'The Pivot' — Moving Studio Classes Online During a Pandemic

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ABSTRACT

Due to pandemic restrictions, three semesters of coursework were moved to 100% virtual instruction using learning management systems (LMS). The opportunity for constructing rubrics that are linked to program-wide SLOs and course-level SLOs, and aligned to individual assignments and productions now exists. Even as coursework pivots back to hybrid and face-to-face/hands-on instruction, the use of aligned rubrics deployed across multiple online sections of a course would allow for much more efficient and effective data collection and analysis across multiple sections and years. This research will examine the process of creating, deploying, and using rubrics in proprietary LMS systems such as Blackboard and Google Classroom, and open-source LMS systems such as Moodle and Sakai. Beyond virtual learning, it will explore how physical productions in the field can use aligned streamlined rubrics, and how rubrics for interactions in synchronous virtual class sessions such as Zoom and Collaborate Ultra can be constructed and used to measure peer feedback. The practice of sharing data across departments and institutions will be explored, and some of the challenges and opportunities of big data analytics will be examined. The outcome is expected to be applied to periodic program reviews and QM strands for online and blended course design and construction. Potential curriculum redesign and streamlining will be explored and linked to contemporary research in higher education and industry-standard technical updates.

Keywords: Media Education, Virtual, Studio Production

1   Introduction

Many hands-on and technical courses in Higher Education were considered impossible to move online during the 1990s–2010s. While UDC has always served nontraditional students, their specific needs for flexible learning and hybrid experiences already made some coursework and video production make heavy use of the online components of classes. Assignments were given and collected by Blackboard for many years. During a program review in the early 20210s, two intro-level production classes were combined and redesigned with 'cell phone journalism at the core. The new skills needed for producing and editing video using first DSLR cameras and later smartphones were written into the student learning outcomes of several courses. While students still had access to the on-campus TV studio and equipment checkout, many students had come to prefer using their cameras for video production assignments. While many students still utilized the on-campus video editing bays, increasingly students had access to notebook and desktop computers with enough computing power to run video editing applications. Anticipating this long-term trend, many of the existing syllabi were updated to allow for flexibility in where and how students edited their video packages and news stories.

2   Methodology

The technology, cameras, playback, and physical equipment needed for video and film production and live studio broadcasting technologies had been moving toward miniaturization and portability. But even as recently as five years ago, the size of the hardware and the logistics and upkeep of physical spaces still necessitated most hands-on teachings take place in specialized faculties on campus. The early use of chroma-key (green-screen) foreshadowed the use of virtual spaces, but the wiring, lighting, and audio prohibited ultra-portable production until the early 2020s.

By 2016 both iPhones and Android phones had enough storage capacity to shoot and store over 20 minutes of high-definition video. By 2018 most new smartphones had multiple lenses that allowed the recording of professional-level video. However, the generic pre-loaded applications on smartphones were limited in capabilities and often did not allow for manual control. With the introduction of Filmic Pro in 2016 and similar phone apps by Adobe and others, students can control all of the manual features of the smartphone camera. This includes manual focus, control of aperture and color temperature, aspect ratio, frame rate, compression, and others. Although these pro applications cost money, there are a growing number of open-source alternatives.

At the same time, many of the software solutions were proprietary or corporate and needed expensive license fees that could not be extended to all student participants. The open-source software movement foreshadowed dispersed uses, but the capabilities of home computers and field production equipment, as well as high-speed connectivity, were also not available.

Even prior to the COVID-19 pandemic, many video production assignments had been redesigned to be accomplished with DSLR cameras (the purchase or rental is already required for the Digital Photography course) or smartphones. Students are introduced to a standard news-gathering process of the "5-Shot +1" method of shooting. For each 'mini-documentary' production students are taught to organize shoots into video sequences that involve the following shots: 1) a close-up of the hands of the subject, 2) a close-up of the face of the subject, 3) a medium or medium close up shot of the hands and face of the subject in the same frame, 4) and over-the-shoulder P.O.V shot from the subject down to their hands, and 5) a 'reveal' shot—an unusual or alternative view—which may be the next step in the subject's job, the addition of another person, or the revelation of something new. The "+1" is a sixty (60) second interview. Students are taught to use the 'rule of thirds' and to not cross the 180º line in their sequence. The five shots are then edited together in a cuts-only format in compliance with news network standards. The interview can be used as a voice-over or intercut with the five-shot sequence. As enrolled students now have access to the Adobe Creative Suite through the university, most students use Adobe Rush or Adobe Premiere, based on their skill set and level of comfort. Others use Apple iMovie. With the release of an open-source version of Davinci Resolve, students may use that free software.

Replacing expensive camcorders, Digital Single Reflex Lens (DSLR) cameras are now required for introduction and intermediate production courses. Replacing the old room-sized switchers, videotape machines, and racks, the digital media program at UDC has used the NewTek Tricaster for almost 15 years. The most recent version, the 'Tricaster Mini' is now

only the size of a shoebox, and uses all digital inputs (HDMI, USB 3.0, etc.). NewTek pioneered an open standard called network digital interface (or NDI) that allows for most of the inputs to be via Internet Protocol (IP) and therefore any camera or device connected to a high-speed internet connection can become a source into the Newtek switcher. Since students were already familiar with this 'video-over-IP' style of live production, when the university needed to shut down for the pandemic, both students and faculty could easily pivot into 100% virtual studio production.

By lucky technological coincidence, the Open Broadcaster System (or OBS) was also launched in 2016 as a free open-source application that can run on notebook and desktop computers and virtually mimic most of the functions of a standard studio's video switcher, including the NewTek Tricaster mini. With roughly half of the students owning a personal computer with enough processing power to run the program, student production teams could have one student act as the technical director and bring the live video sources into their personal computer and live switch a student news production with another student acting as director, and other students acting as live on-camera talent.

Student teams were provided with a template script, into which student journalists ported the stories that had been created by other students shooting on DSLR cameras and smartphones. Student directors and producers practiced from the scripts and worked with the on-camera talent in virtual rehearsals which were held using the Blackboard Collaborate live classrooms. The student technical directors, who had the OBS software installed on their computers were provided a template for inputs, show segments, and other logistics. Once all of the pre-produced smartphone/DSLR segments were completed, students began virtual dress rehearsals with all of the same components that they would have brought into the physical studio.

By another fortunate coincidence, the video conferencing software Zoom created a new feature called 'Immersive View' where multiple web cameras are composited into a virtual space. Both student on-camera talent created green screens for their home offices and were composited into the same virtual space so that they appeared to be in the same new studio set.

While many colleges and universities had mobile journalism, gonzo filmmaking, and digital documentary courses, the overall design of the curriculum for full virtual production remained as limited as the technologies. The COVID-19 pandemic struck higher education at precisely the time when the technical limits were being overcome. Smaller programs that were already accustomed to stretching budgets and lightweight equipment found themselves at an advantage to experiment with open-source software solutions (OBS, Audacity, etc.), portable cameras and high-end webcams, and virtual spaces (Zoom Immersive View, NewTek virtual sets) to create live, virtual, dispersed student productions with limited or no use of the physical lab spaces on campus.

3   Results

Near the end of the semester, the live production was facilitated by faculty overseeing the student production. Blackboard Collaborate was used as the main communication area (the virtual 'control room') and Zoom was used as the studio camera input (the virtual 'news studio floor'). The live production was streamed to YouTube, and the link was sent to all of the

students, many of whom chose to send the link to friends and family to watch the live show. Both the 'control room' and the live YouTube stream were recorded for grading, assessment, and feedback. Like all learning experiences and live productions, there were many technical glitches and mistakes, and these were used as learning experiences in a 'post-mortem' meeting the following week.

Students edited many of the small mistakes and glitches using Adobe Premiere and Davinci resolve.

As part of the iterative process and pivot to 100% online learning (and an eventual pivot back to hybrid and on-campus experiences) the student learning outcomes of the class in the syllabus will be re-evaluated. They are:

1-2 present information in various media utilizing appropriate techniques/technologies.

1-3 competent management skills for the control of time, human resources/technical resources.

2-1 apply content and technology skills by creating short-form documentary videos, editorial essays/columns, audiovisual presentations and live on-camera performances.

2-2 learn how to research efficiently and effectively from primary and secondary sources, correctly credit or cite sources, create bibliographies, and understand and respect copyright.

4-1 Students will demonstrate a working knowledge of editorial fact-checking, thematic deconstruction, objective evaluation, and subjective aesthetic criticism.

5-1 Students will participate in internships, on-campus opportunities, and off-campus relationships.

5-2 Students will demonstrate excellence in a chosen area of expertise through portfolio review.

The open-source textbooks are taken from industry-standard tech manuals and from the public broadcaster standards, which are both available free online. They are:

- *Tricaster 8000|860\460\410\MiniSDI\Mini User Guide.*
- *Open Broadcaster Software Studio Multiplatform Help Guide.*
- *PBS Producer's Handbook.*
- *Reuter's Handbook for Journalism.*

4   Conclusion

While many of these ideas were accelerated by the response to the COVID-19 pandemic lockdowns, the digital media program at UDC has been engaged in using digital technologies and innovative design to address the specific needs of our student population. In 2009 the MacArthur Foundation published a whitepaper by Henry Jenkins and other researchers (Jenkins, 2009), which examined the challenges faced by all students in digital participatory culture, but more especially students from non-traditional academic backgrounds who may not have had access to the skills and technology needed to create multimedia and video productions effectively. While the original problem of the 'digital divide' from the late 90s has largely been solved with smartphone technologies, inexpensive notebook computers, and (some) public WIFI and internet service, several gaps and challenges remain. The report describes these:

"The Participation Gap — the unequal access to the opportunities, experiences, skills, and knowledge that will prepare youth for full participation in the world of tomorrow. The

Transparency Problem — "The challenges young people face in learning to see clearly the ways that media shape perceptions of the world" The Ethics Challenge — "The breakdown of traditional forms of professional training and socialization that might prepare young people for their increasingly public roles as media makers and community participants" (Jenkins, 2009).

The report throws down a challenge that the digital media program was already responding to before the COVID-19 pandemic and will continue to inform curriculum, and assignment design moving forward. The authors continue:

"Educators must work together to ensure that every American young person has access to the skills and experiences needed to become a full participant, can articulate their understanding of how media shapes perceptions and has been socialized into the emerging ethical standards that should shape their practices as media makers and participants in online communities (Jenkins, 2009).

UDC and similar programs redesigned coursework and equipment use (including students' personal cameras) to achieve quality live productions. Like the radical open-source nature and low cost of the Open Broadcaster Software and Davinci Resolve, the digital media program will continue to seek out open-source options and alternatives to encourage collaboration & self-determination among students, equity and access to shared technology by the broader community, open-ended social entrepreneurialism by alumni and online collective intelligence in crowd-sourced applications by all.

5 Publisher's Note

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