Teaching with Animation - Script

Presented by the Teaching and Learning Collaborative at the George Washington University

1. [Old-time movie countdown with audio]

2. [Intro slide – only sound effects]

3. Let’s say you’re teaching an environmental science course discussing the phenomenon of water spouts and how they work. Now, your job as an instructor is to give your students this information ... but how will you go about doing that?

   Well, let’s think about it from a student’s view. In a traditional classroom, we might get the knowledge from:

4. ... a reading ... [book]

5. ... or a lecture ... [photo: diagram on board and instructor explaining] ...

6. ... or perhaps images on a screen [projection of photo].

7. [laptop] Of course, today students might be online, ...

8. ... in which case they would see the images [picture on screen] this way ...

9. ... or they might do a reading on BlackBoard, [screenshot] ...

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10.
… or see a diagram on their screen, like this. [static diagram]

11.
But in the wired world, we also have the option to show the process like this. [animated diagram] …

12.
So why might we want to show the process with the image on the right [animated diagram] versus one of the images on the left? [static images again]

13.
The answer to this question, as well as the world around us, show that we enjoy watching it.

14.
In 1890, psychologist and philosopher William James described how moving things will attract attention¹, and for the past century researchers have been trying to understand exactly how and why.

Call it biology, or survival mechanisms … we are generally more interested in something when it moves. This is the same reason why you intuitively use your hands and arms when you’re teaching a face-to-face class: to get and to guide your students’ attention. If you can use techniques to replicate this type of interaction in the online classroom, you will be more likely to engage your students fully in the material.

15.
When we’re looking at adding movement to our classes, one of the primary ways we can do this is through animation. But what is “animation” exactly? What does the word conjure up in your mind?

16.
Maybe cartoons from childhood? [brief Wile E Coyote/Road Runner video]

17.
Or their modern cousins, computer-generated characters? [brief Avatar video]

18. Although these are indeed animation, they’re outside the scope of what most of us would realistically use in teaching a class. When we’re talking about animation in terms of education, we’re generally looking at some simple moving element, something that we can probably even create on our own with a basic tool.

A more formal definition in current technology comes from researchers Oh-Choon Park and Stuart Gittelman, who in 1992 defined animation as “artificially generated movements of pictures or graphics in computer displays, resulting in apparent motion.”

19. And animation is everywhere. There are hundreds of tools to choose from to create it - in fact, some of them may be features on tools you’re already using. To learn how to use PowerPoint – the most common presentation software at GW – you can view another presentation by the TLC. That title is “Animating in PowerPoint” video in this course or available on the eTeaching tab in BlackBoard.

20. So how should we use animation in teaching? And how should we not? We know good animation can increase student interest and help them process material, but bad animation can actually decrease learning.

21. Take this slide for example ... Okay, it’s test time.

22. What was the main point...? Do you remember? What do you remember?

23. Look at it again ... how does the animation affect the material? This is an example of what Richard Lowe, an expert in animation and learning, calls “eye-candy” – or animation only for animation’s sake. And as you see here, it can distract from your main point. The same goes for the haphazard use of flashing bullets, swiveling text, zooming arrows, and several other features that are sometimes a little too easy to add in PowerPoint – you’ve probably seen those lectures. On the other hand, carefully designed and implemented animations provide a tool for going beyond “eye-candy,” and they can help students both enjoy the material and have an easier time understanding it.

24. For example, many university courses involve some sort of large diagram, describing a process with multiple parts or players. Perhaps your course includes some such diagram. It can be overwhelming to students to see so much information presented all at the same time.

25. Animation may be useful in these situations to break the material into manageable pieces, or chunks, while still preserving the relationship to the original framework.

26. To see an example of how this has been used at GW, you can view Professor Joseph Pelzman’s lecture “Order Fulfillment and the Logistics System” on the eTeaching tab in Blackboard.

27. Now let’s look at how animation might be useful in solving a different type of learning challenge. An art history class is studying Diego Velázquez’s work *Las Meninas*. The instructor wants the students to focus on several points within the image. Because this class is online, the instructor cannot physically point to these elements. However, if the instructor indicates all the elements she wants to talk about, it will look like this.

28. How might she use animation to help her present this material in a more effective way?

29. As you might have guessed, the instructor can use animation to make each of these indications come up one at a time, guiding the students’ focus around the painting in a logical order, but still preserving that element’s relationship to the original context. To learn exactly how to create this technique, you can view our tutorial “Animate in PowerPoint.”

30. When you’re working with animation, or video for that matter, it’s important to make sure that your materials are always accessible to all students.

31. To ensure that your content is accessible, you should post a transcript with your materials. This should include both the audio and a description of any important visuals. You should also be sure to describe any links or
images with alternative text, also known as “alt tags.” Finally, make sure you use strong color contrast to aid those with color blindness or epilepsy.

32.
If you want to incorporate animation into your teaching, you can always make your own materials, and you can use the TLC’s “Animate in PowerPoint” tutorial as a good place to start. But it may be worth your time to first check what else is out there, as there are literally millions of animations available to you on the Internet or at local resources. We’re going to cover a few of those in this presentation.

33.
For starters, anyone looking for medical animations will find GW’s Himmelfarb Health Sciences Library particularly useful. The library houses some animations in its archives, but it also can be a great resource for finding more.

34.
For faculty in other subject areas, an internet search will likely be your best starting point. Begin by typing in your subject plus “animations” or your subject plus “educational animations” and see what comes up.

35.
Another option can be to start with a collection of animations, and then search for your subject matter. YouTube has a little bit of everything, as you already know. Discovery Education, TeacherTube, Explania.com, KhanAcademy, USGS and Merlot, on the other hand are all education-focused content collections, and they house thousands and thousands of animations. You can go to these sites, type in your subject and see what’s available.

36.
Remember, however, just as you tell your students, you must always cite your source, especially when using Internet materials.

37.
Let’s review what we’ve discussed in this presentation. We’ve seen how movement can capture attention, and therefore how you must use it wisely to focus your students’ attention on the subject matter you have at hand and keep from distracting them. We’ve also seen how animation can be used to show a complicated process or structure in a simple way, and it can be used to guide student attention to different elements within a given context.

You can make animation, you can find it at Himmelfarb Library if you’re looking for medical animation, or you can find almost anything online. Just always make sure to cite your source.
In Part 2 of this series, Teaching with Video, we will look at a different type of movement you might want to incorporate into your classes – some of the benefits, drawbacks and considerations of that medium. Please join us again next time, and thanks for watching.