



Whitney High School: Where the News is Unleashed Every Day

How Whitney High School Teacher Ben Barnholdt uses resourcefulness and ingenuity—and capable, cost-efficient tools like Wirecast—to advance an impressive broadcast media program

“I wanted the students to develop classroom-to-career skills, and to get a feel for every aspect of broadcast news production in a very professional atmosphere. This program is designed to teach them broadcast journalism skills, and then apply those skills to actually producing all of the features and content that we need to make *Unleashed* a professional looking newscast.”

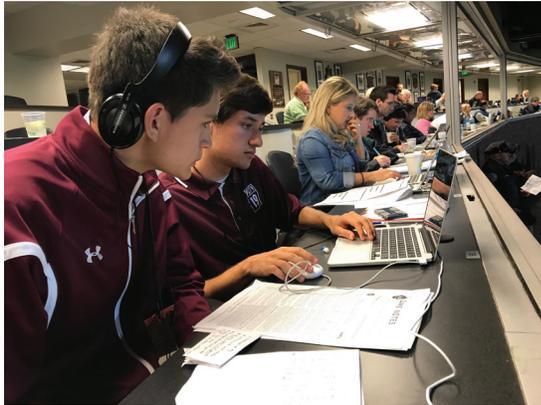
Ben Barnholdt,
Teacher/Director of the
Broadcast Media Program at
Whitney High School, Rocklin, CA

The broadcast media program at Whitney High School, a public high school in Rocklin, CA, stands out as one of the most impressive and successful programs of its kind in the country. Their student-produced 15-minute daily newscast, *Unleashed*, has won numerous national awards for excellence in student broadcasting.

Today, the program has expanded into a full-fledged community television station, branded as WCTV19, which is watched on the school's campus-wide channel 19, on two local cable channel systems, and on the school's social media outlets. Two Sacramento TV stations—KCRA3 and CBS13—featured the students' remarkable accomplishments on their evening news, especially the way they pull together as a team to produce polished news shows like the pros do.

Today, a record number of Whitney High School students vie to get into the program, and stay in year after year. And their teacher, Ben Barnholdt, is happy to stay in the background and let his kids shine.

This is the story of how he started the program from nothing and built it up to be an outstanding training ground for broadcasting, and for life. It's about how they use Wirecast live production streaming software from Telestream to produce and distribute *Unleashed*. It's also about the many challenges that have been overcome and the rich rewards being reaped.



The Initiative

The students refer to him as *Barnholdt* because they spend a lot of quality time with him, both in his classes and in their on-campus TV studio and control room where *Unleashed* is produced. But Ben Barnholdt doesn't mind their informality at all because he is personally invested in them and the program.

When he first arrived at Whitney High School 11 years ago, Barnholdt was tasked with creating a new broadcast media program, and in particular, overseeing the production of a morning announcements show. While there wasn't much video production equipment to start with, and virtually no money or budget to buy it, his vision and goals for the program were clear.

The Background

Unleashed is the culmination of the many classes and workshops that comprise Whitney High School's Broadcast Media curriculum:

- Introduction to Broadcasting – a beginner class taken by all students in the program
- Broadcast Journalism – an advanced course focused on producing news features for *Unleashed*
- Film Production – an advanced course focused on producing short films, commercials and PSAs for *Unleashed*
- Sports Journalism – an advanced course focused on producing sports features, such as Full-Court Press, the sports wrap-up segment for *Unleashed*

A big part of this academic program is to produce videos that address the pressing concerns facing today's teens, such as mental health issues and suicide prevention, and to make their students aware of things that are going on at their school and in the community.

During class time, the advanced students use professional grade video production equipment, such as the Wirecast system, to produce the news, sports and lifestyle segments, which are featured on *Unleashed*.

The reality is that there are more students interested in participating in the program than there are seats in the advanced classes. To move to the next grade level, the students—80 in all—must submit an application every April to make the case for why they deserve to remain in the program, as well as demonstrate tremendous dedication year after year.

This involves arriving at 7am—well before the first bell rings at 7:40am—to tackle the many pre-production tasks associated with *Unleashed* such as:

- Writing news, sports and weather scripts
- Putting scripts into the teleprompter
- Checking the mics
- Adjusting the lights
- Organizing features and segments using Rundown Creator
- Creating broadcast graphics for *Unleashed* segments

While Wirecast is a live streaming production system, *Unleashed* is actually pre-recorded by 9:07am, in time for the students to leave for their first period class. Despite the pre-recording, *Unleashed* has the look, feel and pacing of a live show.

The Challenge

Since professional video equipment is typically a big capital expense, the biggest challenge that has faced the broadcast media program has been financial. Over the years, Barnholdt has managed to raise the money he needed to launch and expand their broadcast facilities through inventive means, including:

- Selling commemorative DVDs of the videos his students produced
- Applying for government, technology and education grants
- Crowd-funding, with such sources as *Go Fund Me*
- Requesting donations from area broadcast organizations and pro video companies
- Winning prize money by entering his student-produced videos in virtually every student film and television competition he could find

“The real turning point came for us when we won a coupon to get Wirecast software for free as one of our prizes. As an all-in-one live production and streaming system, Wirecast is now central to our broadcast studio and remote production workflow and distribution.

– Ben Barnholdt



Even in their 11th year, the program continues to face financial hurdles as they work to further expand the facilities. Through a Go Fund Me campaign and a technology grant, the program recently acquired a new 25-foot broadcast production trailer that's pulled by a pickup truck. The trailer's interior has new flooring, carpeted walls, equipment racks, consoles, wiring, cabling and air conditioning.

The trailer makes it faster and easier to get the student crews and the equipment out to remote sites to produce live-streamed shows. Recent remote productions include: live-streaming football from the high school's stadium and many special community events from Rocklin and neighboring Roseville, CA.

"Our new broadcast trailer uses the same Wirecast-driven workflow that we use in our studio control room. In this way, I only have to teach the students one way of working, whether they're in the studio or working on a remote, like our football games. And all of our programming shares the same look and feel, and overall production quality."

– Ben Barnholdt

The Workflow

By continually expanding and upgrading their facilities, and taking good care of the equipment they own, WCTV19 now looks like a professional television station. The current equipment complement includes:

- Wirecast software
- Studio with a news set
- 4 HDTV studio cameras
- Teleprompter
- Microphones
- Bluescreen background

"Wirecast enhances our show by allowing us to chromakey news graphics and videos into the blue screen behind the anchor desk. It also makes it easy to display CG text and lower-third supers, and add transitions and effects, all from a single user interface."

– Ben Barnholdt



The students are responsible for managing the video distribution of the daily show to the following outlets:

- Whitney High School's campus-wide closed-circuit TV channel 19
- Wave Cable, which carries WCTV19 programs on Channel 18
- Consolidated Cable, which carries WCTV19 programs on Channel 79
- The WCTV19 website
- Facebook Live
- Twitter
- Instagram

WCTV19 streams to many online and social media destinations via ESE Networks, a CDN and Telestream partner. Using the hashtag #whsunleashed, any student in the school can post pictures and videos to social media, such as Twitter and Instagram, that the *Unleashed* team can aggregate. They capture on-screen graphics and video clips of interest from their social media sites at very high quality using ScreenFlow from Telestream. These assets are moved into Wirecast, which keys them into the bluescreen background on-set.

During the production, a student crew runs the cameras and teleprompters in the studio. In the control room, a separate student crew handles the technical execution of the show.

While Wirecast integrates the functionality of video production switcher, Barnholdt has one student switching the four camera feeds using a third-party production switcher. Then that switcher's output flows in real-time into Wirecast where the show's finishing touches are added.

"Wirecast is a very user-friendly program that our students pick-up quickly, including how to bring in media files, such as graphics and video clips, from hard drives. Because of its many pre-sets, our Wirecast workflow is fairly automated, and we can now have a show put together and ready to roll in just 40 minutes."

– Ben Barnholdt

Every device that's added to the workflow creates a new opportunity for a student to get hands-on production experience. This is the case with the broadcast graphics workflow, which regularly combines the following kinds of graphics for a polished presentation:

- Program opens and other transitional elements
- Lower third supers
- Logo bugs
- Full-screen graphics
- Over-the-shoulder graphics
- Data-rich displays
- B-roll video keys

Data displays, such as weather and sports graphics, are created on separate laptops using Adobe PhotoShop and Illustrator. For each daily show, students update key data, like temperatures and scores, without having to recreate their many graphics from scratch.

Another student then uses NewBlue Graphics software on a separate laptop to take those static graphics and animate them quickly and professionally to make the show more visually dynamic. Once the graphics are ready to go, they're transferred over an NDI video-over-IP network and saved on the Wirecast laptop for playout during production.

The Results

The most impressive results are reflected in the numerous awards for broadcast excellence that the Whitney High School broadcast media program has won, including:

- US Education TV's Best Overall Network
- ESE Network's Platinum Award for the top program in the country
- Student TV Network's Excellence Award for Best Daily Taped Show in the nation
- Award for Best Live Event in the Country
- Student TV Network's 2017 National Student of the Year, awarded to then-senior Sarah Murphy, who served as a news anchor on Unleashed during her four years at Whitney High School
- Now a student at Utah State University, Sarah recently won a 2017 National Student Production Award for Talent from the National Academy of Television Arts & Sciences for her WCTV19 demo reel.

Rather than coasting on the achievements of previous classes, each new group of students strives to push the envelope on the look and content of the show. And while winning awards is not their main motivation, they continue to compete in national contests.

In March 2018, Barnholdt will take a delegation of students to the Student Television Network (STN) convention in Nashville, TN where they will participate in yet another awards ceremony, as well as valuable workshops and seminars.

While the broadcast media program continues to rack up awards for excellence, Barnholdt says the best way to judge the program's merits is by looking at its impact on his students, including personal development and character building. For example, the students inspired the program's overarching theme, Ohana, which is Hawaiian for family.



Through Ohana, the students promote a winning attitude rooted in community whereby they can be competitive with each other while still looking out for one another.

Here are some of ways the students are benefitting from this experience:

- Some recent graduates have gotten into media programs at the college or university of their choice
- Other recent graduates have landed good media jobs based on their skills
- The students learn content creation, communications and video production skills that are increasingly relevant and applicable to any professional career in the digital age
- They also think on their feet, perform professionally, work as a team, and leave the program with lifelong friends and fond memories

"Whether we're using it as a production or teaching tool, Wirecast plays a very valuable role in making this program possible. It's such a deep, feature-rich product that we're probably only using 50-percent of what it can do. In time, we'll delve deeper into its production capabilities, which I'm sure will further improve our efficiency and broadcast quality."

– Ben Barnholdt

For more information

Whitney High School Website: Wctv19.com

Facebook Page: <https://www.facebook.com/wctv19/>

Visit Telestream at: <https://www.telestream.net/wirecast-gear/overview-us.htm>