LOOP project - Learn, Operate, Outreach and Perform
Shifting the paradigm of Music Instruction

1. Problem:
There is a growing gap and clear disconnect between an outdated approach to teaching music with conventional instruments, and old techniques, with a new tech-savvy young generation that is growing immersed in technology, surrounded by digital gadgets that offer an immediate and rich interaction.

2.
Solution:
The LOOP project aims to change the paradigm of music instruction. We are giving our students the skills to teach young music students, using digital technologies *from the very early stages* of the music learning process.

Fundamental to the learning and creative processes we are implementing is a *'sound-centric' approach to music making*. We provide our students with an acoustics-based description of what sound is, and how one can digitally re-create and modify it. Sound is seen as the raw matter that is at the core of creative activities that span composition, recording and performance.

In tandem with the focus on the physical properties of sound we implement a *kinesthetic approach* to acquiring skills about sound's very nature. Our students learn to play and operate hardware and software music synthesizers through a tactile experimentation with hardware synths and music controllers. The music learning experience *is geared at exploring the physicality of sound, using sound as a malleable entity that can be shaped, structured and shared together*.

3.
To assess the effectiveness and pertinence of the new instructional model, we use multiple and concurrent methodologies, including written surveys and thorough analysis of the students' creative music projects.

We measure not only the development of concrete music skills through a series of creative assignments, but, just as important, we assess how a new approach to learning about sound and music can impact a student's creativity and overall problem-solving skills.

Methodology 1 – Entry Survey and Exit Survey
All students who begin taking classes in electronic music composition are asked to fill out an entry survey to assess their outlook on creative processes using sound and music. This survey examines mainly the student's musical background and social environment and is meant to determine how that background influences pre-conceived attitudes on using sound to create, structure and perform music.

The exit survey is taken when the students have successfully completed no less than two laboratorial classes on electronic music composition and at least one class in sound synthesis. It is geared at assessing the impact of the teaching strategies that were implemented and how the creative work assignments, and the creative collaborative work has made an impact on the students' artistic outlook and creative inner workings.

Methodology 2 – Assessment of <u>creative work</u>
The compositional projects given to students are the most effective tool to witness a students' progress on how to think freely as a composer and sound designer and how to develop their creativity.

Our program in Digital Music Production offers two classes in Electronic Music Composition (DMP 350 and DMP 351). Each has been conceived to contain a specific group of creative assignments that explore very important concepts in music. These include the notion of Color, Time, Tempo, Texture, Harmony, Melody, Consonance, Dissonance, Noise and Space. A total of five creative projects are assigned per class.

The Sound Synthesis the students take (DMP 352), is designed to be the true catalyst that catapults the student's understanding of the creative power of sound. The class is designed to provide not only technical skills on sound synthesis techniques, but it covers and complements the very same basilar concepts that are discussed in the electronic music composition classes (Color, Time, Tempo, Texture, Harmony, Melody, Consonance, Dissonance, Noise and Space.) Here too there are a total of five creative sound synthesis projects.
An analysis of the evolution of the student's creative work for each of the planned assignments is carefully documented. The findings are first discussed among faculty, and at a later stage in an open forum with the students as well.

Our first results show that in the early stage of the program, students' who do not have a conventional musical background, despite having less musical skills, perform better at creating original compositions that fully explore sound, and they are able to relate to concepts borrowed from other art forms.
Students coming into the program with a conventional musical background, take considerably longer to achieve comparable results as they tend to be limited by melodic and harmonic formulae they are familiar with.
Not until these students truly work with sound as raw material and learn and explore sound synthesis techniques using the lab's hardware synthesizers, and using a tactile approach to sound making, they are able to free themselves from preconceived ideas about how sound and music should come about.

We look forward to keep developing our experiments and to provide our students with creative and critical thinking skills that they can use across multiple disciplines.