Creating Technology Training and Materials

C reating lesson plans and materials for training sessions is an acquired talent and one that requires a good deal of practice. A little help never hurt anyone, though! The ideas and tips below will help you create some fabulous classes and materials.

Learning Styles and Teaching Methods

First off, remember that users have different learning styles.

1. visual (pictures, graphics, mental images)
2. auditory (talk, listen)
3. kinesthetic (do it, handle it, move it)

Which way do you learn best? Most likely, it depends on what's being taught. As you create materials for different courses, consider what is being taught and what is the best way to relay that information to learners of all types. For most technology topics, hands-on learning (kinesthetic) is the best way. As an example, let's take teaching about a word-processing program. Auditory learning—telling users in words what they would see on a screen, if it were in front of them, and which buttons to click on—would not be very effective. Verbal plus auditory—showing the screen and demonstrating which buttons to click on—would work for some users, but not most. Visual plus auditory plus kinesthetic—having users at their own computers, looking at their own screens and clicking on live buttons while the instructor explains what they're seeing and doing—would work for almost all learners.

It's also important to understand the difference between telling and teaching, *especially* when approaching a training topic as complex as technology. Much of what we have experienced in our own learning can guide us to understand the difference. Remember the boring lecture hall where a professor got up and talked at the students (some of whom were seemingly asleep or even comatose) for two hours? Then the bell rang, salvation came, and most of what was said departed your brain faster than you could say "lethargic learning." Yes . . . that was *telling*. Now, do you remember the chemistry class where you added salt to ice to lower the freezing point of the ice so you could make ice cream that you actually got to eat? That was *teaching*.

Students learn most effectively through personal engagement in what they are learning. They need to understand what you are teaching them, why they should care (e.g., how it will make their lives easier), and how to do the task at hand. To teach instead of tell, answer those three questions, engage and involve the students as much as possible during the session, and give them as much time for practice and hands-on experimentation as possible. The last thing you want is for these training sessions to result in intellectual bulimia. In other words, you don't want these classes to end up like your undergraduate geology class did—where you absorbed the information while it was being taught, retained it just long enough for the test, and then purged it in all due haste from your mind forever.

Preparing to Train

For some sessions, you may want to consider sending out a pre-class questionnaire to get a sense of where the students are in relation to the subject being taught. Linda Brew MacDonald encourages all trainers to get answers to

a set of fundamental questions before embarking on a technology-training program. She emphasizes that you can get this information from different sources: the learners themselves, your own knowledge of the learners, or instructors. The five questions she suggests you answer are:

1. What is the educational level?
2. What common background do learners have?
3. Is there a preferred learning style?
4. What are learners' attitudes toward automated sources?
5. What about motivation? Can you adopt the learner's perspective?[1]

Adopting MacDonald's questions, for a class on using files and folders, you could send out a questionnaire ahead of time, asking the following questions:

1. Would you rate your knowledge of using files and folders to be *nothing, very little, some, quite a bit*, or *advanced*?
2. How do you currently organize your files and folders, if at all?
3. Do you prefer classes to be hands-on or demonstrations?
4. Do you have any concerns about learning this topic?
5. How do you feel that learning more about files and folders will benefit you in your day-to-day job?

The answers you receive may not please you, but they will undoubtedly surprise you in some cases. I asked a question similar to number five before a class some years ago. Unfortunately, it was right as the class started and we were doing a round-robin, and one student replied: "It won't. I'm here because my supervisor and you made me come. I hate learning this stuff. I'd rather be back working at the desk." Had I known ahead of time that this was the student's approach to this class, I would have taken the time to talk with her, discuss the reasons behind her feelings, and try to figure out a learning approach that would benefit us both. As it was, I was left bumbling and trying to recover from her statement, which had roused a number of the other students into also saying they'd rather be elsewhere . . . not a good place for any instructor to be. So it's better to find these things out ahead of time so that you can talk to students about their concerns and perhaps tailor the class a bit to fit their individual needs.

Creating Session Outlines

Before embarking on creating an outline for your session, see what else is out there already. See if the library has any books on the topic you are training on. For example, *The Library Internet Trainer's Toolkit* by Michael

Stephens provides several canned modules on various basic technology skills that some library staff members still do not have.[2] It would be worth purchasing this title to access the canned modules on Introducing the Personal Computer, Searching the World Wide Web, Evaluating Web Sites, Using E-mail and WWW E-mail Services, etc.

The Library Internet Trainer's Toolkit
by Michael Stephens
www.neal-schuman.com/db/6/256.html

SlideShare
www.slideshare.net

More than likely, some nice person has created a class outline and materials very similar to what you have in mind and has posted them online. Try checking SlideShare, a Web site where users share slide shows (mostly PowerPoint presentations) they have created on topics ranging from pop-up paper art to using Microsoft Word. You can also consult some of the tutorial and training sites that I list in Appendix 3. Finally, try running a Web search for what you want to train on, followed by the word "tutorial," "class," or "training"—for example "library catalog class" or "library catalog tutorial" or "Internet skills training." You are likely to find training materials that you can either use without changing a thing or modify slightly to fit your own library's situation.

Remember that if you're going to borrow even some of the content from someone else's training outline or materials, you need to write for permission. E-mail the creator of the materials, explain who you are, and describe how and for what purpose you want to use the materials. In my experience, most people say "yes," as long as they are given credit for their work.

Chunk out the various topics into segments that make sense. Write a literal outline of what you plan on talking about in what order, and review it for logic gaps or places where expansion would be beneficial. Schedule at least one break into every class; my rule of thumb is one ten-minute break every hour, longer thirty-minute breaks over three or more hours. Have a couple of people take a look at the outline, in order to let you know if anything seems to be missing or illogical.

Have some variety in what the students are doing throughout the session. Try to mix it up a little bit, alternating between having them listen to you explain things, working alone, and working in small groups. Getting students to get up and move from one place to another in the classroom can also serve to re-energize them and make the class a bit more interesting.

Prepare what you think is too little information to present in the time you have—it will inevitably take longer

to present your materials than you think it will. Don't forget to allow plenty of time for practice or for students to complete exercises. You do not want students feeling rushed.

Finally, have the presentation materials ready in two digital formats (one physical, one stored on a Web site or in your e-mail account) and one backup print copy. You never know what's going to go wrong with the computer, projector, Internet connection, or even power, and you want to be ready to train no matter what.

Creating Effective Handouts

Decide what types of materials you want to create to support your learners: step-by-step how-to handouts, presentation slides (perhaps a printout of these with spaces for notes), resources for more information or continued learning, any manuals applicable to the skills being taught, additional reading you would like learners to do after the class, etc. There is no one-size-fits-all model, unfortunately. Each course and each learning objective requires its own structure and type of supporting materials. The trick is to not get stuck doing the same thing for every class, regardless of what's being taught, but instead re-evaluate the type of materials you create for each and every class.

As a student, have you ever run across a handout that had such an insane level of detail that you asked yourself why it was there? You didn't know why it was there, it just was, like those big leather massage chairs in the middle of shopping malls—they're just there. Before infusing the detail of a Dominican stained glass window into your training materials, ask yourself why you want to do that. An example comes to mind of a PowerPoint presentation I recently received, walking me through some administrative settings I had to set in a software profile for our library. The entire process was only five steps long. Including those steps as a numbered list in the body of the e-mail message would have worked just fine. Instead, I get a twenty-slide PowerPoint weighing in at a whopping *three megabytes*, showing screenshots of each and every last detail, with one slide even devoted entirely to telling me what *not* to pay attention to. This presentation went out to a hundred or so people. That's a hundred e-mail boxes that got clogged, basically resulting in a whole lot of unproductive time—many cumulative hours of library staff time waiting for the darn thing to download and then working our way through the slides to get to those essential five steps. The lesson is that you should always look at your training materials with a critical eye. Do you need to include every last screenshot, or any screenshots at all? In fact, many trainers have abandoned screenshots entirely as they find them to be ineffective training tools. Do you need to include detailed step-by-step instructions, or will a "follow the directions on the screen to do X" suffice? Hold yourself up to my three-megabyte PowerPoint test, and ask yourself if you're coming out ahead or not.

I also recommend considering creating training materials templates to be used for all classes at the library. The consistency of format will not only give the different trainers a structure to follow, but will give the learners a recognizable format for each class they attend.

Always leave attendees with something to go to after the training—some sort of further learning resource to tap. This means that your handouts should include some suggestions for further reading on the subject, Web sites related to the topic at hand, online tutorials that will teach students even more about the topic, and related classes being offered by the library or other organizations. This encourages ongoing learning and presents an opportunity for students truly interested in the subject to self-teach without your needing to hold another class.

Finally, revise your class and its materials continually. After every training session, you should learn something—either from the training experience, from an offhand comment from a learner, or from the formal evaluations you collect at the end of the session. Put whatever you've learned into use. If it's a new thing to add, see if you can take something else out so you can still fit the session into the required time period. If people need the information to be more basic, you'll have to guess if future classes with different students on the same topic will require the same basic information.

Notes

1. Linda Brew MacDonald, "Deciding among the Options," in *Teaching Technologies in Libraries: A Practice Guide* (Boston: G. K. Hall, 1991), 29–55.
2. Michael Stephens, *The Library Internet Trainer's Toolkit* (New York: Neal-Schuman, 2001).