RESEARCHING IN A DIGITAL WORLD

How do I teach my students to conduct quality online research?

Erik
PALMER

Hawker Brownlow
EDUCATION

RESEARCHING IN A DIGITAL WORLD

How do I teach my students to conduct quality online research?

The Need for Internet Literacy 1

Before Students Go Online 4

Going Online to Seek Answers 14

Evaluating Online Resources 25

Using Online Resources 38

Developing Lifelong Skills 49

Encore 51

References 56

Related Resources 57

About the Author 58

The Need for Internet Literacy

Do you send your students to the Internet to do research? I ask teachers this question when I lead workshops, and overwhelmingly, their answer is yes—even in the primary grades. Then I ask if they teach any specific lessons to *prepare* students for researching in an online environment. Equally overwhelmingly, their answer is no. Because our students are digital natives, right? Even the youngest of them seems able to intuit how to manipulate all kinds of digital devices, how to create and upload content, and how to find entertaining things online. This leads us to assume they are Internet competent and completely web savvy. But do they really understand how to find the best of places for research and how to analyze all the sites their device dexterity helps them find? The answer is no.

Here is something else I've learned from my workshops: Teachers absolutely believe that teaching Internet literacy is necessary. Yet it isn't happening—and not because of the time constraints, although that is certainly a factor. The main issue is that many of us don't have a great deal of Internet literacy ourselves. The intricacies and operation of Wikipedia, domain name suffixes, search engines, browsers, how to find who is publishing particular site content, how Google decides what to list first on a search page, how to use punctuation to get better search results—for many of us, these remain mysteries.

Student Struggles with Online Research

I happened to be in Oregon recently. As you may know, that part of the country is the home of the endangered Pacific Northwest tree octopus (*Octopus paxarbolis)*, the cephalopod that is born in the ocean but comes ashore to live in the forests along the Oregon coast. I wrote about the animal and the website devoted to it (http://zapatopi.net/treeoctopus/) in my book *Teaching the Core Skills of Listening & Speaking* (Palmer, 2014). I didn't see any tree octopi on any of my walks, but I didn't expect to—unlike many of the students I've taught, who visited the website and had trouble recognizing it as an elaborate hoax. The trip reminded me of the kinds of struggles students have with online research:

- Uncertainty about what words to put into the browser's search box
- Overreliance—often *exclusive* reliance—on Google
- Difficulty figuring out which of the 34,219,300 search results returned is the best place to start
- Never looking beyond the first page of results
- Inability to assess the purpose of a site
- Never checking or considering the authority of the site's authors
- Not knowing how to evaluate a site's credibility
- Copying information and images without understanding plagiarism or copyright

These and other issues make clear that we have some work to do to prepare our students before we send them online. Without that preparation, projects that could engage

students in independent learning and critical thinking end up wasting learning time, yielding bad information, and creating both bad habits and faulty understanding.

Much of what I will share in this book was learned the hard way. For years, I had my students do a research project I called "Planetary Problem Solving"—a project easily adaptable to all grade levels and a variety of subject areas. The set-up was simple: Choose a current global problem (e.g., acid rain, overpopulation, world hunger, heart disease), research it, and report out, citing at least three online references. What I didn't do was provide any instruction to build my students' Internet literacy. Problems followed.

I have structured this book in a way that I hope is useful. We will proceed through the process of researching online. In each section, I will give some background knowledge to share with students and then use a Planetary Problem Solving example—childhood obesity—to illustrate how this insight might be applied. In the end, I hope you will walk away with a practical approach for preparing your students to conduct truly effective online research.

The Challenge for Teachers

Let's be honest: the Internet was not designed with students in mind—and certainly not elementary students. I once watched a 2nd grade teacher hand each student a Chromebook, assign them a country to report about, and direct them to www.safesearchkids.com. After that, she left them to their own devices. Students inputted "Brazil" or "Italy" and got flooded with results—all kinds of sites, both

credible and dubious. The kids who weren't distracted by ads and pop-ups dutifully copied information into their notebooks, even words and information they didn't understand.

The digital natives in our classroom still need our guidance in the form of information that will help them be savvier and more efficient researchers. They need our support in the form of practical strategies that they can use to think more critically about the "facts" they find online. Adapt the ideas in this publication for your grade level. Modify its action items as needed. And always be vigilant as your students search, especially if they are very young.

Before Students Go Online

Our students have never known a world without the Internet, but that doesn't mean that they couldn't benefit from a little tutorial about some of the basics of its operation. Let's start there.

Logistics and Key Terms

What is happening when we "go online"? It is useful for students (and adults) to understand some key terms and logistics.

The Internet is not a place. Nor is it an all-knowing, all-wise source of knowledge. It is a vast network of interconnected computers. Students commonly say, "I found it on