

LearnTune

Collaborative music for playful learning

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1. LearnTune is a tool that ...

offers middle school students a pathway to knowledge acquisition and retention outside of traditional methods. With music creation as a medium, students can be engaged and excited over the shared experience of transforming knowledge into songs.

2. Problem Space

- **Traditional classroom** learning can be boring/stressful and **does not promote collaboration**.

“The formal learning environment is very serious, this [listening to music] is fun and breaks our routine.” — music-passionate student

- **Traditional curriculum** does not engage learners **at the level of individual needs and preferences**.

“Some students have done Spoken poetry, but some have not. So, options are needed, not limited to making a song from scratch. Students need to do what they want to do.” — high school teacher

- **Self-expression / learning in non-traditional mediums** is not available.

“I realized that music is such an important tool to help with comfort and feel like something's familiar.” — outdoor educator

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How might we spark playfulness to engage students in collaboration more than traditional classroom learning?

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3. Walkthrough of our product

Learning from the teacher

Step 1: Traditional Learning

- The teacher guides learning using their preferred format

Step 2: Discussion groups

- Working in groups of two to four, students discuss what they have learned

Playful music creation

Step 3: Lyric Generation

- Student groups use generative AI (ChatGPT) to help them write two verses of a song related to class content

Step 4: Music Generation

- Students choose the music genre that matches the learning content and generate songs using Suno

Sharing for deeper learning

Step 5: Song Sharing

- Student groups share their song with the whole class and talk about the song

- The teacher asks guiding questions for students to reflect on the class content in the songs

4. Ethical Considerations and Mitigation Strategies

- **Privacy Concerns**
 - Pre-set database to protect user privacy
 - Opt-in options that utilize user prompts for training
 - Explicit warnings about data usage and storage
- **Copyright**
 - Educational purpose only policy
 - No downloading songs
- **Accessibility for Differently-Abled Users**
 - Lyrics display
 - Colorblind settings in the interface design
 - Alt text for album covers
 - Intuitive and simple user interface
- **ESL (English as a Second Language) Considerations**
 - Straightforward and simple language for accessibility to ESL users
- **Misinformation and Harmful Content**
 - Non-explicit language
 - Content filtering to prevent harmful content or misinformation
- **Bias and Inclusivity**
 - Minimal bias in lyrics generation, considering race, gender, and cultural background
 - Cultural inclusivity in the generated content

5. Future roadmap

- **All-in-one platform** for making songs for learning: our platform can streamline the whole experience from generating lyrics, editing lyrics, generating a song, sharing a song, and organizing songs as playlists.

- **Music Engagement features:** features such as composing melodies, playing instruments, and co-playing the song on the platform can increase learners' engagement.
 - **Inclusive learning environment for learners without a music background:** when designing Music Engagement Features, we want the learning environment to be inclusive for those who don't have experience playing musical instruments. So, the Music Engagement Feature needs to be simple, intuitive, and don't require prior knowledge.