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Online opportunity

Professor uses video game skills to improve pandemic teaching

Teaching and Learning

BY KELLY FOSS

The shift to online learning at Memorial University gave Dr. David Churchill an opening he'd been waiting for.



Dr. Dave Churchill

📷 PHOTO: MIKE RITTER

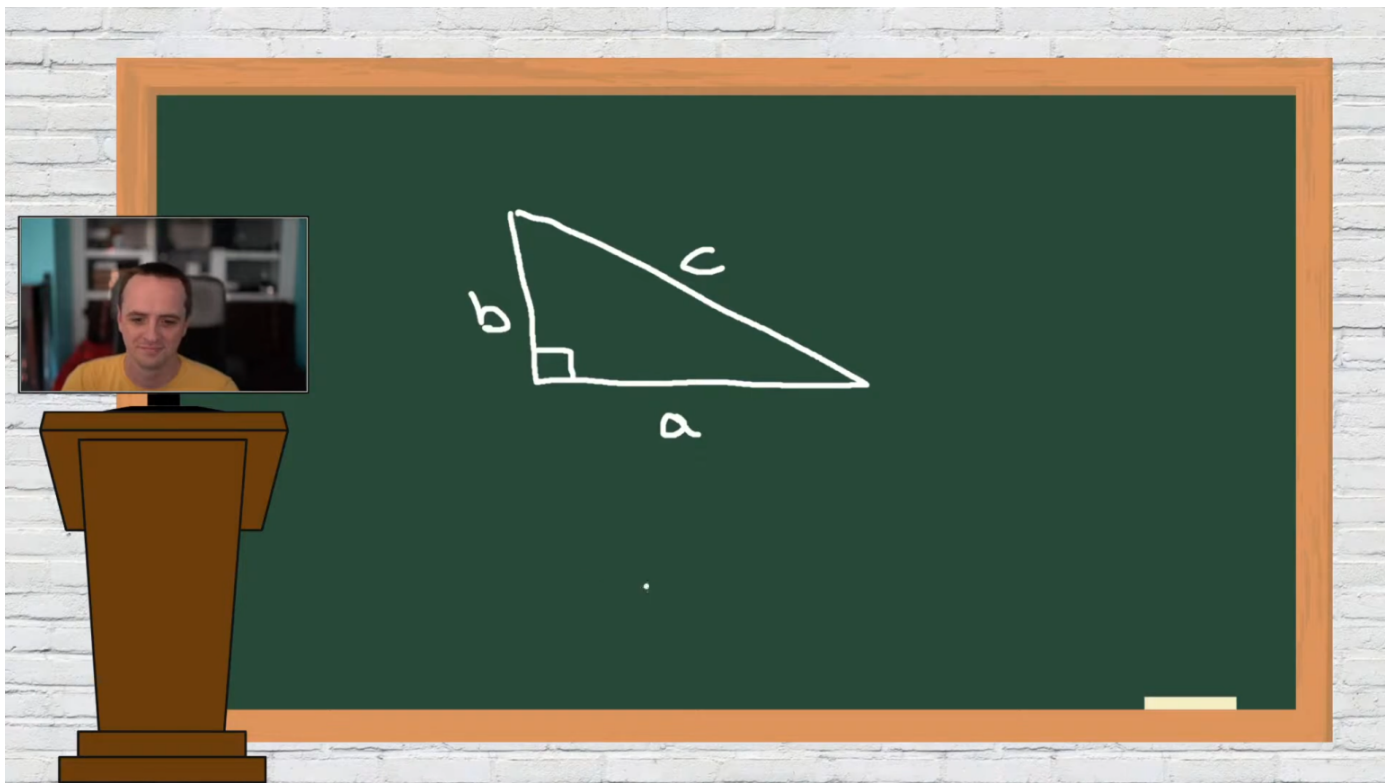
“As bad as it was, the pandemic was also an opportunity,” said the computer science associate professor. “Going online that first year allowed me the chance to pour all my effort, my heart and soul really, into something I would never have had the time to do if I was teaching in person.”

Years of livestreaming and interacting with fellow video gamers online meant when the change occurred, Dr. Churchill was in a better position than most.

“I’ve basically lived online since I was 14,” he said. “I’m familiar with online streaming, specifically Twitch and YouTube, because I play video games. I had video and audio production experience and I had the hardware at home to do it.”

‘Best of both worlds’

While Dr. Churchill’s classes were technically asynchronous – or, pre-recorded – he invited his students to tune into his Twitch channel and watch him record them live.



Open broadcast software allowed Dr. David Churchill to easily switch back and forth between his various displays, basically giving him an at-home TV studio.

📷 PHOTO: SUBMITTED

“It was completely optional, but I found the technology interesting and thought my students would also find it interesting, because many of them are video gamers too,” he said. “It’s what I considered the best of both worlds.”

The process involved Dr. Churchill giving a live lecture, where students could ask questions, and making the video available later through Twitch's video-on-demand. He also uploaded it to YouTube and made it available through his Memorial web space.

"Students could decide for themselves how they wanted to view it."

During the recordings he used open broadcasting software, which allowed him to quickly switch back and forth between his webcam and various displays.

"My first lecture received over 10,000 views in 24 hours."

— Dr. David Churchill

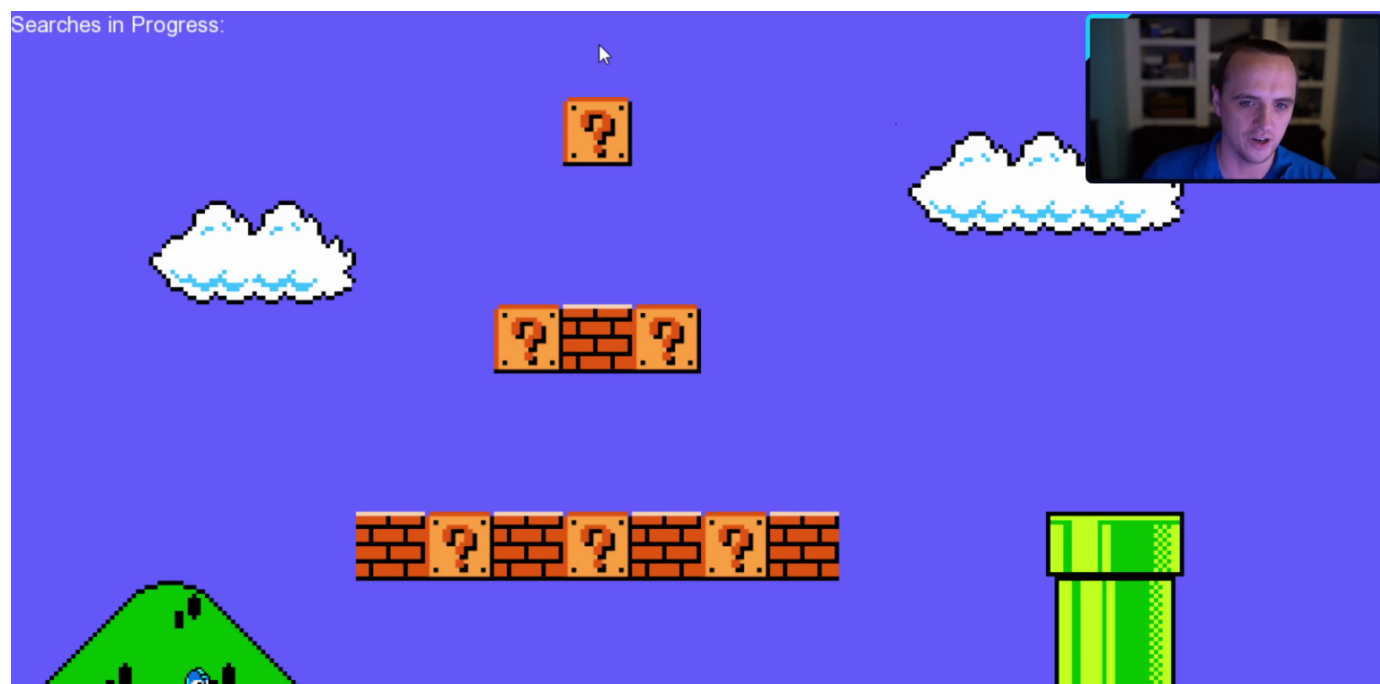
"It was basically a TV studio. One minute I could be programming and showing them the output, then with a push of a button I could be showing them one of my other three monitors displaying my PowerPoint slides or a YouTube video."

He found about 40 per cent of his classes watched the live lectures, while another 40 per cent watched the recordings within a day.

Building a community


The professor also used Discord for his classes – a platform that allows users to communicate with voice and video calls, text messages and more – which also has roots in gaming.

"One of the bad parts about being online is not talking to anyone," he said. "I set up chat rooms for each of my classes with sections for announcements, general discussion and an assignment help room where students can get advice from each other. It allowed the students to build a community and many of them have chosen to stick around, even after finishing their courses with me."





Videos from Dr. Churchill's C++ game programming course went viral with over 10,000 views in 24 hours.

 PHOTO: SUBMITTED

Using Twitch and YouTube gave Dr. Churchill another opportunity: making his lectures available to the general public. He says his students made up half of his viewers; the other half was random people who were interested in the topic.

"Later I made a Reddit post about making videos from my C++ game programming course available online and it blew up. My first lecture received over 10,000 views in 24 hours."

Becoming a better instructor

Ultimately, Dr. Churchill believes that editing and posting videos of himself made him a better lecturer. He also says watching videos from other universities' computer science departments has provided him with inspiration.

"They've given me lots of great ideas I can pass along to my students. That's not something I would have been able to do in person."