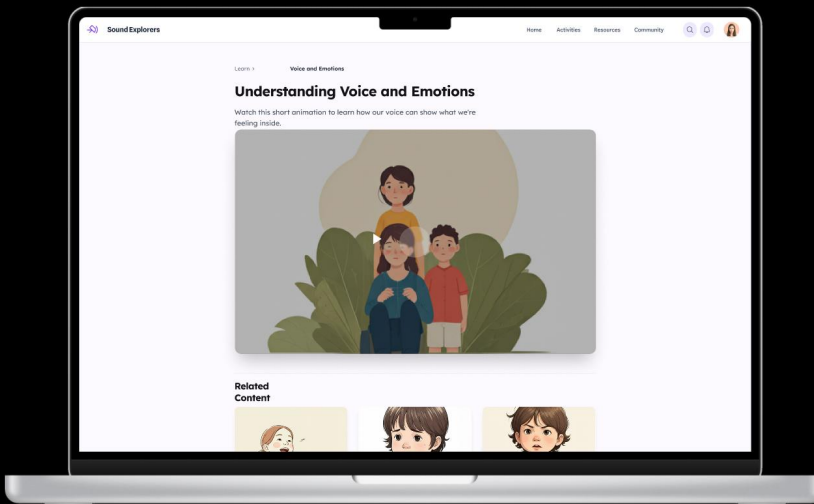
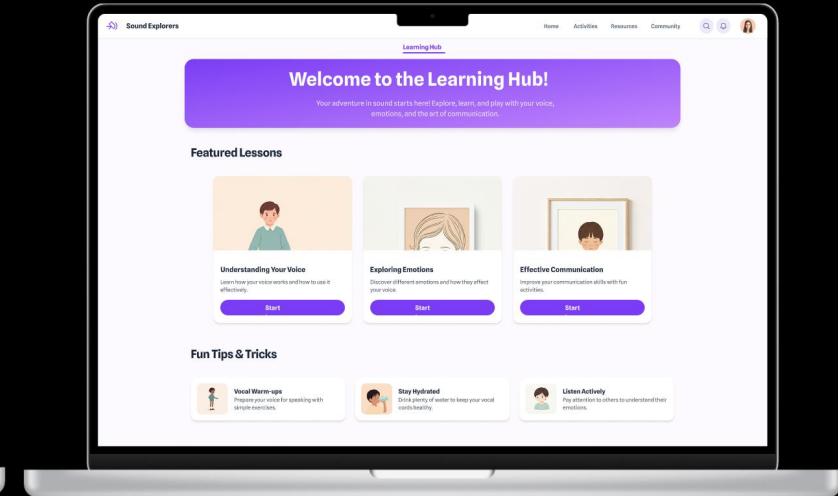
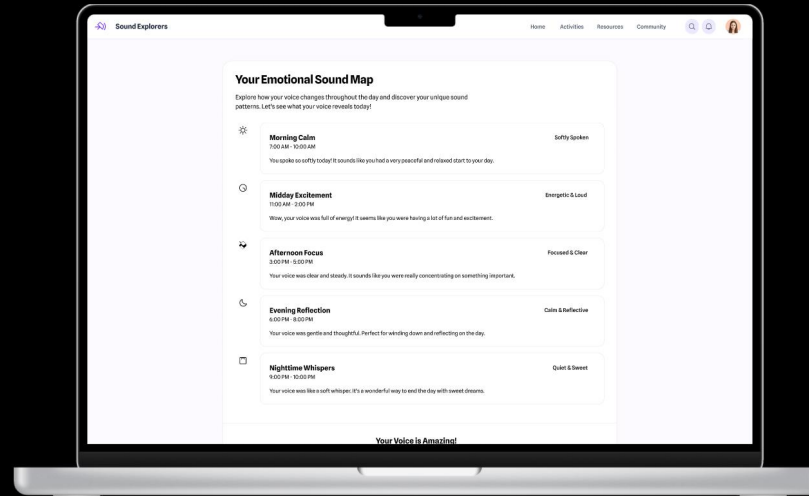
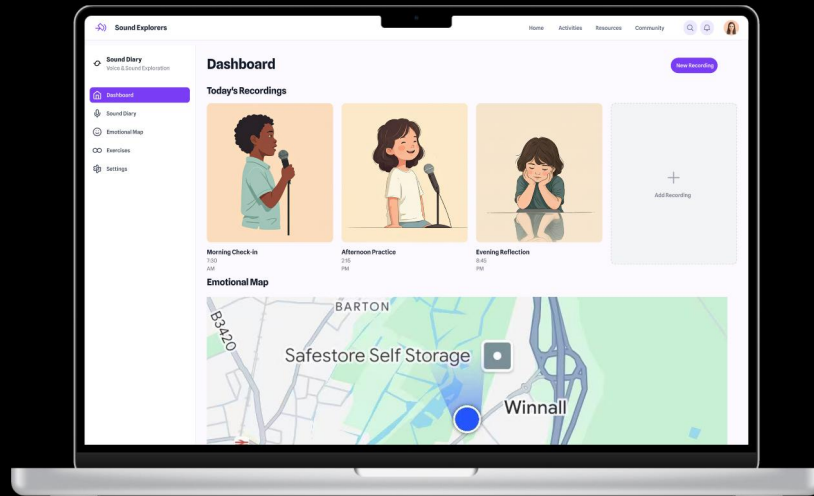
Medium fidelity model



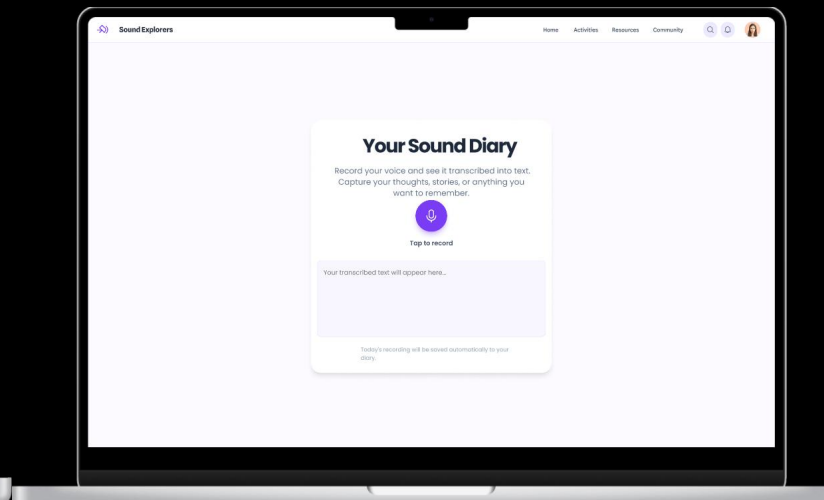
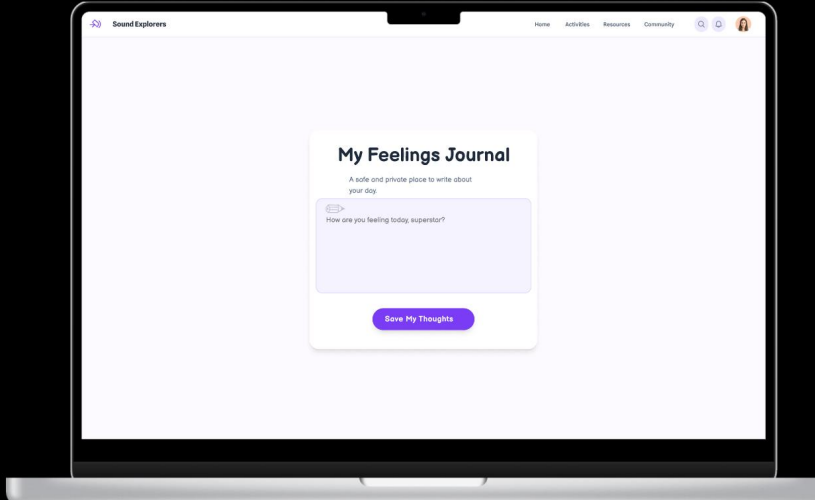
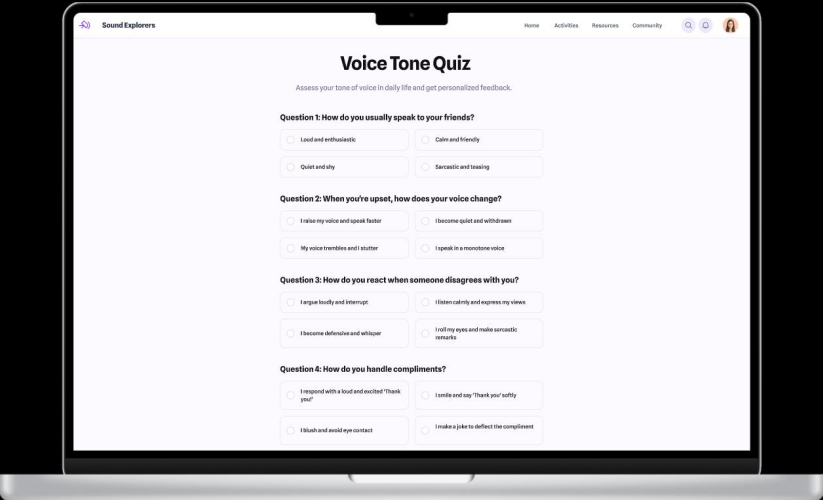
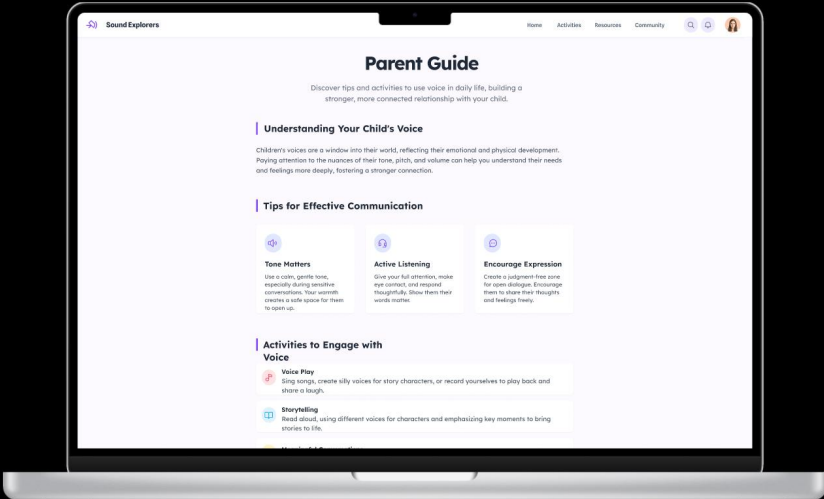
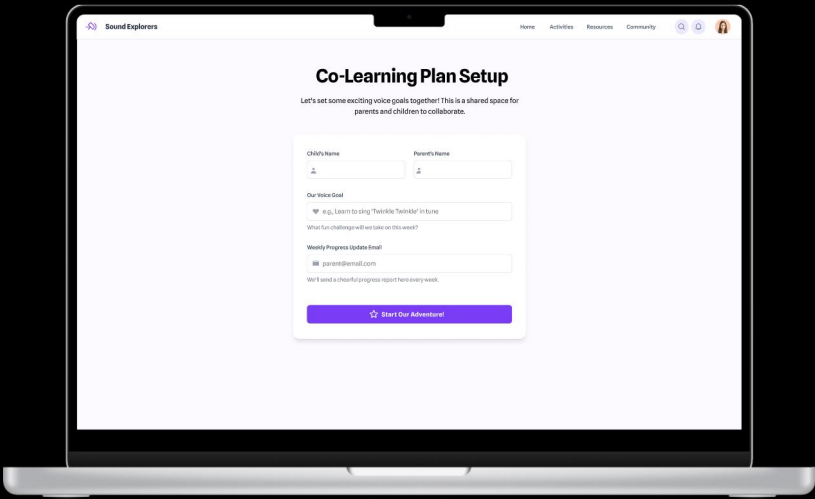
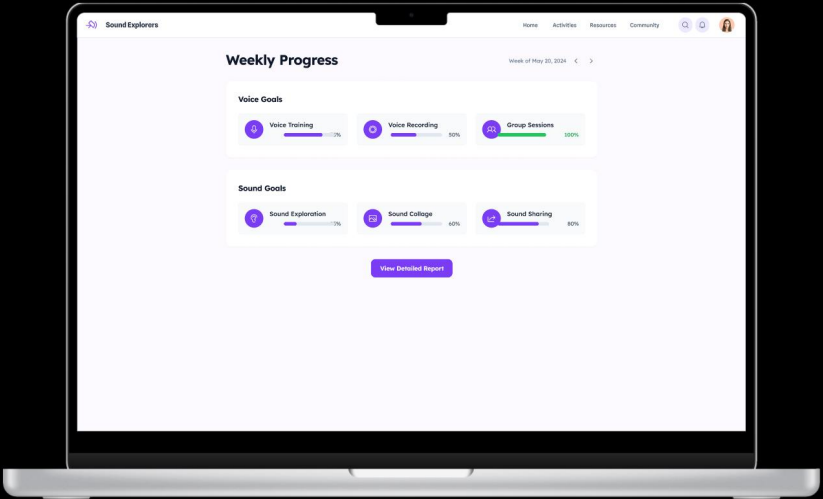
OUTCOME



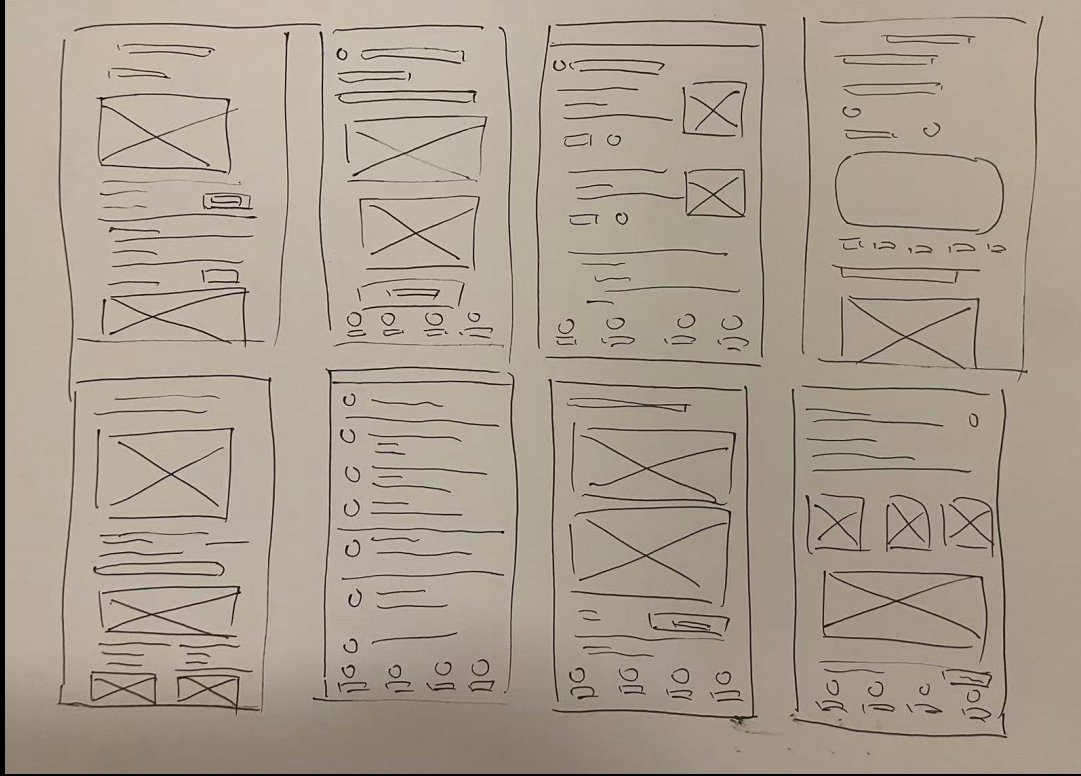
OUTCOME



OUTCOME



Low fidelity model



OUTCOME

The mobile app is specially designed for teenagers and parents who own mobile phones.

