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Pedagogy for Librarians

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**“Pedagogy for Librarians” by Megan Hodge
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Inside and Outside the Library*. 2015. Cambridge, UK: Chandos.**

Abstract

Most librarians are required to take classes on reference, collection development, and information organization in library school; courses on pedagogy, on the other hand, are usually optional, if they're offered at all. This leads most librarians who end up with instruction duties to learn on the job. Activities and assessments can be learned on the fly fairly easily, but these often have little to no bearing on how much students actually absorb and recall weeks later because alone, they are usually insufficient to ensure deep learning. This chapter seeks to add the basics of pedagogy, a subject comprehensively covered in K-12 teacher preparation programs, to the librarian's instructional repertoire.

Introduction

While K-12 teachers take numerous classes on teaching methods and educational psychology and even doctoral students sometimes get a semester on pedagogy before they're thrown into the classroom, most non-school librarians must learn on the fly or from colleagues at conferences. What we pick up in the field, though, tends to be things like active learning techniques, pop-culture-sourced research topics with special resonance for our students, and effective assessments that can be executed quickly, all of which are useful and even desirable in the classroom. These may result in engaging lessons, but put us in danger of repeating the same information to students when they return to the library, weeks later, asking for help on their papers because they've forgotten what we covered in class. Without an understanding of pedagogy and how learning works, we are doomed to teach material without its being learned.

In this chapter, I hope to bridge that gap. I am a relative rarity in the librarian world in that I went through a battery of education classes in college in order to obtain a secondary teaching license, meaning I've had much more training in learning theory than the majority of my librarian peers. This by no means makes me a master teacher—I am a recent library school graduate without many semesters of teaching under my belt—but what I learned in my education classes and my experiences teaching English to middle and high school students informs my practice as an academic librarian. I still have much to learn and spend a fair amount of time researching instructional design and keeping up with the literature, but I am a much better teacher than I would have been otherwise as a fresh-out-of-library-school instructor. What I bring to the table is a broader understanding of the mechanics of teaching and how learning works, with an emphasis on linking theory to practice.

I have organized this chapter into three sections: preparing for teaching, things to keep in mind while in front of the room, and improving instruction outside the classroom. While these strategies are hardly comprehensive—all of them could or do have entire books written about them—I hope they will be useful on their own and serve as amuse-bouches for further examination. Many of these strategies are recursive and feed naturally into and build upon each other. Finally, I have tried to write in a way that will make these recommended strategies painlessly, immediately employable to the practicing instruction librarian, whether that instruction takes the form of a semester-long course or one-shots, as well as some recommendations for further reading (with full citations for these recommendations in the References section).

Before class: getting ready to teach

Lesson plans. Write them.

One of the first things future teachers learn in their education classes is the importance of creating and using lesson plans. Ideally, these lesson plans include a list of materials necessary for the class (e.g., handouts), learning objectives (more on which below), and an outline of the class structure: the main topics to be covered, any activities, and notes on anything you'd like to make sure you remember to do or say (special requests from a professor, for example). So essential is lesson planning that it is "often identified in university teacher preparation standards, state teacher certification standards, and more general standards for professional practice" (Norman, p. 49).

At its best, lesson planning enables you to focus on crafting classes that are innovative and meet the learning objectives through the various methods at your disposal: group discussion, demonstration, review, etc. Ideally you tweak something about your instruction each time you teach, whether it's a new example research topic or simply a phrase you heard a colleague use that helps the students click with the material. (If you're teaching the same thing the same way so often that you don't need a lesson plan, you need to mix your instruction up a little! If you're bored, the students will be, too.) Additionally, the presence of learning objectives can ensure that each of the activities and material blocks that you decide to include in the lesson do, in fact, support the intended learning outcomes. This prevents both content creep and the addition of activities or subtopics simply to fill the allotted time.

When crafting your lesson plan, keep in mind how *you* like to learn: probably you prefer for your learning to be self-directed and relevant to your job; you need time to practice and reflect (Gerding and Hough). How can the content you choose to communicate and the activities you include ensure that goal is met? As Mel Silverman notes in *Training the Active Training Way*, beginnings and endings are the most important parts of any story or content because they're what we remember the most. Each class should therefore have as many of those beginnings and endings as possible, which can be done by, for example, chunking material into smaller modules and using active learning techniques as transitions (Ambrose et al, p. 52).

More prosaically, the lesson plan can be brought with you when you teach to make sure you don't forget anything you meant to say or do, and be used as a vessel for catching your thoughts on how a new activity went either in or just after class. The lesson plan should be thought of as a guide rather than a script, though. Your plan should be flexible enough to adapt for students' unexpected familiarity with your intended material—or, conversely, a lack of understanding of necessary threshold concepts.

Specific aspects of lesson planning are examined in greater detail below.

Additional Reading

While geared towards school media specialists, <http://aasl.jesandco.org> has a collection of lesson plans that are tied into AASL's Standards for the 21st-Century Learner (similar to ACRL's Information Literacy Competency Standards for Higher Education, but for the K-12 set). In order to be included in this database, lesson plans must meet standards on the inclusion of learning objectives, a list of required materials, etc., and are therefore excellent models even for librarians teaching in higher education.

Articulate learning objectives and base everything—content, activities, assessment—on those objectives

What are learning objectives, and why are they so important? Unlike goals, which are generally teacher-centered and talk about what *you* will do (e.g., “discuss the Boolean operator OR as a means of increasing the number of search results”), learning objectives are student-centered and indicate what students will be able to do as a result of your class. In the K-12 world, these objectives conventionally start with “*The student will be able to*” or even the acronym TSWBAT, and this is a suitable prefix for learning objectives in higher education as well.

Just as important as that student-centered opening clause is the verb that immediately follows it. Avoid using the catchall ‘understand’ here. Understanding is an amorphous concept; how does one know whether students have understood a concept or not? What if they ‘understand’ 90% of what you said about the Boolean operator OR: will the class have been successful? What if that ‘understanding’ drops to only 50% two weeks after the class? Additionally, ‘understand’ too often means simple recall.

Learning objective verbs ought to be action verbs and measurable in some way. Measurability is important: it reveals how successful you were as an instructor as well as ensures that students walk away from the class with a tangible ability. Benjamin Bloom led a group that produced an inventory of such verbs in the mid-twentieth century that has been a cornerstone of education since its publication. Bloom’s Taxonomy classifies learning-related verbs by level of comprehension, specifically by what students will be able to do; exactly what one wants in a learning objective.

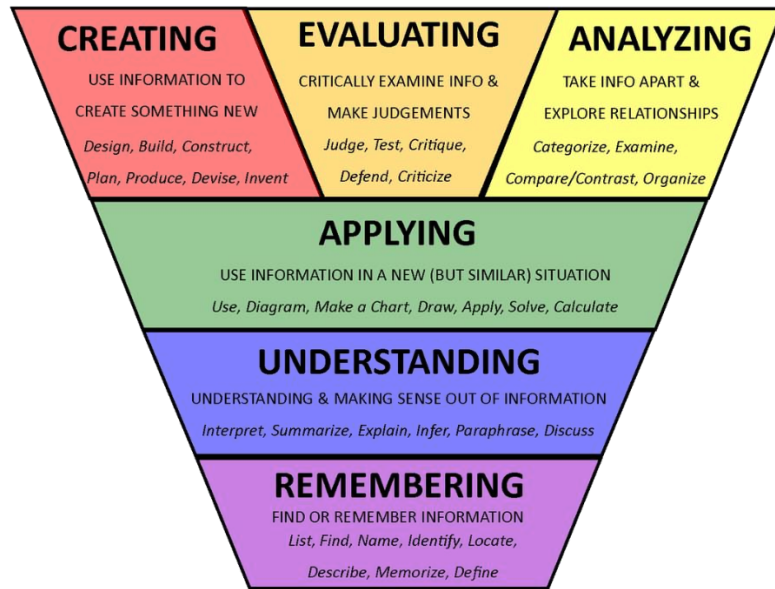


Figure 1. Image courtesy of Jessica Pilgreen

Shifting away from what the teacher will do to what the students will learn is a key element in successful lesson planning and teaching because it prompts the instructor to plan the class in a way that meets those objectives, as opposed to simply making sure that each item on a list of concepts has been checked off by the end of class. If the library works closely with a particular department, as mine does, library- or research-related learning objectives may already have been articulated on the course’s syllabus. In most cases, though, you will likely have to create your own based on the specific requests of the professor of record.

Each activity, each discussion point, on a lesson plan should support one of that session’s learning objectives in some way. An activity-oriented class can therefore be just as ineffective as a lecture-based one: while the students may be more engaged in class, the session ends up consisting of

busy work, a way to fill up the time. Including the learning objectives on the lesson plan also helps ensure that there is at least one activity or content chunk which fulfills that objective.

Consider including a learning objective (or phrasing all of your learning objectives in a way) that highlights their usefulness outside the academic environment in “real life”: for example, “The student will be able to evaluate websites for their reliability based on their author, creation date, and content.” Many skills that librarians teach in information literacy classes are ones that will be useful even after the students have graduated, but students are not likely to make such connections themselves. Again, by making yourself as the instructor think about the intended learning outcomes in this way, you ensure that these larger implications are not lost in nitty-gritty explanations of how to, say, use wildcards in ProQuest databases, and the chances are higher that you will make the connections for your students. If students see a benefit to what they’re learning beyond a passing grade on whatever research project they’re working on, they are more likely to pay attention (Gerding and Hough).

Additional Reading

While aimed at medical school instructors, the University of New Mexico School of Medicine’s Teaching for Learning guide provides a wealth of information on the effective use of learning objectives (among other useful information such as assessment and reflection). Included are an explanation of the SMART learning objectives system (Specific, Measurable, Attainable, Relevant, Targeted) and advice on how to implement the system, as well as suggested presentational strategies for each of the classifications in Bloom’s Taxonomy.

Carnegie-Mellon University’s Eberly Center for Teaching Excellence has put together a comprehensive literature review, called *The Educational Value of Course-Level Learning Objectives/Outcomes*, on the myriad ways that the use of learning objectives is linked to enhanced student learning.

Teach less material; move away from what must be “covered”

Out of all the strategies in this chapter, this one will likely be the most difficult to implement and, perhaps, internalize. Teachers at all levels are continually under pressure to cover as much material as possible, to “get through” the textbook. Most instructors have a semester or academic year to get through a curriculum; librarians who teach one-shots have only one class period, unless they’re lucky enough to be asked back for additional sessions. Given that we may never have an opportunity to teach these students again (unless they ask a question at the reference desk later), cramming everything students will need into a one-shot can be tempting—indeed, panic-inducing. Alternatively, the session’s content may rest entirely outside of our hands; professors sometimes contact us with a very clear idea of what they want us to cover, and are unwilling or unable to spare a second or third class period. The curriculum for our semester-long course may have been created by a committee and be standardized across all instructors.

Research suggests, however, that learners need to process and interact with information in order for it to be filed away for later retrieval (Ambrose et al, p.100). This isn’t possible if an overview of the library’s website, Boolean operators, truncation, and two databases are all on the day’s agenda. While each of the library concepts I just listed seem straightforward and easy-to-grasp to us, making a total of four minutes each spent on AND vs. OR, and ? vs. *, seem reasonable and sufficient, chances are that this is not true for your students, even if everyone nods when you ask if they understand. This is called cognitive overload: your brain can only take in so much new information at a time. Think of YouTube video tutorials you’ve watched or Ikea furniture assembly instructions you’ve read, or even some conference presentations you’ve sat through: how much of any of those did you remember

afterwards? The implications—that students need to focus on learning one skill at a time in order to reduce their cognitive load—are of particular import to one-shot instructors, who often feel pressured to fit multiple disparate learning objectives into one 50- or 75-minute class.

Try to limit the number of concepts you'll cover to as few as possible. Jane Bozarth, a well-known trainer of trainers, advises spending 50% of your time on the most critical 20% of your content to avoid cognitive overload. This doesn't mean making students repeat "OR = more, AND = less" like a research catechism umpteen times, but allowing enough time to incorporate exercises that lead students to proficiency in the new skill. As much as possible, the rest of your content supports the most important 20%, similar to what is commonly known as the journalism triangle:

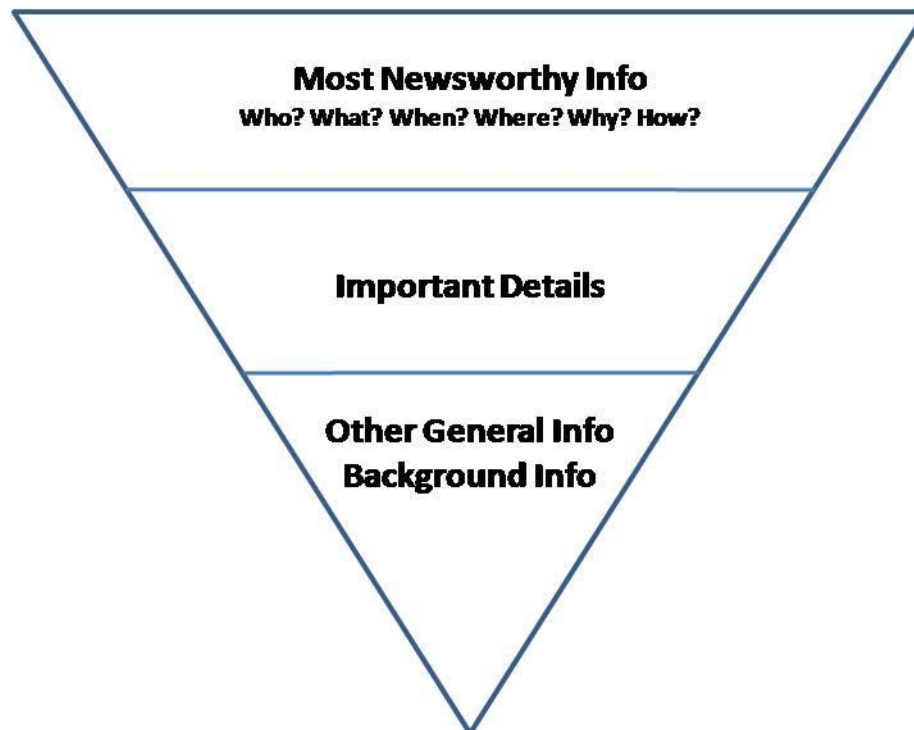


Figure 2. Image courtesy of the Air Force Departmental Publishing Office

Consider which is better: “covering” five concepts, of which students will ultimately retain knowledge of none or one, or demonstrating two concepts, both of which are able to be used again and again outside of class? “Allow[ing] students to focus on one skill at a time [...] temporarily reduce[s] their cognitive load and giv[es] them the opportunity to develop fluency before they are required to integrate multiple skills” (Ambrose et al, p. 105). I discuss strategies for doing this in the next section.

Not all of us have the agency to make such changes to what we teach, however. If you are among the ones who don't, show the person or people who do some research on the effects of cognitive overload (Ambrose et al's *How Learning Works* has a literature review of the topic which would work well) and ask about reducing the number of concepts covered per class. Your request may not be approved, though, and even if you do have autonomy over your class's content, there's still the matter of all those other things the students need to know about. Such situations are when a handout along the lines of Iris Jastram's Subversive Handout comes in handy (see appendix). Created specifically for classes where the requested list of learning outcomes dwarfs the available time, the Subversive Handout is a handy reminder of the topics covered in class that day, but more importantly also provides a list of the all the other usual suspects a librarian can help with. The topics on the handout may well

inspire professors to schedule additional sessions (as Jastram has found to be the case) and will hopefully trigger appointment requests from students as well.

Incorporate exercises where students apply what they've learned to promote deep rather than surface learning

The main benefit of reducing the number of concepts taught per class is gaining additional time to focus on those concepts, to incorporate exercises and activities into our lesson plans that encourage interaction with the new concepts at the higher levels of Bloom's taxonomy. In other words, you promote the synthesis, evaluation, and creation of knowledge rather than the mere remembering of it to correctly answer the one-minute assessment at the end of class, but no longer. One-shot instructors especially are pressed for time, but "what do students remember, much less understand, when there is only *teaching* with no opportunity to really *learn*—to work with, play with, investigate, use—the key ideas and points of connection? Such an approach [teaching] might correctly be labeled, 'Teach, test, and hope for the best'" (Wiggins and McTighe, p. 3). How useful is 'knowledge' of truncation where students can correctly define it, but don't think to use it after they've completed the assignment for which they had library instruction?

Phrased another way, as instructors we ought to think about what we'd like students to be able to do with what they learned in our class months or years down the line, both in and outside of academia. The end result we're hoping for, after all, is not the flawless truncation of all search terms students use in the future, but the ability to find the best, most relevant sources that fulfill their information needs. This task is arguably much easier for librarians to implement than our discipline-bound peers; so much of what we teach (e.g., the importance of evaluating information for reliability) naturally translates to the world outside academia. Ideally, our classes are really mini-lessons on what it means to think like a librarian, and these questions guide our lesson planning and learning-objective creating: "What are the particular abstract reasoning abilities that students must possess to understand certain concepts central to the discipline? Where are the students likely to have the most difficulty in reading or solving problems in the field?" (Bain, p. 51).

The best college teachers, according to Ken Bain's long-term study on the subject, favor teaching methods that amplify their students' "capacity to comprehend, to use evidence to draw conclusions, to raise important questions, and to understand one's thinking. In most disciplines, that means they emphasize comprehension, reasoning, and brilliant insights over memory": in other words, the learning classifications at the higher rather than lower end of Bloom's taxonomy (95). In higher education, we like to think that we prepare our students to be informed, productive citizens as well as well-equipped future employees; it makes sense, therefore, that what we teach should be just as applicable (if not more so) after graduation as before it. "The scholarly work on this issue asks not if students can pass our examinations but whether their education has a sustained, substantial, and positive influence on the way they think, act, and feel" (p. 24).

Students must be able to retrieve that information in order to transfer it to new contexts; incorporating exercises where students must analyze, evaluate, or create their new knowledge (along with proper information organization, discussed in the section on advance organizers, below) can make the difference between a student who remembers information today and a student who uses that knowledge years from now.

In the classroom

The anticipatory set: preparing students for learning

The anticipatory set should be the very first part of your instruction session: a question or tidbit that piques interest or curiosity in the information to come and, ideally, establishes a rapport between teacher and students. That connection is especially important for librarians who teach one-shots, as they generally have only this one opportunity to convince students that they are worth listening to. One-shot instructors have just one chance to make a positive impression; those who teach over the course of a semester have a much longer window in which to make and modify that initial impression.

Too many instructors launch right into the meat of the lesson without first either making a connection with the students or doing anything that gets them interested in the material. Student expectations are likely to be fairly low; aside from ardent Hermione-types, most students probably view a library instruction session somewhere between a regular class and solving math problems on the excitement spectrum. Note, however, that “the most basic way to get someone’s attention is this: Break a pattern” (Heath and Heath, p. 64). There are all sorts of ways in which you can break the expectational pattern of boredom at the library: students will not expect a Top 40 song to be playing when they walk in the classroom, for example. “Teachers [can also] succeed in grabbing students’ attention by beginning a lecture with a provocative question or problem that raises issues in ways that students had never thought about before, or by using stimulating case studies or goal-based scenarios” (Bain, p. 109-110). Or break the pattern of boring PowerPoint slides with an opening slide of a funny Internet meme that’s currently popular.

The first few minutes of class are also key to developing a rapport with the class. Building rapport is important even in one-shots where it’s unlikely you’ll ever teach the students again. If you make a connection, earn their respect, pique their interest, they are that much more likely to grant you their attention and a suspension of any latent cynicism over what you are offering them. I often start my classes by referencing a local or national event that’s likely to be at the forefront of the undergraduate’s mind: sports championships and extreme weather events are generally pretty safe. For example, in early February I might start class by asking how many students watched the Superbowl and whether anyone was upset over who won. I could then bring up the statistical whiz Nate Silver and his predictions for both political elections and the recent Superbowl, and use that as a segue into the topic of the day: librarians and their professor can predict, like Nate Silver, what grade a research paper will get just by looking at the research question.

If you plan to have the students interact with you or each other at all, “it is also a good practice to set up the expectations of the class right from the start. If they know within the first few minutes of a lesson starting that you will be expecting their active engagement, it will set the tone of the whole lesson, easing them into the rest of the activities you have planned” (Walsh and Inala, p. 17). Doing nothing but talk at the students for these first few crucial minutes without any expectation or need for a response lulls them into disconnected passivity. Starting class off with a question that requires participation in the form of a show of hands or shouted-out responses, on the other hand, alerts students to the fact that the class will not be a straight lecture, and mentally prepares them to participate later on.

The advance organizer: telling them what you’re going to tell them

As experts in a particular subject—finding information—we possess a complex network of information about our subject that is continually being added to and refined. When we learn something new about the process of research, we are able to easily fit that new information into our existing schema. Non-experts don’t have those schema, however, meaning they don’t possess a meaningful way to organize—and therefore remember—the new concepts and ideas they learn in class. Furnishing a preview or outline of what will be covered in class—what is known as an advance organizer—can

therefore provide a rudimentary schema into which students can file new information. In essence, you prepare your students' minds for learning. The presentational maxim "tell them what you're going to tell them, tell them, then tell them what you told them" springs from this theory.

"Having a preview of what is to be learned before attempting to use it makes for a much deeper level of organization in which to insert (or attempt to insert) new ideas and concepts. [...] When you know what's coming, you'll get a lot more out of the experience than when you experience it for the first time" (Svinicki). Providing an advance organizer can be as simple as including the course's learning objectives in the syllabus (in a for-credit course) or writing the day's agenda on the whiteboard prior to the start of class; I also verbally state what I call the class's game plan to make sure students catch this vital information. Additionally, you can make connections explicit between what students already know and what they will be learning; I discuss this strategy in greater detail in the next section.

There are more sophisticated methods by which one can foster the development of students' organizational model of research. You could furnish an outline or concept map for each class, keeping in mind that the provided language ought to be related to the day's learning objectives, rather than a not-so-helpful list of lesson parts such as 'introduction,' 'lecture,' and 'recap'. Coming to class with a prepared mind is a central tenet behind the flipped classroom movement, which has recently found traction in the library world: "rather than spending class time giving out new information, the students prepare their minds for the applications before class," usually with an assigned reading, video, or other learning object (Svinicki). Both of these more time-consuming methods of providing an advance organizer can be used in for-credit as well as one-shot classes; the flipped classroom is arguably of greater benefit to the one-shot classroom, as those instructors work within the most limited timeframe. By familiarizing students with the meat of the lesson's content before meeting, the class period itself can be spent refining that knowledge and providing opportunities for students to interact with it at a more sophisticated level (see Incorporate Exercises section, above).

Activate students' prior knowledge to scaffold their learning

As knowledge professionals, and especially as we move further and further from being undergraduate or graduate learners ourselves, there develops a disconnect between instructor and student in what we think students already know and can do. As librarians and lovers of learning, many of us have been surrounded by people who are not just smart, but love learning and academia, for a long time. We may also fall prey to stereotypes about our students, such as that all Millennials are tech-savvy, that affect how we decide to teach (Hargittai, p. 93). Our expectations of what students already know when they walk in the classroom therefore need to be adjusted to reflect our students' realities, rather than our own.

Many instructors have found that the seemingly specific goals and requirements we have laid out for a particular task cannot be understood by our students; what is happening here? As Ken Bain explains it, "We use our existing mental models to shape the sensory inputs we receive. That means that when we talk to students, our thoughts do not travel seamlessly from our brains to theirs. [...] Even if they know nothing about our subjects, they still use an existing mental model of something to build their knowledge of what we tell them, often leading to an understanding that is quite different from what we intend to convey" (Bain, p. 26-7). This conception of students arriving in our classroom with preexisting knowledge and ideas directly contradicts the traditional notion of students as empty vessels, which just need to be filled up by the knowledge their instructors impart.

When teaching, then, we ought to make connections between the knowledge our students already have to the new material we introduce. We cannot assume that students will make these connections themselves, just as we do not assume that hiring panels will connect the dots between what we (as applicants) see as relevant experience and a list of desired qualifications in a job ad; we

make those connections explicit in cover letters. While students likely already have preexisting knowledge that we would like to draw upon, that knowledge remains inaccessible until we make those connections clear to them.

Students are likely very familiar with Google and other Internet search engines; explicitly comparing and contrasting them with library databases can therefore be helpful. For example, I ask my students to explain to me why they don't type in an entire question into an Internet search box when doing research for their classes (because in the present day, the answers come from sites such as Yahoo! Answers and About.com, which the students know are inappropriate for college work); I then describe how entire questions should not be typed into library databases either (though for different reasons). Similarly, a colleague of mine teaches the use of database facets by explicitly comparing them to the facets on search results screens of shopping websites such as Zappos and Amazon.

Additional Reading

Jane Vella's 4-Is instructional model, as outlined in *Taking Learning to Task: Creative Strategies for Teaching Adults*, encourages instructors to connect new material with students' preexisting knowledge, following it up with an activity that encourages students to interact with the new material, then an activity that gets students to implement their new knowledge (at the upper levels of the ubiquitous Bloom's taxonomy), and end with an activity that integrates the newfound knowledge into their lives. This forms a circle of learning, with the student and his/her life as both the starting and ending point of the learning process.

Barbara Fister, a librarian who blogs for Inside Higher Ed, has compiled a useful list of tacit knowledge about libraries and research that librarians are likely to have, and that we may mistakenly assume our students have as well.

Affective learning: how students feel in the classroom is as important as what they're learning there

How students feel in class makes a surprisingly large difference on how receptive, consciously or unconsciously, they are to learning. This is partially due to cognitive load; students have less brainpower to devote to learning if they're thinking about stressors. Research has shown that college-aged students in particular are undergoing social and emotional development that dwarfs their intellectual development (Pascarella & Terenzini). External stressors are largely out of your control as the instructor, of course, though it's worth remembering that a substantial number of students are affected by library anxiety (Schroeder and Cahoy, p. 132). Other affective learning factors, however, are eminently in your power: the relationship between instructor and student and the overall climate of the class.

Think about how you evaluate information as learned from Rush Limbaugh (if you're a Democrat) or Bill Maher (if you're a Republican). You may take whatever you hear from this pundit at the opposite end of the political spectrum with a grain—or pound—of salt because you believe their political biases lead them to distort the facts. While an extreme example, this is analogous to how students can react if they feel their instructor doesn't have anything of relevance to say or is intimidating or off-putting; it is de-motivating.

The importance of affective learning is one of the reasons that the anticipatory set is so important: it can help the students relax and make a connection with you. Developing a rapport with students can begin even before class has started, however, by greeting students as they come in or making conversation after they've settled in. "This reduces any perceived barrier between [you], and

makes for a more informal and receptive class” (Cahoy, p. 11). Similarly, the first few sessions of a semester-long class can be used to communicate high expectations: to inform students tacitly and explicitly that your standards are high but that you believe they are capable of reaching the bar you’ve set. “Expecting students to perform well becomes a self-fulfilling prophecy, having direct impact upon student learning” (Woodard and Hinchliffe, p. 324).

“Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement” (p. 321). This is great news for librarians who teach for-credit classes; you have a semester of opportunities to develop and nurture connections with students. One-shot instructors needn’t feel disconsolate, however; I have found from personal experience that my students respond better—in terms of greater participation with each other, willingness to answer questions, openness to untraditional activities, and reduced classroom management issues—if I am my natural self when teaching, rather than a personality-less librarian automaton. Providing positive feedback in class—when warranted—can further develop a rapport as well. And both one-shot and for-credit library instructors can make themselves known to students by setting up regular office hours in their liaison departments.

Connecting with students is also a crucial part of classroom management, even for one-shot instructors. Students are less likely to engage in inappropriate behaviors—texting, intentionally taking a nap—with instructors they like and respect. You’ll still encounter the occasional insolent or argumentative student, however. The old maxim “kill them with kindness” is useful here; it is a surprisingly successful strategy, though likely to be more effective when used in a semester-long class. Additional classroom management techniques are discussed in the next section.

Additional Reading

While everyone has a sense of humor, few of us are likely capable of successfully taking the stage at a stand-up comedy club. Eamon Tewell on *The Desk Set* and Joshua Vossler in *Humor and Information Literacy* both explain how your personality can constructively inform your instructional practice and provide strategies for effectively using comedy as an affective learning technique.

Classroom management

One might think that classroom management wouldn’t be a concern when teaching in higher education. But what teacher hasn’t witnessed chatting or texting in class, or tardy students who continually arrive 5 minutes late, missing ten percent of the day’s material and distracting all of their classmates as they shuffle up to the remaining seat at the front of the classroom?

The proverb ‘an ounce of prevention is worth a pound of cure’ is especially true in education; creating a positive atmosphere in the classroom with clear expectations goes a long way towards forestalling potential disruptions. “Praise is one of the most powerful, and certainly one of the most underutilized, tools in any teacher’s repertoire” (Eyster and Martin, p. 16); it can neutralize negative forces in your class, reinforce excellence, and prevent the hardworking but quiet student from remaining invisible and unacknowledged. See the section on the importance of affective learning, above. Additionally, try to unchain yourself from the instructor’s podium as much as possible. Walking around the classroom is a good way to ensure attention even from students at the far reaches of the classroom and preempt disruptive behaviors before they occur.

While instructors may be tempted to ignore the occasional muttered aside because they don’t want to make a big deal of something trivial, I urge you to take a stand. “Everyone in the class will quickly sense what you will tolerate and what you will not. Turn a blind eye [...] and they will understand that you are giving up part of your rightful authority and that they are the ones who get to set the social

guidelines in the room”; advice that is as true for one-shot instructors as it is for those who have the luxury of teaching semester-long courses (p. 60). Unfortunately, the instructors of record often check out at the back of the room when they bring their classes to the library for instruction—that is, if they haven’t dropped their students off and left them for you. This doesn’t necessarily mean that you need to call out every giggling student; proximity can be a surprisingly effective classroom management technique. Simply moving closer to the inattentive student is often enough to quell the undesirable behavior.

If you are fortunate enough to teach a semester-long information literacy class, you have an additional set of issues to deal with, tardiness likely foremost among them. This is more likely to be an issue in college than K-12 education, as class attendance is usually not mandatory. You could lock the door precisely one (or two or five) minute after class starts, but this is a bit harsh. Less draconian is giving a short quiz as soon as class starts, with no make-ups allowed. This alternative to giving a grade for prompt attendance—arguably not appropriate in college—encourages not only punctuality but close reading of the assigned homework text as well.

Additional Reading

While geared towards the K-12 teacher, Eyster and Martin’s *Successful Classroom Management* is a treasure trove of classroom management strategies, especially the preventative kind. Additional topics covered include ways to guarantee lesson plan variety and why a passion for the subject should not be underestimated, both of which have implications in ensuring the attentiveness and conduct of your class.

After class: completing the instruction loop

Reflective practice

What you do as an instructor after class can matter as much as the time you spent preparing or actually teaching. If you use an activity or analogy that unexpectedly bombs, do you do more than cross it off your repertoire? What about when your class is an unsurprising success? Taking the time to reflect on your class—what worked, what didn’t, anything else that comes to mind—helps you work through the more important implications of that information: *why*.

Was the class immediately after the lunch hour, making students sluggish (and therefore, perhaps, in need of something to get them up and moving about)? Did you chat with the students while they waited for class to start, thereby forming a rapport that helped carry the lesson in the form of increased participation? Some of these factors will be outside your control, but it’s still worth reviewing them in case any of them could be mitigated through planning. Additionally, reflection helps prevent you from subconsciously overlooking (and rectifying) instructional shortcomings you may have.

Ideally, this reflection will take place as soon after the class has ended as possible, especially if multiple sessions are taught in a short period of time. Small but important details are more likely to be lost the longer the delay between teaching and reflecting. Regardless of whether you teach one-shots or for-credit classes, the chances are high that you will teach the same content in some shape or form again. Unless you somehow take note of what you’d like to do differently or emphasize next time, you are likely to either forget those changes or fall back on “the spiel,” especially when stressors such as too little time to prepare during the instructional busy season are factored in. Depending on how much you tend to shift into autopilot when teaching, this can even happen between different sessions of the same class on the same day; making a note on the lesson plan to allot only 2.5 minutes for a discussion

instead of 3 can mean the difference between a more focused classroom and one that keeps descending into off-topic chatter.

Blogging can be an especially effective medium for the reflective process. In addition to all of the above benefits, blogging has the added advantage of providing a mechanism for feedback from other librarians and instructors without asking for it outright (e.g., on Twitter or Facebook). The commiserating replies will assuage your disappointment, the congratulatory ones heighten your feeling of success, and you're likely to get some good tips as well.

Finally, "incorporating metacognitive elements [...] can also prevent the boredom that can result from teaching the same concepts over and over" (Booth, p. 19). Reviewing what you said and did after class, when the heat of the moment has passed, can remind you of having read or heard about a similar technique elsewhere, or prompt you to research solutions to small problems that presented themselves in class.

Additional Reading

Char Booth has several extremely helpful chapters on the importance and benefits of reflective instruction, including easy-to-follow methods by which it can be made a regular part of one's instructional practice, in her book *Reflective Teaching, Effective Learning* (American Library Association, 2011).

Provide prompt, formative feedback

"Feedback is the teacher's way of communicating with students, and it is key to helping the student learn" (Woodard and Hinchliffe, p. 324); as such, it is the most vital tool in an instructor's arsenal. Feedback ensures that students comprehend and are capable of using the information you are responsible for teaching. Feedback on formative assessments—that is, assessments conducted during the learning process rather than afterwards—is therefore be the most useful kind of teacher-student communication as it enables you to correct missteps in the journey that, if left unchecked, may lead the student to entirely the wrong destination.

If you teach semester-long courses, there will be many opportunities to check student progress and provide feedback, both formally and informally. If you find yourself in this fortunate position, it is important to return graded—and commented-upon—assignments as quickly as possible to students. The grades students receive for homework and more substantial assignments are how they gauge how they're doing in the class; as library research is a foundation class, few students will have mastery over the material. Ambrose et al call this stage of learning unconscious incompetence, when students "have not yet developed skill in a particular domain, nor do they have sufficient knowledge to recognize what they need to learn" (96). Students may think they understand a concept when in reality they only partially understand or have a flawed understanding. Providing meaningful feedback on assignments in a timely fashion ensures that these misunderstandings are corrected before learned behaviors and foundational concepts must be unlearned. But do not neglect to provide written commentary in the interests of providing a timely grade: "although grades and scores provide some information on the *degree to which* students' performance has met the criteria, they do not explain *which aspects* did or did not meet the criteria and *how*" (emphasis Ambrose et al, p. 140).

Many of us do not have the luxury of meeting with students a dozen or so times over the course of a semester; fortunately, formative feedback can still be provided in the one-shot classroom. Especially in the instance of one-shot instruction, it is important to have "more tasks of shorter length or smaller scope [to] provide the frequency of feedback that allows students to refine their understanding" (p. 150). It is thus preferable to assess understanding after each new concept is introduced and students

have had an opportunity to wrestle with that concept discretely rather than conducting a more general assessment at the end of class.

Keep in mind that feedback does not necessarily need to come from you, or even be given individually; students can, with appropriate guidance (e.g., rubrics) provide feedback for their peers and feedback is still useful when given for group rather than individual work. For example, after I've introduced the concept of truncation and we've discussed it for a while, I often ask the class to truncate a couple words by selecting one of four multiple-choice options on PollEverywhere. This enables me to see how well this concept of truncation has been understood, and for me to explain why the other answer options are incorrect to the class as a whole rather than individually. Another activity I use, borrowed from my supervisor, is to divide the class into small groups and to ask each group to put a set of cards with call numbers on them in order. The teams then stand up (this exercise is also helpful for reinvigorating a sleepy class) and I call out the order the call numbers should be in, one card at a time, with teams sitting down once one of their cards is shown to be out of sequence. With each progression—if a team has had to sit down—I explain why the cards should be in this particular order, and again am able to provide feedback collectively rather than individually. Group feedback can therefore be as useful as individual feedback, in addition to having the benefits of speed and student anonymity (sparing students potential embarrassment in the case of a wrong answer).

Articulate your teaching philosophy

Technically, teaching philosophy statements could appear in the preparing-for-class division of the chapter; education students generally prepare them in their final semesters in preparation for their job search, as schools (and often institutions of higher education as well) ask for them as part of the application process, and they are therefore created before the students begin teaching. Education majors have had the advantage of several years of cumulative study of learning theory, instructional strategies, and educational psychology before they get to this point, however, and these subjects are all necessary to inform a robust teaching philosophy. I have placed this section in the after-class division of the chapter to mimic the education major's practice of placing it in the penultimate stages of study, as the reader has, at this point, had a rudimentary orientation on these topics.

So, what *is* a teaching philosophy? It's a narrative—between a couple paragraphs and a couple pages long—that articulates how you feel the teaching and learning process works, in addition to describing and justifying the way in which you teach. There is a multitude of best practices in the canon of educational research, but no one-size-fits-all scientific method for flawless instruction: it is a highly personal practice. Explaining, to yourself and potential employers, how the theories you've learned and your experiences have shaped your methods can therefore help you reflect upon and refine your teaching. While most commonly used as part of the educational job application process, the teaching philosophy therefore has a formative purpose as well, and thus is useful for librarians who teach.

As the creation of learning objectives and their inclusion on a lesson plan help ensure that the content and activities you choose support those learning objectives, so the construction and refinement of a teaching philosophy helps ensure that you teach mindfully and intentionally. Especially during busy times, it can be difficult—both preparing for class and actually teaching—to break out of instructional autopilot. Revisiting your teaching philosophy and revising it as necessary can keep it fresh in your mind and serve as a reminder that asks, “Is this how I want to teach?”

Where to start? Think about what you love most about teaching, the greatest student needs you see in the classroom, and what inspired you to become a librarian in the first place. For example, Iris Jastram, an instruction librarian I've mentioned earlier in this chapter, calls her blog Pegasus Librarian; the About Me page of her blog explains why the mythological creature is the namesake for her blog and why it is her instructional inspiration: in a nutshell, because her “favorite symbolic concept places

Pegasus at the point where innovation, creativity, wisdom, deliberation, and a healthy sense of humor intersect. That's the place [she]'d like teachers, learners, and librarians to inhabit" (2006). As she demonstrates, the inspiration for your teaching philosophy can lie outside of librarianship and even academia.

Additional Reading

A number of graduate schools have created guides for their students on the writing of teaching philosophies; these often include leading questions to help jog your memory. Among these are Cornell and Washington University in St. Louis. The University of Minnesota has created a highly regarded tutorial that walks you through the statement-creation process step-by-step.

It can be helpful to see how other librarians have envisioned as their teaching philosophies, especially since librarians are so rarely asked to create them. There is a collection of librarian teaching philosophies on the 21st Century Teacher-Librarians Ning that could give you an idea of how you might approach creating your own; an Internet search for "librarian teaching philosophy" yields some additional examples.

Finally, the Chronicle of Higher Education has posted an article online on how to write a teaching philosophy that goes beyond a discussion of fundamentals (such as being student-centered) to reflect your own unique voice and experiences.

Conclusion

The concepts and strategies discussed in this chapter are just the tip of the educational psychology and learning theory iceberg. There are entire bodies of research devoted to aspects of learning theory that I have not even touched on: multiple intelligences, learning styles, learning development stages. While no crash course can replace a systematic study, hopefully the principles discussed herein will still be of immediate practical use and serve as a stepping stone for further research. I hope that you will view teaching as "an endeavor that benefits from careful observation and close analysis, from revision and refinement, and from dialogues with colleagues and the critiques of peers[, ...] never completely satisfied with what [you have] already achieved" (Bain, p. 20-1). One of the things we learn as librarians and educators is that the best teachers are themselves constantly learning; this is just as valid for technique as it is for content.

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Appendix

An example of a Subversive Handout (see section on Teach less material; move away from what must be “covered”).



Things to Think About

Here's what I will have covered today (hopefully):

- The difference between catalogs and databases, and why it matters
- Searching MLA International Bibliography
- Finding the full text of articles
 - Online
 - In the library
- Interlibrary Loan (remember that it can take as little as a few days, or as much as 3 weeks to deliver articles and books to you)
- Sidelong glance at the Arts & Humanities Citation Index

Some things I haven't covered (but you can ask me about at any time)

- Finding books using Bridge and WorldCat
- Finding book reviews
- Finding letters, diaries, images, and other primary sources
- Finding out if journals are peer reviewed or not
- Advanced citation mining
- Effective full text searching (you use different strategies when you're searching through all of the author's words, as we started to learn when searching JSTOR)
- Found an article via Google? How do you know if it's a peer reviewed, scholarly article like those in library databases?
- Locating and using dissertations... and when not to look at them
- And other fun things like using EndNote and del.icio.us to gather and organize your research as you find it.

Getting Help

- My office hours (constantly updated):
<http://people.carleton.edu/~ijastram/schedule.html>

Figure 3. Image courtesy of Iris Jastram.