Rules and Risks in Teaching New Technologies: Two Approaches to Engaging Drones in the Classroom

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Talking points (During the presentation, [video of drones](https://m.youtube.com/watch?v=0QFTdQhy2JI) were showing on the screen)

1. Introduction of presenters (2 minutes)

 \* Avery introduces our presentation. Introduces us. Talks very briefly about the need for communication courses that include drones.

2. Drone (2 minutes)

 \*Avery: What do you think of when you hear the word drone? Do you think of vehicles of mass destruction cruising over Afghanistan? Do you think of surveillance machines circling above us at 60,000 feet? Do you think of balloons tethered with cameras surveying the Civil War aftermath or kites with timing devices capturing shots of the mighty Mississippi in the early 20th Century? Or do you perhaps think of these (showing small drone)? These hobby crafts that have captured so much of our attention? These small devices that have disrupted so many fields with their opportunities and challenges?

 Well, I think of those latter two words: Challenge and Opportunity. Challenge. And opportunity.

 And that’s really what we’re here to talk about today. We’re here to think about the challenges and opportunities drones present, particularly in the classroom. And while what you will hear today has a decidedly communication slant to it, you’ll also perhaps find yourself thinking about the ways in which drones can help you to reshape and rethink education models.

3. U of U Case Study (5 minutes)

 \*Avery tells the story of developing the course for the University of Utah

 \*Discusses the H2 grant and the Honors College

 \*Only four known programs using drones in journalism at the time

 \*The need of immersion based on ethics, morals, legal sides as well as creation side

 \*Handing the reins to the students

 \*Also developing insights ourselves

 \*Working around policy

4. Ethics, Morals, Legality (3 minutes)

 \*Avery talks about the way the course helped to develop thinking about ethical and moral uses

 \*How this evolved into prototypes

 \*How students surveyed other universities

 \*How by the end of the course, at least 20 other universities were aiming for similar courses

5. What Would You Do? (5 minutes)

 \*Avery: Before we hear more about what other universities are in fact doing, and the updated and more legal ways they are doing them, I’d like for you to do something for me. Just take a minute and, perhaps with a neighbor, think of the most major ethical or moral issue facing drones in the classroom. Please talk among yourselves.

 \*Thank you. Hopefully this sheds a bit of light on some of the intricacies and challenges facing drones in the classroom, as well as gives you some perspective on the opportunities. With more on that, I’ll turn things back to my colleague.

6. Drone education enters a second generation: A new skill

\* Jean: I am probably the professor least likely to teach drones. I am a writing teacher. I don’t do video, and I’m not a tech geek. But at professional journalism conferences I attended earlier this year, I kept hearing about new Google tools, 360 images and drones. I knew my students needed exposure to these, and I proposed a special topics class called Innovations in Media. Our video instructor couldn’t fit it into his schedule, so I got it.

Luckily, last summer the Poynter Institute, the premier training organization for professional journalists, did some drone journalism boot camps, and I got into one. I learned what was involved in drone flight and realized I had an opportunity to provide my students with a distinctly employable skill: a drone pilot’s license.

The Part 107 and opportunity to get a license to fly just drones changed the landscape. The FAA rule creating Part 107 went into effect in 2015. It creates two categories of drone pilots: commercial and hobbyist. A commercial pilot needs a Part 107 license. A hobbyist does not.

I interviewed five professors within the past month who teach drones in media-related classes, and they all incorporate Part 107 standards and training. Not all require students to pay the $150 and pass the FAA test, and few students have followed through to get their licenses, partly because of the cost. But all of these professors require students to fly within 107 rules and try to prepare students to take the test.

Lincoln University, an HBCU in Missouri, has a grant to pay that fee for students who learn the material this spring in their senior capstone class. Will Sites, the journalism professor at Lincoln, says it has been a game-changer for Lincoln, an open-admissions university which has predominantly first-generation students of color, most of whom graduated from failing high schools in inner cities. Sites says he is convinced that there is a place for each of these students, and the potential of jobs in this cutting edge industry has opened doors they did not have.

7. How are drones being taught?

\*Jean: The professors I interviewed took a variety of different approaches with the content of the class. The Part 107 by itself is a boring class. (handout). It gets interesting when you can give students the hands-on experience. Professors try to meld both in these classes to keep students engaged.

One issue professors have to face is the amount of time hands-on drone experience can take out of their schedules. The Part 107 requires a pilot in command to be present each time a drone takes flight. If the drone is owned by the university, then many consider it a commercial flight. At University of Nebraska Lincoln, Professor Matt Waite requires students to get their Part 107 license so they can head out to the cornfields on their own to fly. At Winona State University in Minnesota, Professor Tom Grier prepares students but does not require they pass the test, and only 2 out of 53 students who have taken his class have obtained their license. He divides his classes of 28 into groups of 4 to 6 and he accompanies them on all shoots, even if they have their own drones.

At Brigham Young University in Utah Professor Quint Randle takes no responsibility for students who fly their own drones but he or his colleague Steve Fidel, who is also Part 107-licensed, is present whenever students use one of the two university-owned UAVs. During his classes, Avery considered all of his students hobbyists who could go out on their own.

A big piece of this decision making is insurance and what the university risk management office requires. When I returned to Weber State University with my Part 107 training, I learned that our risk management officer had grounded some drones that had flown around campus, and faculty who had drones in their department assumed drone flight on campus was banned. It turns out most of them do not have their Part 107 license, and when I showed our risk management officer mine, he was happy to work with me. Because I planned to teach a class that fall, he found liability insurance to cover the drones and divided the price among all of the departments that owned them.

There is an app for per-flight insurance: Verifly. Some professors have used this.

8. How do you assess this new skill?

\*Jean: One of the difficulties is how to assess work from these new technologies. In my case, it’s humbling because the students all fly better than I do. But it’s my job to assess the learning that has occurred. Most of the courses required a final project that demonstrated the learning--often a video project that incorporated aerial video. Many also require students to demonstrate knowledge of the Part 107 material through practice tests. My students are required to score 80% on the practice test that comes with the book. To get the license they need only 70%, so I feel confident that they could pass if they paid the money.

Have Avery describe the different approach in his class, which was more interdisciplinary.

9. Concluding remarks

Discussion of additional resources.