

# Expanding the Experiential Library

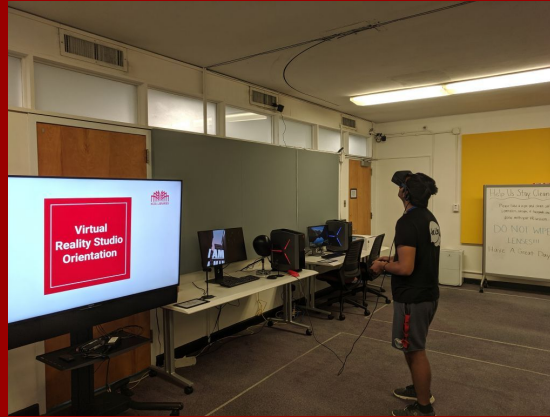
Using Livestreaming to Adapt Hands-on Learning  
Spaces During a Global Pandemic

Colin Nickels (he/him)  
Experiential Learning Services Librarian

Claire Cahoon (she/her)  
NCSU Libraries Fellow

# Background - Experiential Learning

We can't allow access to spaces safely.



How do we share these spaces and services while remote?  
Show what they can do? Employ student workers? Provide drop-in help?



## **Zoom Poll:** How much do you know about Twitch?

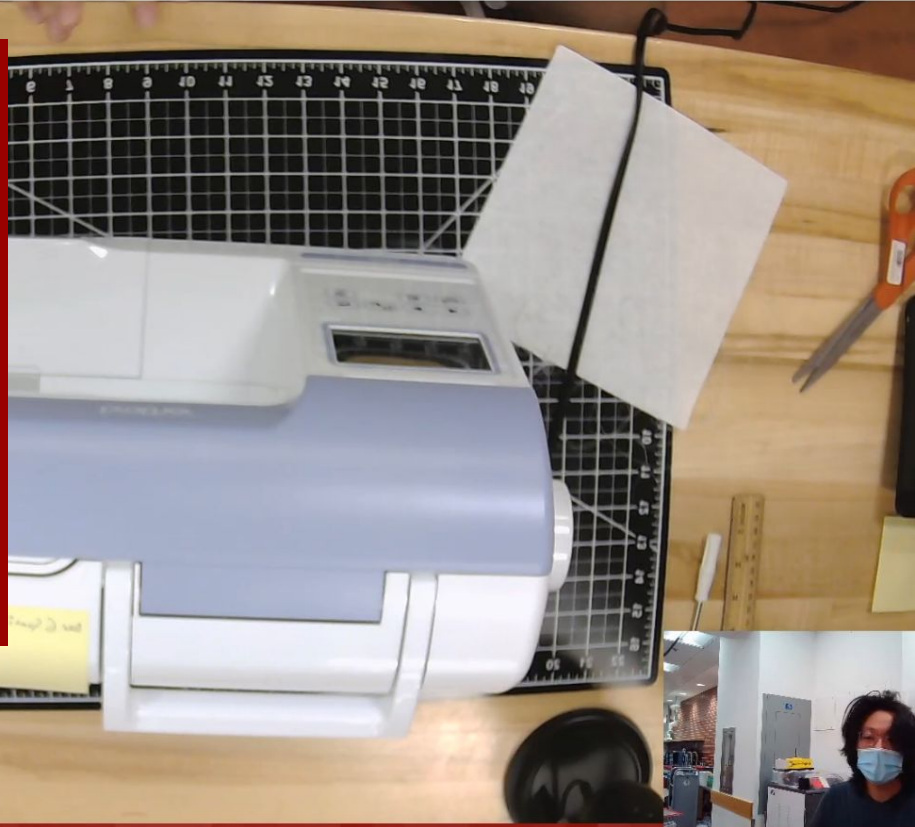
- I've never heard of it
- I've heard the name before
- I've watched a few streams
- I'm a regular user
- I'm a Twitch streamer

# What is Twitch?

A virtual space for interactive live broadcasting, specializing in community-created content.

## Features:

- Share video, your screen, a game, and more
- Chat room
- Saved videos



I-> Chat on Videos

0:00 ncsulibraries\_mod: You are live! Sound and Video look good. Welcome everyone to the Makerspace stream!

0:23 librarianClaire: Hello!

2:04 librarianClaire: Is Inkscape a free tool?

2:33 librarianClaire: Got it

2:34 ncsulibraries\_mod: Yes! Inkscape is free and open-source. <https://inkscape.org/>

2:43 librarianClaire: Thanks!

3:55 ncsulibraries\_mod: The stitch pathing plugin (Ink/Stitch) used is also open-source and free. <https://inkstitch.org/>

10:22 ncsulibraries\_mod: Machine in use: Brother PE800

16:36 ncsulibraries\_mod: Yeah. I believe the maximum hoop size is 5"x7".

17:27 ncsulibraries\_mod: You might want to re-stitch the graphic after resizing to reset the spacing between stitches. It might be a little too dense scaling that much.

18:51 ncsulibraries\_mod: I'll introduce myself so you can use my name. Hello everyone! I'm Nick (the streamer from yesterday).

19:41 ncsulibraries\_mod: Aww... you flatter me. You have more experience with this software than I do though. I haven't used it since the update.

25:34 ncsulibraries\_mod: I tend to just call it backer or tear-away.

27:07 ncsulibraries\_mod: It's there mostly to provide an unstructured fiber mesh that will catch any stitches that sound cause stress during stitching. Some fabrics can be embroidered without it, but it assists in making sure holes aren't torn in the base fabric.

28:58 ncsulibraries\_mod: Not sure how "sound" got in there. "Could" was the intended word.

32:19 ncsulibraries\_mod: It's made of fibers not dissimilar to paper, so with some water it will degrade into pulp and wash out (eventually).

33:42 ncsulibraries\_mod: Is the

## NC STATE University Libraries

Digital Embroidery - Stitching Inkstitch/Inkstitch Designs • 23 days ago

Makers & Crafting



ncsulibraries  
streaming live now

Hi, I'm  
Andrew (He/Him)

9 Share

Follow

# Similar Platforms

- YouTube Live
- Facebook Live
- Instagram Live

**NC STATE**  
University Libraries





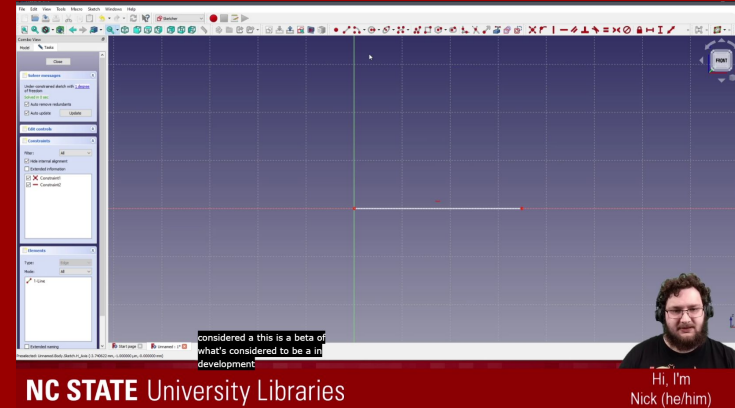


## Why Twitch?

- Approachable and widely used
- Casual/informal
- Drop-in views (not fixed length)
- Anonymous
- Synchronous and asynchronous
- Browser and mobile accessible

# Our Team

- 2 Librarians - Fellows Initiative  
Background work, logistics, administrative tasks, scheduling... etc.
- 2 Staff - Supervise students, physical setups, supply ordering, anything on site
- 6 Students - Planning, delivering, and moderating streams
- Guests, Collaborators, and Advisory Group



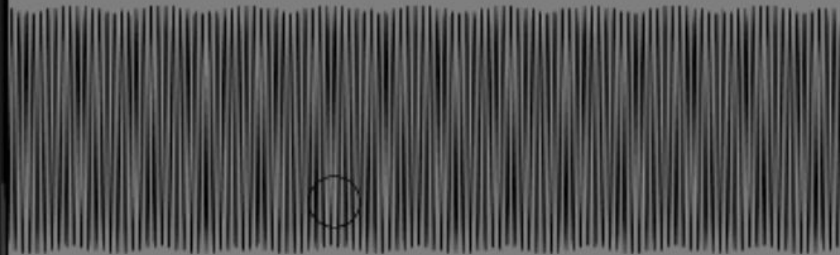
# Technology:

- USB Microphones
- Document Cameras
- Webcams
- PC or Mac
- OBS Software
- Avermedia Pro 2 Capture Card
- Equipment based on content (3D Printers, DJ equipment, VR Headsets, etc...)

The screenshot displays the OBS Studio interface for a live stream. The main preview window shows a streamer's video feed with a red background and the text "NC STATE University Libraries". Below the preview is a red banner with the same text and a name tag that reads "Hi, I'm Nick (he/him)". The interface includes several panels: "Stream Information" (Title: NOW: Making the most of a digital space [OBS, Arduino, HID] | LATER: Fusion 360 XTANE), "Scene Transitions" (Move, 500 ms), "Controls" (Stop Streaming, Start Recording, Start Virtual Camera, Studio Mode, Settings, Exit), and "Stats" (1 Viewer, 0:05, 0 Clips). A "Stream Chat" window is open on the right, showing a welcome message from "ncsulibraries\_mod" and viewer comments like "sounds good!" and "floating head!! oash haha". The bottom status bar shows "Dropped Frames 0 (0.0%)", "LIVE: 00:00:30", "REC: 00:00:00", "CPU: 14.7% / 50.00 Fps", and "Rtc: 300".



```
44
45 function drawFreqSpec() {
46   const spectrum = fft.analyze()
47   const rectWidth = windowWidth / spectrum.length
48   spectrum.forEach((d, i) => {
49     const xPos = map(pow(i, 1 / 1.5), 0,
spectrum.length, 0, pow(windowWidth, 1 / 1.5))
50     const height = map(d, 0, 255, 0, windowHeight)
51     rect(xPos, 0, rectWidth, height)
52   })
53 }
54
55 function playOscillator() {
56   osc.amp(maxAmp, 0.5)
57 }
58
59 function mouseReleased() {
60   osc.amp(0, 0.5)
```

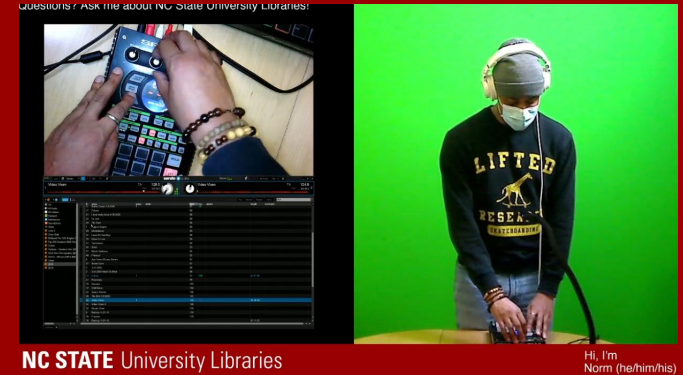


## Limitations

- Twitch's purpose isn't education
- Terms of Service for the Affiliate program
- Remote streams, remote streamers

# How are we using Twitch?

- Drop-in Hours
  - Share spaces (Makerspace, VR Studio)
  - Demonstrations
- Special Guests
- Collaborations
  - Exam Wellness Week
  - Brickyard Broadcast



# Fall 2020 by the Numbers

## August 31 - November 20

- 75 streams
- 17 different streamers
- Avg. of ~3 viewers per stream
- 106 followers



*Follows by week, August 31 - Nov. 28, 2020*

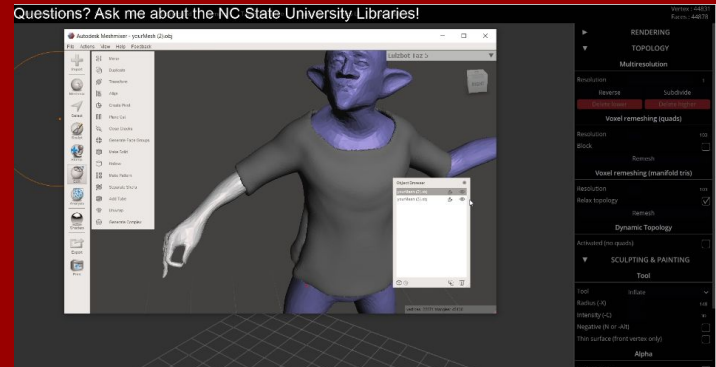
# Production Value vs Preparation Time

- Compelling content can be easy
- Experiential learning spaces primed to create this kind of content
- The more time you invest the larger the impact you can have
- Partnerships can bring large audiences



NC STATE University Libraries

Hi, I'm  
Justin He/Him



NC STATE University Libraries

Ian (he/him)



## **What's Next?**

- **Consistent Scheduling**
- **More Advertising and Outreach**
- **New Content Categories**

Questions? -- [twitch.tv/ncsulibraries](https://twitch.tv/ncsulibraries)

Ask now or feel free to contact us later!

Colin Nickels  
[crnickel@ncsu.edu](mailto:crnickel@ncsu.edu)

Claire Cahoon  
[cecahoon@ncsu.edu](mailto:cecahoon@ncsu.edu)