Managing Multiple Information Channels:

Strategies for Designing Effective Presentations

BY JOSEPH DEVNEY | *Associate Fellow*

HERE'S A BAD IDEA: a grocery store that sells everything in quart-sized plastic containers. The container would be a reasonable solution for some things: a pound of coffee or hamburger, a couple of tomatoes. But if you bought a chicken or a loaf of bread, it would need to be cut into pieces and put in multiple containers. If you needed a little bundle of green onions, the long green tops would need to be folded down, but still the standard-sized container would hold mostly air. Six or eight big cookies might fit, if they were broken into crumbs first.

It's an absurd constraint. It's obviously better to use different types of containers for different types of foods.

But some people adopt a similar constraint when designing presentations: "All information must be delivered via projected slides" (PowerPoint, Keynote, or a similar program). Sometimes a slide is so crammed with information that it's unreadable. Often, complexity has to be sacrificed.

And I have seen the converse: presentations in which the text on the slide was also the speaker's script, or the content of the paper handout. That is, multiple types of containers, or *information channels*, for the same content. Neither approach takes advantage of the strengths and weaknesses of the different channels.

You have probably seen many presentations: in the workplace or the classroom, or at STC events, academic conferences, or other venues. You may need to give a presentation; you may want to give one. It should be an effective one, making good use of the variety of communication tools available. Don't adopt the quart-container approach.

Why is a good presentation important?

You don't want to bore or annoy your audience, of course. But outside that immediate concern, there are reasons for not only giving good presentations, but for seeking out opportunities to do so. Here are some important ones.

‣ Your professional reputation
‣ Influencing people and events
‣ Getting your message out—whatever it may be

If you are reading this article, you probably work in the field of communication. How do your coworkers and managers know you are a good communicator? Most of them probably don't read your manuals or help files. But they can see you present information every time you have a chance to get up in front of a meeting.

Giving presentations is one way to influence people, if you have an opinion or a point of view to share. This can be important in the business world. In some companies, each manager must periodically give a presentation about their group to upper management, and sometimes to the other groups within the department. An effective presentation might mean that your pet project is given the go-ahead. Or that when budgets shrink, your group is spared and you won't have to lay off people who work for you.

If you are not in management, giving effective presentations about your work still raises your profile within the organization and enhances your reputation as a communicator.

You might have reasons outside the workplace or outside of STC to want to give presentations. Maybe you want to let potential clients know what you can do for them. Maybe you want to educate people about a social or political cause that is important to you.

Sometimes there can be a lot riding on a presentation. There may be concerns that go way beyond your reputation at work.

‣ The movie *An Inconvenient Truth* is a film version of a slide presentation that former U.S. Vice President Al Gore had delivered around the country. The presentation, and especially the movie, changed the direction of the debate about climate change. It convinced a lot of people that the problem was real and put pressure on politicians to do something about it.

‣ Information design expert Edward Tufte sometimes works with lawyers. He tells the story of a trial of several members of a criminal organization in which there was a mountain of evidence. His job was to present the evidence in such a way that the jurors could understand its significance. The effective presentation of information helped to put murderers behind bars.

‣ In 1986, there was an accident with one of the space shuttles, the Challenger. It exploded in mid-air shortly after takeoff. Edward Tufte has said that one important cause of the accident was an ineffective PowerPoint presentation. The engineers did not get across to the decision-makers just how risky it would be to launch the shuttle on that particular day.

In this last case, the stakes were *very* high. The launch went ahead despite the engineers' misgivings. Seven people died. The United States lost a billion-dollar piece of hardware, and the space shuttle program was halted for more than two years. A more effective presentation by the engineers may have prevented all that.

What is a presentation?

For the sake of this discussion, a *presentation* refers to a speaker addressing an audience in the same room and using at least one additional information channel, in a stand-alone event. Typically, there are three information channels: voice, slides, and handouts. Others are also available.

Some of the points in this article are applicable to other venues, including multiple speakers delivering jointly, speeches (voice only, no slides or props), and classes with multiple meetings.

Most presentations involve a series of slides and a speaker talking. Maybe you think of the slides as the presentation, and your job is to say something about the content of each slide. Let me suggest a different perspective. The basis of the presentation is not the slides but the series of ideas you want to get across. For each idea, you decide which channels are best suited to transmitting it to the audience. Some important ideas might have no accompanying slides.

Three important attributes

Each of these methods of communication—voice, slide, and handout—is what I call an *information channel.* The kind, quantity, and purpose of the information you have to impart should influence which information channels you use.

You can compare information channels in different ways, but I think these are the most salient attributes to consider.
‣ Ephemerality
‣ Flexibility
‣ Information density

Ephemerality. "Ephemeral" means short-lived. Speech is very ephemeral. The instant a word leaves your lips, it disappears. We remember the gist of something said, not necessarily the exact words. Paper handouts are not ephemeral: once someone takes the handout back to the office, it can be kept for years, always accessible. Information on a slide is only available to your audience until you move to the next slide.

You can overcome ephemerality to a limited extent. You can leave a slide up for a while so you can talk about it or give your audience time to write down its content. You can also post your slides online for review after your session. For speech, you can repeat information or you might record your presentation for later review.

Flexibility. How easy or difficult is it to stray from your prepared presentation? PowerPoint and similar tools are not very flexible. You prepare and order the slides in advance. At best, you can flip ahead or back during the presentation. You don't want to rewrite slides in front of your audience.

A printed handout is somewhat flexible, because people can write on their own copies. And depending on what the handout is, you might direct people to look at different parts of it during a discussion.

Speech is very flexible. You can respond to questions from the audience. You can include information you hadn't considered when you prepared the presentation. You can have a discussion on a topic you didn't know would come up.

This flexibility has a downside, though. It's easy to get off-topic. If you know that you are easily taken on tangents, you might want to write a script for yourself and stick to it.

Information density. How much information can you push through the channel? The information density is high for the printed page and low for a slide with text.

The spoken word is somewhere in between. Your audience can read a passage of text more quickly than you can read it out loud. And you will use a lot more words if you talk about a slide for a minute than you can fit on the slide itself.

The printed page is the most information-dense and the least ephemeral, and it's at least somewhat flexible. Why not just hand everybody a sheaf of papers and go home? Because information density is not the only attribute to consider.

You sometimes need flexibility. In some situations you can't, or don't want to, plan every part of your message beforehand.

Sometimes ephemerality is a good thing. As a speaker, you bring the audience along with you in the moment. If you are building a case with a series of arguments, your listening audience can't skip ahead, or stop and reread an earlier passage. They have no choice but to follow your rhetorical lead.

And the spoken word can be richer than the printed one. Have you ever heard a speech and then read the transcript? These are very different experiences. As you read the text, you can compare the different parts, and you can study the speechwriter's techniques. You can look carefully for logical inconsistencies that might not be apparent when you listen to the speech. When the audience reads the speech, the speaker loses temporal control over the content.

On the other hand, voice carries information that the printed word cannot. If you read the text of a speech, you don't hear the speaker's vocal techniques: when he pauses, when he changes pitch or volume. You get the speech in black-and-white instead of color. Speech communication can be more than just the words in the transcript.

If the printed page is the most information dense of these channels, a slide show is the opposite. Consider this example. The United States Constitution, as originally written, is about 4,300 words. Using six-point type and narrow margins, it can be printed on a single sheet of letter paper (on two sides). All the amendments to the Constitution total about 3,200 words, or less than two pages of six-point type. The entire legal foundation of the U.S. government can fit on two sheets of paper.

How does that compare to PowerPoint or Keynote? One amendment can fit on a slide comfortably, so long as you pick the right amendment. But other parts of the Constitution can't. Look at this sentence from the body of the Constitution, displayed on a slide.

One Sentence

He shall have Power, by and with the Advice and Consent of the Senate, to make Treaties, provided two thirds of the Senators present concur; and he shall nominate, and by and with the Advice and Consent of the Senate, shall appoint Ambassadors, other public Ministers and Consuls, Judges of the supreme Court, and all other Officers of the United States, whose Appointments are not herein otherwise provided for, and which shall be established by Law: but the Congress may by Law vest the Appointment of such inferior Officers, as they think proper, in the President alone, in the Courts of Law, or in the Heads of Departments.

For many people this is too much text for one slide. And it's only a single sentence in a paragraph. There is a sentence in the Twelfth Amendment that is twice as long—that would be totally unreadable on a slide. The U.S. Constitution can't be effectively presented to an audience via slides. The printed page is the way to go for such a lot of information because it is so information dense.

But what if you just want to talk about the Second Amendment?

"A well regulated militia, being necessary to the security of a free state, the right of the people to keep and bear arms, shall not be infringed."

A slide has low information density, but in this case there is not a lot of information to present to the audience. Putting up a slide with the text would be a good way to keep a discussion on track. You could spend ten minutes talking about that last comma. You *could* give everybody the list of amendments on paper and lead the discussion from that. But on paper, a single comma is one tiny data point in a sea of text. It can get lost.

And you could waste time getting everyone on the same page, literally. I can easily imagine having to say something like this: "Okay, everybody look at the first page of the second handout. We are talking about the sixth line on that page. No, the other handout." With the topic of discussion on a slide, there is no confusion. And it gets everyone to focus his or her attention on you, the speaker—or at least on the front of the room, where you are standing.

Imprecision can be good

Presenting numbers to your audience brings up related issues.

I once wrote a sentence in an article that made a reference to a donation of "over a quarter million dollars." The editor changed it without checking with me first. The printed sentence referred to the donation as "$261,581." What I had written was not wrong, it was just less precise that what the editor changed it to. I knew the exact number, so I could have used it. But I made a conscious decision to use the approximation instead. I had two reasons for doing this.

First, our brains are hard-wired to deal with round numbers. Yes, we can work with precise numbers—we all made it through grade school arithmetic. But it is easier to grasp, calculate with, and remember simpler approximations.

Our brains also find it easier to deal with simple fractions, like one-third or three-fourths.

The other reason that I chose the approximation instead of the exact number has to do with the capacity of our short-term memory. A famous article in a psychology journal over 50 years ago said that most people can hold five to nine "chunks" of information in their brains at once. If we are talking about large and precise numbers, we are effectively giving people a series of random digits, each digit a "chunk."

This rule doesn't apply just to numbers. It also means that you should not overwhelm your audience with lists. If you really must put more than six or seven bullet points on your slide or your handout, try to list them in some order, so they are not just a random list of items. They will be easier for your audience to grasp and remember.

Here is a real-life example of this difficulty with remembering numbers. A guest on a local radio program said, "From what we've found, there's been about 42,000 citations given out so far in the state."

A few minutes later, the host referred back to that statement: "You said there have been over four thousand citations." The host is a smart guy, a well-respected college professor. But he made a common mistake in remembering a large number. He got the most significant digit right, but got the order of magnitude wrong.

For these reasons, I was willing to sacrifice a little precision in the magazine article to gain accuracy in my readers' memories. My readers might not be sure later on if the amount was "two hundred thousand-something" or "twenty-something thousand" dollars. There is much less chance of misremembering "a quarter-million dollars."

What does this mean for our discussion of information channels? On your slide, which is ephemeral, you might want to put the approximation, the "quarter-million" in the magazine example. For the sake of clarity and completeness, you can tell your audience the actual amount.

Different approaches depend on the situation. If you are displaying data in a table or a graph, you probably want to list the exact number on the slide. And if your audience is made up of "numbers people," like accountants or mathematicians, they might be perfectly comfortable dealing with large and precise numbers.

Paper handouts are not ephemeral. In your handout, give the exact number because your audience can take the handout home. But also give the approximation. That way someone who wants to talk about your presentation has the exact number to refer to if they have the paper handy, and also the more easily remembered approximation if they don't.

Use your judgment here. Keep in mind both the attributes of the different information channels and the limitations of the human brain.

Other information channels

Voice, slides, and handouts are the primary information channels used in presentations in business and academia. But you have other options as well.

Hand gestures can be useful for supplementary information or to add dimension to the spoken word. You can choreograph your gestures if you think it will help get your message across.

Hand gestures are natural. People gesture unconsciously. Blind people gesture. Blind people talking to other blind people gesture. You will unconsciously gesture during your presentation anyway. You can choose to put those gestures to work for you. Don't choreograph everything, but you might decide that a particular point can be made more memorable with the right hand movements. I have elicited gasps from my audience when I supplemented a story with hand gestures. That extra little bit of emotional charge will help them remember the story.

Pass-arounds are things that people can look at briefly while you are talking and then pass on. Good choices for pass-arounds are examples that demonstrate the points you are making. If I talk to a group about information channels, I pass around the printed Constitution so that they can see that it is indeed readable in six-point type.

Audio can bring other voices into your presentation. I have used the radio dialogue quoted above in presentations. The host's voice is immediately recognized by local audiences, so the example is remembered more readily.

Summary

The heart of your presentation is the ideas you want to get across to your audience. Each of the information channels available to you is more or less ephemeral, flexible, and information-dense. For each of the ideas, decide which is the most appropriate information channel based on those attributes. Information that is only needed to understand a larger point can use an ephemeral channel, but that would be the wrong choice for information the audience might want to hold on to. Choose a flexible channel if the discussion might change in unpredictable ways. If you want to focus on a small point, information density is not necessary. But don't try to force too much information through a channel that will not transmit it well.

And don't forget the channels used less often in presentations: audio, video, artifacts (pass-arounds), and choreographed hand gestures. ℹ️

JOE DEVNEY (joe@devney.com) *is both a writer and a linguist. He has a background in public speaking and experience both as a presenter and teacher. You can download supplemental information about managing information channels in your presentation by going to* www.devney.com/PDFs/IntercomSupplement_Oct2013.pdf.