

How storytelling improves science

January 30 2015, by Jordan Gaines Lewis



Credit: ShotPot from Pexels

My first research presentation in college is forever etched into my memory.

It was the end of our fall semester biology lab, and my group met in the library the week beforehand to prepare our PowerPoint. I was in charge



of making slides with background information. For our project, my lab group had measured polyphenol oxidase – an enzyme involved in the browning of fruit – in three different apple varieties.

As it turns out, every group had done this experiment – after all, it was the coolest thing we'd all learned how to do that semester. So I wanted our group to stand out. I interspersed the boring, informational slides with a little storytelling:

It's almost time for the annual county fair, and you want to make the best apple pie! You know that the key to success is using an apple that won't brown right after you cut it. Which variety will get you the blue ribbon?

My group was a bit sceptical, but they ultimately buckled under my persistence. The presentation took on a life of its own.

We got our grade a week later – an A. But the professor wrote a note underneath: "Good presentation, but a bit gimmicky. Don't do that next time."

I was deflated. While my approach, in retrospect, may not have been the best for a class assignment, I knew that what I had done wasn't inherently bad or wrong – I was telling a story.

Scientists are often told to reach out to general audiences about their research for the public's benefit:

We need to establish trust! Taxpayers deserve to understand where their money is going! We need to clear up misconceptions about GMOs and vaccines and climate change!

While these arguments are absolutely true, many scientists find this hard to do. Science communication can become a time-consuming side job.



And for many, such a responsibility to the general public can be extremely daunting.

But it's okay for scientists to practice their communication skills for nonphilanthropic reasons, too. Despite my initial college lab experience, telling stories as a science communicator today has made me a much, much better scientist in a few unexpected ways.

1. I read more and write more. So I read and write better.

A non-scientist may be surprised to learn that scientists spend a large chunk of their time reading and writing. When they're not in the laboratory or attending a meeting, scientists are most likely reading the latest literature in their field or writing, writing, writing – papers, grants, lectures, and everything in between.

The problem is this: we do all this reading and writing within an extremely narrow field. My dissertation, for example, is focused on biomarkers for obesity and how they relate to sleep quality in adolescents. It's so easy for me to put on blinkers and forget (or just have no knowledge of) what's going on in the rest of the sleep field, much less broader areas of biology and neuroscience.

While it's impossible to know everything that's going on at all times, being a science communicator has helped enormously. Scouting for story ideas or researching for a piece means I'm constantly coming across new findings, new methods and new hypotheses. Being active on social media, particularly Twitter, has introduced me to the diverse work of my journalistic peers, too.

In addition to my column here, I can be found sharing my thoughts on



my blog. Engaging beyond sleep literature gives me the tools to approach my very specific research project from many different, unexpected perspectives.

But perhaps the best part is this: writing is significantly easier and infinitely less daunting than it used to be. Sitting down to write is hard, and finding your voice is harder. But the more one writes – whether a short, snarky blog post or a 12-page grant application – the easier and better it gets.

2. Simplifying my work makes for better conversations

Here's a confession that many scientists may relate to, but few may admit: when I attend a talk outside my field, I'm lucky if I understand 50% of what is going on.

Also, forget the wordy background information, paragraphs and long conclusions – when I look at your research poster, I'm only looking at the title and figures.

Scientists are busy people with packed schedules, and we don't have the energy or brain capacity to learn everything we want to in the overwhelming world of scientific conferences. As a science communicator, I've learned that this is true for people on the Internet too – if you've read this far into this article, you're in the minority.

The purpose of science communication is to simplify, but not dumb down, your work so that the average non-scientist can understand it. Nowadays, when I design posters or oral presentations, I aim to do the same thing regardless of whether I'm introducing my work to scientists or non-scientists. My research posters, in fact, are almost laughably



simple. Well under 200 words, with large, blocky figures, at first glance they may resemble a high school science project – certainly not a typical graduate student's work at an international conference.

But the human brain is attracted to simplicity. Since applying what I've learned from being a science communicator, my conference poster experience has completely changed. I'm frequently bombarded by a nonstop stream of scientists from all different fields, never having more than a free minute or two to sneak a swig of water. The best part is that because they understand what's on the paper, our discussions can go deeper.

3. Unique opportunities and credibility

Since college, I've wanted to attend the <u>Society for Neuroscience</u> annual meeting, the largest gathering of neuroscientists worldwide. Especially after following along with the Twitter hashtags <u>#SfN12</u> and <u>#SfN13</u> in recent years, I wanted to make <u>#SfN14</u> a reality for myself.

This year, I got to do just that thanks to a travel stipend through the <u>SfN</u> <u>Science Journalism Student Award</u> – something I couldn't have done if, obviously, I hadn't started my quirky little hobby. In a roundabout way, I was able to attend an event I would have never been able to afford, and I returned to the lab with fresh ideas for my own research.

As people begin to recognise me as an "expert" in my field, I'm solicited for quotes and radio interviews. I've made a few odd dollars here and there for writing pieces, supplementing my lavish graduate student lifestyle. I even <u>gave a TED talk</u> in July – something I never imagined I'd have the chance to do.

While certainly not all scientists wish to seek out these types of public displays, it's exciting to discover the countless venues for us to share our



work with others.

So, scientists, here's the bottom line: if you're hesitant to reach out to the public due to lack of time, ambivalence, or just not knowing where to start, it's understandable. It takes a fair bit of work, and it's not easy. But if you want the chance to expand your horizons, improve your writing, enjoy unique opportunities, and engage more people – scientists and non-scientists alike – you might want to give science communication a shot.

In addition to making your work accessible to the general public, you might be surprised by how much your benchwork benefits, too.

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