CPR Music

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Project Budget:

$25,000

Abstract:

While technologies can be used in harmful ways exacerbating inequities for personal gain, they can also be leveraged for social good. We are developing a free web-based music making and learning interface that connects students and empowers their creativity--regardless of whether their parents bought them a $12,000 bassoon or they have a school-issued Chromebook. We propose to use this funding to further application development and collaborate with in-service music educators in Virginia to make these opportunities more widely available to K-12 students.

Technology, early thought of as a democratizing force, seems to have become a homogenizing tool of capitalism, where early dreams of information exchanged freely in a post-scarcity, post-copyright society for the benefit, creativity, and curiosity of all have given way to whole industries that create and protect walled gardens of resources from those who may benefit from them most. Where the first computer programmers and innovators were women and people representing a wide array of demographics, today's posters of Mark Zuckerburg and Elon Musk illustrate a new instance of a long history of colonization. Is the application of technology necessarily a dividing force that widens the chasm between those in power and everyone else?

Similarly, in music education, musics that are considered legitimate and encoded within curricula represent a vanishingly small minority of our historical global tradition of making music. While Bach, Beethoven, and Mozart might be considered household names, comparatively few people are aware of non-white and/or non-male composers, or musical practices not aligned with Western classical-type traditions. Such practices are often disparaged within music academia; for example, music faculty continue to debate whether rapper Kendrick Lamar's Damn, for which he received a Pulitzer Prize, should be considered "real music." Further, developers and companies are creating walled music education gardens that restrict access to schools, teachers, and (most importantly) students based on financial resources. These exclusive practices are not new in music education. Costs associated with instrument rentals, participation fees, and one-on-one private instruction are part of the reason why only about 30% of US high school students ever take a music class. These 30% of students are not representative of wider school populations; white students and higher-SES students are over-represented in secondary school music, while women and students with disabilities are among underrepresented groups.

We want to make interactive, engaging, standards-aligned music learning available to every single child--irrespective of where they live, the family and cultures into which they are born, or who their school's music teachers are. Researchers have raised important questions about access to music education. We are interested in moving beyond these questions to explore more inclusive music learning and making for students with a variety of identities and genre preferences who may wish to create and express themselves through a variety of modalities. While their expressive interests may include singing madrigals or joining a marching band, the vast majority of high school students do not elect participation in these opportunities (even though they have access to them in their schools).

With this in mind, we propose to continue developing a free web-based platform to facilitate individualized, standards-based learning. We are designing for access for people with varying means, abilities, backgrounds, and technological literacy. We have recruited an interdisciplinary team of innovators to work with participatory design methods and create--from the bottom up--technology that aims to connect people of all backgrounds to musics of all traditions.

We have already designed, developed, and deployed a minimum viable product of "TeleBand" (see https://tele.band), and made it available to in-service music teachers in Spring 2021. Despite the modest feature set and user experience, participants (five teachers and 278 students in three states) were enthusiastic about our approach and are clamoring for an opportunity to use TeleBand again (four teachers and approximately 475 students are slated to use it this Spring). For our next phase, we have five goals:

1. Improve the user experience for students, teachers, and researchers.

2. Commission new music from a composer aligned with our mission for use in our platform.

Implement new activities that:

3. Help students see connections between their lives and the music they are studying, as between themselves and other students and their instructors.

4. Support students developing digital music production skills.

5. Help students make connections among various representations of music (e.g. block-based programming, Western music notation, and digital audio workstations)

These five priorities position our work on the bleeding edge of human computer interaction research, exploring the capacity for technology to facilitate building and maintaining interpersonal relationships. Further, the pedagogical approach that prioritizes students' ability to not only perform, but also create, respond, and connect through music helps ameliorate a well-documented gap between music education policy and common practice. Our initial work has generated interest in the research community through invitations to present at two international conferences, a national conference, a state conference, and to publish in international conference proceedings--all within one year of launching Teleband.

Project Budget Amount:	$25,000
Personnel:	$5,000
Travel:	$2,000
Supplies/Materials:	$4,000
Speakers:	$5,000
Other:	$9,000

Additional information to explain or expand on budgetary needs:

Personnel: Two summer CS student developers ($500/week x 2 students = $1K/week x 5 weeks = $5K)

Speakers: Two summer music students to co-facilitate summer PD for in-service music teachers and consult with CS student developers ($500/week x 2 students = $1K/week x 5 weeks = $5K)

Travel: One-day on-site PD/training at JMU--mid-summer 2022 ($100 stipend x 20 in-service teacher participants = $2000)

Other: Semester-long commitment from participating teachers--fall 2022 ($400 honorarium x 20 in-service teachers = $8000)

Use CPRMusic

Distribute student user survey

Submit structured experience reports

Participate in end-of-semester focus group

Catering = $1K

Supplies/materials: Commission of a new piece of repertoire from an underrepresented composer (or not) that leverages unique elements of CPRMusic (i.e., DAW, collaboration with peers, create, connect): $4K