Internet Research and Information Literacy: Effective Strategies and Cautionary Tales

Effective Internet Search: Basic Tools and Advanced Strategies

INTRODUCTION

This Teacher's Guide provides information to help you get the most out of *Effective Internet Search: Basic Tools and Advanced Strategies*. The contents of this guide will allow you to prepare your students before using the program, and to present follow-up activities to reinforce the program's key learning points.

PROGRAM DESCRIPTION

Formed decades ago from a small pool of data sources, the Internet has grown into a seemingly endless ocean of information—in which today's young researcher can easily get lost. This video introduces strategic, study-related online search methods that teenage or college-level viewers may not be familiar with, especially if they're accustomed to the more recreational side of the Internet. Outlining ways to formulate initial questions about a topic, the program offers examples of frequently used search engines (from Google to specialized databases) and how to take advantage of them using keywords, quotation marks, Boolean operators, nesting, wildcard and truncation symbols, and other typed-in directives. Result-oriented topics are also featured, including: the differences between primary, secondary, and tertiary sources; the best criteria for confirming the legitimacy of a particular Web site; and helpful techniques for searching within a site. Part of the series *Internet Research and Information Literacy: Effective Strategies and Cautionary Tales*.
A Cambridge Educational Production. 3-part series, 19–22 minutes each.

LEARNING OBJECTIVES

After viewing the program, students will be able to:

- Understand what is useful on the web

- Develop a research strategy

- Determine if an online source is credible

- Choose the right tools for searching the Web

- List some available sources for information on a range of topics

EDUCATIONAL STANDARDS

For educational standards for this title, please see: http://ffh.films.com/id/20147/Effective_Internet_Search_Basic_Tools_and_Advanced_Strategies.htm

PROGRAM OVERVIEW

Where do you begin to look for information online? How do you know if the information you are finding is credible and accurate? If you can't find the answers you are looking for, where do you search next? *Effective Internet Search* describes strategies you can use to find the answers you want. From determining what kind of sources to seek, to narrowing down and identifying the most credible results, *Effective Internet Search* provides detailed explanation of the options available to students. The video provides tips for making your Internet research quicker and more productive.

MAIN TOPICS

Topic 1: A Brief History
In this section, *Effective Internet Search* provides a quick history of the Internet and how it has grown to become the resource it is today.

Topic 2: Types of Research
Are you looking for facts and data, review and opinion, or analysis? This brief video defines these terms.

Topic 3: Getting Started
Your research plan should include these steps: analyze your topic, brainstorm or mind-map to select keywords, finalize your research questions.

Topic 4: Types of Sources
There are many types of sources, including popular, scholarly, trade, among others. This section explains the differences and which ones are best for your particular need.

Topic 5: Basic Research Tools
What is the difference between a database and a search engine?

Topic 6: Advanced Research Tools
If basic research tools are not enough, this section describes tools you can use to get more specific, narrowed search results.

Topic 7: Evaluating Your Results
How do you know which sources are credible? This section gives you tools and tips to assess the credibility of a Web site.

FAST FACTS

The Internet started in the 1960s to aid communication throughout the military.

Before you begin your Internet search, it is important to have a research plan.

Brainstorming and "mind-mapping" are useful for determining keywords.

Using unique identifiers such as names, titles and dates will yield the best results.

Search engines are the best places to start for general queries.

There are specialty search engines that give results for specific categories of research, such as travel or blogs.

Using the search term "AND" or "NOT" narrows a search, while "OR" broadens the search.

Library databases are helpful because they have content that is evaluated for credibility before it is posted.

VOCABULARY TERMS

World Wide Web: a system that interlinks hypertext documents on the Internet

Trade source: a form of published content that combines popular and scholarly techniques on a specialized topic

Primary source: unaltered first-person narrative and content

Tertiary source: list of compiled secondary sources

Database: a collection of related data organized for access on a computer

Crawler-based engine: a type of search engine that compiles listings automatically and lists sites that match your search query

Directory: a type of search engine in which human editors compile the listings, search results are based on the written description of the sites

Boolean Operator: a technique using words such as "AND," "NOT," and "OR" to narrow or expand search results

Surface web: the portion of the World Wide Web that is indexed by conventional search engines

Dynamic content: Web pages with constantly changing content, either by a user or server

PRE-PROGRAM DISCUSSION QUESTIONS

1. Which search engines do you use? How often do you use them?

2. Have you ever used a library database? Which one?

3. What is an example of a popular source?

4. What is the difference between a primary and a secondary source?

5. How do you determine which Web site to go to when you are researching online?

POST-PROGRAM DISCUSSION QUESTIONS

1. What questions should you ask as you first analyze your topic?

2. What is the difference between a popular source and a scholarly source?

3. What is a keyword and how is it used?

4. Give an example of a specialty search engine.

5. What are three questions to ask to determine if a site is credible?

SUGGESTED ACTIVITIES

ACTIVITY 1

For each of these five research interests, describe your initial search strategy.

1. My subject is pyramids, but I don't have a specific question yet…

2. I need information about business law…

3. I'm researching art museums in New York City. Where do I begin?

4. I'm looking for information on the manufacture and export of incense.

5. I'm writing a thesis about social networks and will need many sources

Answer key

1. My subject is pyramids, but I don't have a specific question yet.

Broad subjects. Try an online encyclopedia first.

2. I need information about business law.

General information about a specific area of knowledge. Use a targeted search engine.

3. I'm researching art museums in New York City. Where do I begin?

Specific, but well-known subject. Try a directory.

4. I'm looking for information on the manufacture and export of incense.

Specific, but unusual topic. Use a general search engine.

5. I'm writing a thesis about social networks and will need many sources.

Multifaceted subject—a combination of several search engines, databases, and directories.

ACTIVITY 2

Internet Scavenger Hunt

Go on an Internet scavenger hunt to find answers these questions. Keep track of the search engine and key words you used to conduct your search.

1. What are the exact dimensions of the largest pyramid of Giza?

2. What year was the Regulatory Flexibility Act passed and amended for small business owners?

3. Which art museum in NYC is the home to the Miotte Foundation?

4. The United Nations was established in 1945 to replace what organization?

5. What is the name of the plastic tips on the ends of shoelaces?

6. On June 15, 2011, a total lunar eclipse was visible from every continent except two. Which ones?

7. How many calories per serving are in one cup of sliced raw radishes?

8. What is the name of the government organization set up in North Carolina to regulate electrical contracting within the state?

9. Who was the starting right defensive end rookie player that was on the losing Superbowl team in 2005?

10. How many feet is the Statue of Liberty's torch, from flame tip to bottom of the handle?

Answer Key

1. Length of the base: 755.75 feet; height is 481.4 feet. Because this is a specific fact, research using an **online encyclopedia**. **Britannica.com, pyramid of giza**, yields **Pyramid of Khufu** (the tallest one), which yielded the term **The Great Pyramid** with the dimensions.

2. Passed in 1980, amended in 1996. Because this was general information about a specific area of knowledge, use a **targeted search engine**. In **SBA.gov** (small business administration) search **regulatory flexibility act**, click the link **Office of Advocacy–regulatory flexibility act** then click **RFA Overview**.

3. Chelsea Art Museum. This was a question on a specific yet well-known subject, so use a **Directory**. **Yahoo Directories, Arts and humanities**, region–**united states**, state–**New York**, cities–**Manhattan**, categories–**Museums and Exhibits**, categories–**Art**. On the 2nd page the description reads: **Chelsea Art Museum, Home of the Miotte Foundation**.

4. The League of Nations. Go to an **online encyclopedia**. **Encyclopedia.com**, search **United Nations, history**.

5. Aglets. Because this is a specific question on an unusual topic, turn to a **general search engine** first. **Google**, search **shoelace AND plastic tips**, aglet.

6. North America and Antarctica. This question required a specific fact on a well-known subject, so head to a **directory**. **Altius directory, articles, science, astronomy**, search **lunar eclipse**, then click **Lunar Eclipses Occurs List 2006–2015**.

7. 19. This was information on a specific area of knowledge, so use a **targeted search engine**. **Nutritiondata.com**, search for **radish**, click **raw radish**.

8. North Carolina State Board of Examiners of Electrical Contractors. This was a specific answer in a well-known subject so use a **directory**. **Yahoo Directory**, regional–**United States**, states–**North Carolina, Government, Boards and Commissions**, North Carolina State Board of Examiners of Electrical Contractors with its description.

9. Trent Cole. This is a multifaceted subject, so you need to use a **combination of several search engines, databases or directories**. Start searching which teams were in the 2005 Superbowl. Google, search **2005 AND Superbowl teams**. Answer is New England Patriots vs. **Philadelphia Eagles**. Patriots won. Now look at a specific database to find their roster. **Profootballreference.com**, click **Teams**, click **Philadelphia Eagles**, click **2005**, click **Starters and Roster**, scroll down to find all players listed as **Rook**, find **RDE**, **Trent Cole**.

10. 29 feet. Specific fact on a broad subject. Turn to an **online encyclopedia**. **Britannica.com, Statue of Liberty**, click **article, 29 feet**.

ACTIVITY 3

The student should use Google Timeline to determine the highest peaks of Internet activity and then use their research to explain why. Choose one of the following topics.

- Global Warming

- Renewable Energy

- Nobel Peace Prize

TRUE/FALSE QUIZ

(if the statement is false, explain why)

1. There are three main types of text resources: individual facts, data/report, review and analysis.

2. The first step to take before researching a topic is to formulate questions.

3. The three common forms of published content are popular, scholarly, and blogs.

4. Secondary sources are unaltered first-person narratives and content.

5. Tertiary material is useful as jumping off points for further research.

6. Keywords are nouns and objects related to the topic.

7. Crawler-based search engines compile their listings based on written descriptions by human editors.

8. Boolean operators include the terms *and, or, where, when.*

9. If a Web site has an e-mail address listed, it is a valid, trustworthy site.

10. Wild card and truncation symbols are useful if you are searching for words with multiple endings, meanings, or spellings.

QUIZ ANSWERS

1. There are three types of research: individual facts, data/report, review and analysis.

True.

2. The first step to take before researching a topic is to formulate questions.

False. *You want to first ask the who, what, where, why, when, and how of the topic.*

3. The three common forms of published content are popular, scholarly, and blogs.

False. *The three common forms of published content are popular, scholarly, and trade.*

4. Secondary sources are unaltered first-person narratives and content.

False. *Primary sources are unaltered first-person narratives and content.*

5. Tertiary material is useful as jumping off points for further research.

True.

6. Keywords are nouns and objects related to the topic.

True.

7. Crawler-based search engines compile their listings based on written descriptions by human editors.

False. *Directories are based on human editors, while crawler-based search engines compile their listings automatically.*

8. Boolean operators include the terms *and, or, where, when.*

False. *Boolean operators include and, or, not, near.*

9. If a Web site has an e-mail address listed, it is a valid, trustworthy site.

False. *You still need to check who publishes the site, check the author's credentials, check to see if the information is relevant and accurate, and check for a list of references.*

10. Wild card and truncation symbols are useful if you are searching for words with multiple endings, meanings, or spellings.

True.

ADDITIONAL INFOBASE LEARNING RESOURCES

Researching, Reading, and Writing
Faced with a mountain of research to conduct, reading to do, and papers to write, students must work both efficiently and shrewdly. This three-section program tells how to identify and cite reliable online and offline sources of information, carve textbook chapters into manageable chunks, and outline and revise papers—all elements that are essential to getting the job done well. A Cambridge Educational Production. A part of the series *Academic Success: Smart Tips for Serious Students*. For (12 minutes) © 2009

Item#: 40414
DVD ISBN 978-1-60825-721-8

Research Basics on the Internet
Making sense of the landslide of information available on the Internet is a challenge to many students. How can they locate the materials they need among its vast resources? Focusing on the experiences of a frustrated student who is struggling to find data to complete her school project, this program explains how to use search engines to browse for Web sites. The program also explores the concept of research itself, contrasting online and traditional types. (19 minutes) © 1999

Item#: 10890
DVD ISBN 978-1-4213-4221-4

Information Literacy: The Perils of Online Research
In a world of information overload, information literacy has become a survival skill. But what exactly does information literacy mean? With a focus on the Internet, this video explains how to conduct solid online research by collecting information in an organized, efficient, and ethical way. Professor Maurita Holland of the University of Michigan School of Information provides expert commentary and guidance on a range of research activities, including evaluating the credibility of Web content, documenting online sources, and paraphrasing—not copying—the words of others. Additionally, a high school teacher and a graduate student demonstrate real-world examples to reinforce the challenges and rewards of online research. The consequences of plagiarism and shaky facts are emphasized. A viewable/printable instructor's guide is available online. (21 minutes) © 2006

Item#: 35675
DVD (chaptered) ISBN 978-1-4213-5719-5

ADDITIONAL INTERNET RESOURCES

The following are helpful sites providing tips and resources for Internet searching:

http://www.virtualsalt.com/evalu8it.htm

Provides a few ways to remember the importance steps to follow when evaluating Web site sources.

http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/FindInfo.html

Provides a comparison chart of popular search engines and directories and links to help cite sources.

http://www.searchenginecolossus.com/

Lists search engines from different countries around the globe

http://www.learnwebskills.com/search/

Outlines the importance of using keywords, Boolean operators, and subject directories to search topics.

http://www.rileyguide.com/jobsrch.html

Provides tips and helpful ways to search for a job on the Internet.