

Berklee College of Music

# **Masterclasses with Cojemo\_**

Submitted in Partial Fulfillment of the Degree of  
Master of Music Production, Technology, and Innovation

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## **Abstract**

This project aims to find a new medium for conventional teaching environments by incorporating [www.twitch.tv](http://www.twitch.tv) as a streaming platform to engage students. Using a program called Open Broadcaster Software, the author was able to simultaneously record and stream video of myself giving lessons on music production aspects such as compression, EQ, sampling, etc. The full streams remain on the author's twitch channel ([twitch.tv/cojemo\\_](https://www.twitch.tv/cojemo_)) while edited versions became part of the Cojemo\_ YouTube page. While growing the viewers remains a challenge, this project was successful in that these videos can be used by future students, as well as whoever finds them online.

*Keywords:* Twitch, teaching, tutorials, streaming, audio production.

# Acknowledgements

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Lastly, to my parents, family, and friends who have been with me from the beginning, all of my music is for you. It is because of you that making music is a joy.

## **1. Introduction**

In the winter of 2014, Connor Moen graduated with a degree in Music Composition. He had dreams of becoming a composer for media and created projects for film and video games. Spring had come and gone when one of his former professors offered him a position as an adjunct professor teaching Introduction to Music Technology. This course was to be focused around using Sibelius, a program the professor knew that Connor had extensive experience with through the projects he completed in his studies there. The author had never really considered teaching as a career path before, but leapt at this rare opportunity. After being successful in the first semester teaching this course, Connor developed and co-taught a music production course for a new major in the second semester. This experience and the successive semesters of teaching awakened a passion for this career path.

When the author was considering what type of project to work towards for his culminating experience, he decided to combine his passion for teaching with the music production skills that he was developing at Berklee. This introduced the challenge of obtaining students to teach. When most new audio engineers want to learn more about music topics and software, they search for YouTube tutorials to learn. After some thought, the author thought this would not be very innovative and would barely make a dent in the vast amount of videos already available. Interactivity is also very important; this aspect makes classroom learning a more impactful experience than online. The author gravitated towards the website twitch.tv for its ability to interact with people over the web in real time. Streamers on Twitch also set up their own YouTube channels to stay connected to fans who either missed the stream or did not want to sit through a multiple hour long session.

The author believes the future of online classes will be similar in format to the one being explored through this project. Real time interaction between a teacher and students that can take place from anywhere in the world is a powerful tool.

## **2. Review of the State of the Art**

Music equipment and technology have become so widely available and affordable that there has been a rapid increase in Do-It-Yourself musicians. Through researching the pedagogical aspects of music production and engineering, one can find three main types of learning available: specialized classes, audio engineering books, and the Internet. For the DIY musicians on a budget, the Internet is by far the most affordable and convenient choice. YouTube videos have increasingly become the first resource for anyone wishing to learn a new skill. For music production and sound engineering, there is a veritable endless amount of videos explaining audio theory and technique as well as the specific programs and equipment used. Users then have a choice of channels to subscribe to based on their personal preferences ranging from how the videos are presented to the teaching style of the content creator.

What the YouTube videos lack for students is the personal communication sometimes desperately needed to answer a specific question. This is truly what separates the Twitch streaming service from YouTube. Viewers have access to a live chat feed to instantly interact with the streamer. This interconnectivity is what has made Twitch garner over 1% of all internet traffic everyday<sup>1</sup>. Under the Music & Performing Arts channel, streamers typically engage their audience through performing live and taking requests for songs. The streams with the most active viewers at one time consists 24/7 music streaming. The streamer with the highest average

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<sup>1</sup> DiPietro, Matthew. "Twitch Is 4th in Peak US Internet Traffic – Twitch Blog." Twitch Blog. February 05, 2014. Accessed November 25, 2018. <https://blog.twitch.tv/twitch-is-4th-in-peak-us-internet-traffic-90b1295af358>.

viewers in the Music & Performing Arts channel goes by the pseudonym 2Bough who averages 1,363 viewers at a time.<sup>2</sup>

### **3. Description**

Where the channel, `cojemo_`, has differentiated itself is in the masterclass type approach that the content is focused on. The live chat feature provides a place for viewers to get answers to specific questions they may have and to share their experiences with other viewers. Users may also submit their own projects and songs where they can get live feedback on their ideas and problems. The content generated from the Twitch channel is also available for later viewing on the `cojemo_` YouTube channel. YouTube watchers who discover the channel will be drawn to watch live on Twitch to be able to join in the fun and to ask questions, while the Twitch watchers will be drawn to YouTube to review the topics covered and to see what they missed.

The process for creating the content for the channel can be broken into three steps: planning of the course for that session, the live stream, and editing the live stream to be posted to the YouTube channel. Determining what course would be offered was planned ahead in a schedule that is available to the viewers. Lesson plans were constructed for each course by the author.

The live stream process involves some basic audio equipment and a few different software programs. The standard setup includes a webcam, an audio interface, and microphone prior to opening up the software. Next, open the digital audio workstation (DAW). After this, open Open Broadcaster Software (OBS) as the intermediary between the computer broadcast and the Twitch server. OBS has several areas that need to be set up for a stream prior to starting, and

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<sup>2</sup> The Most Popular Music & Performing Arts Twitch Streamers, November 2018. Accessed November 25, 2018. <https://www.twitchmetrics.net/channels/popularity?game=33>

these can be saved and recalled for later. Lastly, run a separate webpage running the stream. This allows monitoring of the broadcast and see what the viewers are writing in the chat.

In OBS, there are some “scenes” that need to be configured. The scenes determine what is shown and heard by the viewer by attributing different sources to them. At minimum, a streamer should have two scenes, one for broadcasting and one for a holding or “away” screen. The author’s away screen consists of an image source, a media source which plays a mega mix of Connor’s music, and a script which controls a countdown timer. Before starting a stream, start this countdown timer to let people know they are in the right place and that the stream is working.

The broadcasting scene is more complicated. The sources it includes are: audio input capture to record the internal audio for listening to what is coming from the DAW being used, a second audio input capture to receive the signal from the users microphone, two browser input sources which relays the chat to my broadcasting screen and shows alerts such as followers and subscribers, a video capture device which records the webcam, and a display capture device for broadcasting whatever is displayed on the computer. The internal audio source must be changed for the DAW being used. The author suggests using a separate application called Soundflower which routes audio between different apps.

#### **4. Innovative Aspects**

Learning a new skill for many living in the 21st century is as simple as going to YouTube and finding a tutorial. This is fantastic when one understands exactly what they are looking for, and they may even be able to have another video recommended to a topic they had not heard of. An example of this may be looking at a video to learn about compression, and seeing a related



video about side chain compression. With audio production however, the amount of tools at an engineer's disposal is vast. Having a teacher available to interact with you on your specific project helps a new audio engineer learn how to achieve the sound they're looking for without wading through the sea of YouTube videos.

The author is one of the first to bring a channel to Twitch exclusively dedicated to teaching music production. Mr. Bill, ill.Gates, Morwic, and other electronic music producers have streams on Twitch, however these streams focus more on their workflow rather than tutorials. Mr. Bill has tutorials available on his YouTube channel, but these are not available on his Twitch page.

## **5. New Skills Acquired**

After completing this project, the author found that he had become much more comfortable with online teaching. Connor believes that the presence acquired in his online persona can translate well to the classroom setting. Furthermore, teaching engrained the production skills acquired through the coursework at Berklee. The author has become moderately fluent in OBS and video editing, which will also be useful in any type of audio/visual projects that may be pursued in the future.

## **6. Challenges**

The challenges encountered in this project can be organized into three aspects: learning the technology, gaining viewers, and becoming comfortable with this style of teaching. The author was not familiar with both streaming and video editing software, namely OBS and Adobe Premier Pro. While the user interface for OBS is very intuitive, the audio routing was the most difficult to overcome. Finding solutions were surprisingly hard to find given the amount of

people streaming on Twitch, however the particular set up being used is not very common. The author had gain video editing experience before starting this project. The author found that Adobe Premier Pro was the best video editing program to use for this application. Learning video editing came largely from studies in the Live Video Performance course at Berklee.

For most content creators on the internet gaining regular viewers is a steep challenge, and `cojemo_` is no different. It can take months for a YouTube channel or Twitch stream to reach its first 100 followers. The author plans on continuing promoting the channel to friends, colleagues, and students to build the initial live viewer count. Once viewership is steady, `cojemo_` will appear more frequently towards the top of the popular streams and will garner new viewers in this way.

Before starting at Berklee, Connor taught undergraduate courses in music production and technology as well as private and group lessons to middle school age children. He became very comfortable with this style of teaching and obtained skills in encouraging interaction through questions and activities. Changing to a style of teaching where he was not in front of students in person was an unexpected challenge. It took some time for the author to become comfortable with not receiving immediate feedback, but gradually he developed his own style with presenting material through this medium.

## **7. Future Ramifications**

After finishing the program with Berklee, the author will continue teaching undergraduate students in the art of audio engineering and music technology courses. He plans on using these videos as a resource for future students to use outside of the classroom. This should prove to be an invaluable tool as the videos act as a smaller lecture in themselves. As the author progresses throughout his career, the stream will expand to topics relating to the newest

technology. The author plans to provide weekly streams on an even wider range of topics such as composing, arranging, Sibelius, and other programs to continue to grow cojemo\_'s community. As the community grows, Connor plans on exploring the sessions subscribers are working on to give them personal feedback on stream. This will undoubtedly help and inspire more followers in the process.

## **8. Conclusion**

Twitch streaming may very well be the future of online learning. With the ever rising costs of education and student debt in America, future music makers may see an alternative to receiving a college education in real time, specialized learning online. There is a significant improvement to YouTube tutorials as well with this format being the real time interaction with the Twitch streamer. With music making in the 21st century becoming largely a DIY activity, streams such cojemo\_ could be a crucial step in the process of learning about the production of audio.

## **9. Bibliography**

- DiPietro, Matthew. "Twitch Is 4th in Peak US Internet Traffic – Twitch Blog." Twitch Blog. February 05, 2014. Accessed November 25, 2018. <https://blog.twitch.tv/twitch-is-4th-in-peak-us-internet-traffic-90b1295af358>.
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