

Representing STEM in Video

Tips for Effective Storytelling

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What is the Purpose of Your Video?

There are three questions you should anticipate being asked before embarking on producing your video:

- What is it about?
- Why do I care?
- What will I learn?

There is a lot of filmed material on the Internet about STEM and afterschool STEM programs. It varies in purpose, production value, and even watchability. Most of it is produced by well intentioned non-professionals who are explaining what STEM is, or documenting their programming, or describing the benefits and affordances of out of school time activities.

To rise above the general noise of all of this material, it's important to be clear and precise about **what you're trying to convey**. Are you describing programming that benefits a certain population of kids? Are you describing a unique approach to delivering effective STEM programming? Are you building a story around an individual young person's personal achievements and growth? Are you identifying and explaining the value of the learning that is a result of the programming you offer? Or are you explicitly advocating for OST STEM programming or approaches to evangelize them? Each of these motivations for producing a video are valuable but it's important to establish early on where your focus lies.

As a viewer, **why do I care?** Are you appealing to a funder who needs to know more about a particular approach or program? Are you speaking to other educators (both inside and out of school) who want to learn more about the value of OST STEM and the ways they can leverage it? Are you appealing to your community to raise money, become involved or to recruit more young people to participate in your programs? Or are you speaking to other programmers to share your experience of offering excellent STEM programming as a way to scale out your practices? A viewer who is actively looking online for inspirational or informational media wants to learn something as a result of their search. Be certain that you leave them caring more about what you offer by the end of the video.

While some people may simply want to know about other programs and approaches, most people want to **learn something new**. Is it a unique program that addresses specific or unmet needs? Will the viewer learn about a new technique or a novel approach to engaging kids in authentic science research? Are there attendant educational benefits or affordances that are emphasized in your programming that you think are particularly effectively addressed? Or are

you showcasing a special accomplishment – winning a robotics competition or first place in a science fair or an invitation to the White House. Without offering something new to learn, a viewer will check out within the first minute of watching.

What is the Style of Your Video?

Style is important and helps to set the tone, focus the messaging, and establish the purpose of your video. When kids make videos, they almost always have very exact ideas about what style they want it to be: a newscast, a music video, a parody, an eyewitness report, and so on. Adults tend to take more straightforward approaches. And if you are a programmer and you want to make a clear statement about what you do, that probably makes more sense.

The **documentary** approach can take many forms but usually includes interviews, testimonials, verite moments, and supporting b-roll blended together to tell the story. In its purest form, it's a completely objective window on a subject without editorial intervention. But in most cases, it's a window on a subject with a specific point of view. It "documents" an aspect of reality for the purposes of instruction or enlightenment. In the best case, the viewer is a witness to something unfolding but practically speaking, and for our purposes, a documentary that you might produce will be more like an explanation. And because it will more likely than not, contain some sort of advocacy, it will have – and should have – a very clear point of view.

A **public service announcement** serves a very specific purpose. Its goal is to raise awareness and persuade the audience about an important topic. It may be the case that your organization needs a PSA more than it needs a document of its programming. You may be addressing or uncovering a critical community need that is at that moment, more pressing than the programming itself. Note that many PSAs include people talking directly to the camera, in contrast to documentaries where people often sit down for an interview and talk to either a person who is on-camera (60 Minutes) or off-camera.

Related to a PSA, is pure **advocacy**. In many cases, this is a blend of documentary style filmmaking and a public service announcement, though the latter is more typically expressed in subtler ways and without a direct appeal to the viewer. Many organizations and programmers will elect to make advocacy videos by default because the primary purpose of producing the video will likely be to celebrate and share a great program, approach or achievement and then explain why it's effective and why there should be more of it.

Many videos, especially ones that are produced by young people, are highly creative, personal, and **whimsical**. These are sometimes light on information, but fun to watch, fun to make, and illustrative of the enthusiasm and fearlessness that comes with being young. That energy alone is often the best demonstration of programming that is youth-centered, embraces exploration, and meets kids where they are.

Some Do's

Capture good audio. Audio is often the last thing that people think about when producing a video. Many OST locations are noisy, which is good, but it can make capturing audio challenging. There are a few options for dealing with this.

- Invest in a lavalier microphone or lapel mic that you can clip onto the collar of a person who is being interviewed.
- Use a directional microphone on the end of a boom pole and place it out of the frame but close enough to the person to clearly pick up her voice.
- Find a quiet room in which to conduct an interview.

If you are filming kids at work and you want him to tell you about what he's doing, have him face you when he speaks. Or arrange to put a mic on him and then film him doing what he's doing. That way you will be able to pick up conversations that are had between kids and also not have to worry about which way he's facing or what he's doing.

If it's practical, enlist another person to capture and monitor audio so you can focus on the visuals.

Take time to set up interviews. If you are going to conduct an interview with a programmer, young person, parent or any other stakeholder, take the time to set the interview up. This includes:

- Finding a relatively quiet location (it's ok if there is background noise as long as you can see it).
- Choosing a location with a deep background and with some relevant activity in it. Avoid shooting against a wall or next to a fern (or any plant!).
- Making your subject comfortable by engaging her in conversation before the interview begins. And then try to start the interview seamlessly and without making a big deal.

Here is a long list of tips:

- Be prepared with your questions.
- Listen to what the person is saying.
- Follow up with questions if one comes to mind.
- Keep it conversational.
- Make the person forget she is being filmed.
- Don't look for soundbites.
- Be interested.
- Look at your interviewee in the eyes and nod your head occasionally.
- Learn to say, "yes of course, you can start over."
- Start over if you sneeze.
- You can fix most things in the edit.

Get lots of b-roll. B-roll is the supporting visual material that you'll need to tell your story. If possible, try to film all new b-roll rather than using bits and pieces that you may have lying

around. Be very intentional and refer often to the purpose of your video and what you want viewers to learn. Ninety percent of b-roll should illustrate exactly what a person is saying or add to what a person is doing and that you are capturing. The last ten percent can be general, establishing or beauty shots but those should be strategically deployed.

Leave some air between comments. This means don't string together lots of commentary without leaving a bit of space between bites. Give people time to absorb what is being said AND absorb what they are seeing.

Include some verite moments. These are moments where you are simply capturing what is happening. The scene is unfolding as it unfolds and the camera and videographer don't exist. It's unfortunate that this aspect is missing from a lot of productions because it allows you to witness what kids are doing naturally – how they are problem solving, how they are interacting with peers or responding to facilitators.

Vary your narrative. There are many ways to push the narrative along: a voiceover, interviews, verite moments, and kids talking about their work. Use all of them so that you have more than one voice and more than one dimension to your storytelling. Be sure to choose your narrators based on their experience or expertise. Have people talk about and represent what they know uniquely.

- Programmers know about the structure and content of what they offer.
- Frontline facilitators know about working directly with kids.
- Classroom teachers know what the impact that a program may have on the performance of their students.
- Learning experts know about the inherent benefits of a type of approach.
- Kids know about what it's like to participate in a program.

Some Dont's

There is nothing more alluring than the many **transitions** that are available to you in iMovie. Avoid confusing using them with being creative. But if you're a kid, you can use whatever you want.

Don't make a video that is longer than five minutes unless you are a professional. One of the most important skills to develop is editing. You can absolutely tell your story in three minutes and if you do, it will increase the likelihood that people will watch it. It is documented that on Edutopia most people stop watching at about the one-minute mark.

Don't drink a lot of coffee before handling a camera. Keep a steady hand when filming. Use a tripod when you want to hang on a scene for a while. Shaky verite is a bit passé and should only be used sparingly.

Don't use b-roll that has nothing to do with what is being said. Again, refer often to the purpose of your video. Just because kids are doing things in the context of your program or space doesn't mean they are doing something that has anything to do with what is being said.

Don't be too talky. Many videos are comprised of a lot of adults talking, often about the same things, and often without a purposeful reference to the subject of the video. Avoid using too many narrators when fewer will suffice. There are often political reasons why people show up in videos and sometimes this can't be avoided. But the Emperor of STEM Nations Worldwide seldom has something more interesting to say than a frontline facilitator or a program designer or in an astonishing number of cases, a kid who is deep into a STEM project.

Try to avoid using too much music. Music is a wonderful device for enlivening a production. But use it in places where it makes sense – at the beginning and at the end, and possibly in interstitial moments during the video. But it can be very distracting when people are talking or when you're trying to listen in on a conversation between two kids trying to figure out how to wire a circuit board or build a LEGO robot.

And don't use Beyonce's music. Or Jay Z's just because he's rich and will forgive this transgression. YouTube routinely takes down videos with unauthorized content.

Don't conclude the video more than once. Find the most appropriate representative to make concluding remarks and stick with him or her. Three conclusions are not more persuasive than one good one.

Some Be's

Be substantive. Be precise. Be specific. Be creative. Here are some things that everyone already knows:

- Cultivating STEM learning is critical to preparing the United States to compete globally.
- STEM careers are the careers of the future.
- Out of school time programs give kids time to do deep inquiry.
- Schools are all about testing. OST is all about deeper engagement and activities are hands on.
- OST STEM programs are fun.

What people may not know about is how you address these issues specifically and uniquely. They may not know how they can get started doing what you do successfully. They may not know about how to scaffold programming in such a way that kids build on previous experience. They may not know how the skills that kids are cultivating are transferable to the classroom and to life. The more specific you can be about how what you offer impacts the way kids learn and problem-solve, the more valuable your video will be as a tool.

Be a storyteller. Good storytelling is at the center of all good video-making. It creates interest, momentum, and utility. And a good story will get passed around and cause other good stories to happen.