Scenario

Harry Dosital is feeling overwhelmed by one of his class assignments. Harry would have been happy if the assignment was to write a traditional research paper but his professor has asked the class to solve a real life problem. The professor has asked the class to imagine a small city undergoing a natural disaster such as a flood or a tornado. Each group in the class is required to plan a hypothetical information command center for this city. The professor explains that the government needs to obtain accurate, up-to-date information on the scope of the damage and injuries sustained due to the disaster. This information is vital for the city to be able to provide adequate emergency and medical assistance to its citizens. Harry can see that this is an important function for any city in the midst of a crisis but he is not sure about where to get reliable information to help him construct a plan for the city.

Harry and his classmates do some brainstorming and decide to approach this assignment as if they were actually producing a research paper. Their first step will be to research recent disasters. They reason that this will provide some information about the way some cities have gathered information during disasters. If an information gathering strategy worked for other cities, it will work for their hypothetical city. There certainly have been a lot of natural disasters recently, so it shouldn't be too hard to find some information. Super Storm Sandy and Hurricane Irene are two recent events that immediately come to mind. The group starts to research Super Storm Sandy with Google and Wikipedia.

Harry and his classmates are engaging in the Gather pillar of the Seven Pillars of Information Literacy model. Just as municipalities needed to gather reliable information in order to provide vital services to their citizens, Harry and his group members need to gather information that will help them complete this assignment.

These information needs are components of the Gather pillar, which states that the information literate individual understands

- How information and data are organized
- How libraries provide access to resources
- How digital technologies provide collaborative tools to create and share
The issues involved in collection of new data
The different elements of a citation
The use of abstracts
The need to keep up-to-date
The difference between free and paid resources
The risks involved in operating in a virtual world
The importance of appraising and evaluating search results

They are able to

- Use a range of retrieval tools and resources effectively
- Construct complex searches appropriate to different digital and print resources
- Access full text information, both print and digital, read and download online material and data
- Use appropriate techniques to collect new data
- Keep up to date with new information
- Engage with their community to share information
- Identify when the information need has not been met
- Use online and printed help and can find personal, expert help

The abilities connected with the Gather pillar overlap, in some aspects, with those in other chapters. Where this is the case, those abilities are not addressed in this chapter.
Proficiencies in the Gather pillar

- difference between paid and free resources
- need to keep up-to-date
- risks involved in operating in a virtual world
- how digital technologies provide collaborative tools to create and share information
- how libraries provide access to resources
- how information and data are organized
- issues involved in collection, citation, and evaluation of data and information
- use of abstracts

use online and printed help and can find personal, expert help
identify when the information need has not been met
engage with the relevant communities to share information
use a range of tools and search strategies to retrieve and access full text information

gather
means
finding what you need

understand, know, recognize

able to
Information Formats and the Internet

Traditionally, information has been organized in different formats, usually as a result of the time it took to gather and publish the information. For example, the purpose of news reporting is to inform the public about the basic facts of an event. This information needs to be disseminated quickly, so it is published daily in print, online, on broadcast television, and radio media. More in-depth treatment of information takes longer to research, write, and publish, and traditionally was published in scholarly journals and books.

Today, information is still published in traditional formats as well as in newly evolving formats on the Internet. These new information formats are loosely defined as Web 2.0 formats and can include electronic journals, books, news websites, blogs, Twitter, Facebook, and location postings. The coexistence of all of these information formats is messy and chaotic. The process for finding relevant information is not always clear.

One way to make some sense out of the current information universe is to thoroughly understand traditional information formats. We can then understand the concepts inherent in the information formats found online. There are some direct correlations such as books and journal articles, but there are also some newer formats like tweets that didn’t exist until recently.

Let’s look at the news industry. Many traditional newspapers are shutting down and those that remain are retrenching. While there are many reasons for this, one of the major trends has been the rise of the Internet. In the United States, more than 50 per cent of the population reads the news online (http://www.oecd.org/sti/ieconomy/oecdexaminesthefutureofnewsandtheinternet.htm).

Indeed, online news sites provide a different and, some might argue, a more relevant experience for the reader. They offer video and sound, up-to-the-minute updates on breaking news, and the ability to interact with the content by posting comments. Another important feature of online news is that search engines can deliver content from the site in response to a query. In other words, readers don’t have to visit a site such as the New York Times in order to read its content.

This has both positive and negative consequences. The positive consequence is that readers can quickly and conveniently obtain information from a variety of sources on a topic or event. The negative consequence is that it is more difficult to evaluate the credibility of the sources. The Evaluate chapter in this book provides some good strategies for evaluating information sources.

For Harry and his group, all of this means they will have to research many different kinds of information resources in order to create an effective information command center.
Twitter and Blog Postings

Many of the group’s Google results are Twitter feeds and blog postings. These did not provide a lot of information. After all, a tweet consists of only 140 characters. However, these resources did help Harry’s group by suggesting key people, cities, technologies, and other resources associated with Super Storm Sandy to research. Often a blog posting will provide a link to a longer, more useful resource. The students’ review of blogs and tweets also provided an otherwise unthought-of insight. As Harry and his group were reviewing Twitter feeds posted during Super Storm Sandy, they noted that people were using Twitter to inform their friends and relatives about their whereabouts, their health, and the conditions of their surroundings. Since electricity was not available, most televisions and radios did not work, but mobile technologies like Twitter served as effective communication tools. Once Harry realized this, a Twitter feed was quickly incorporated into his command center’s communication plan.

Newspaper Articles

One of the members of Harry’s group suggested they should consult a newspaper to see what role the newspaper played to help the city understand the destruction caused by the storm. The group chose the New York Times. The New York Times can be accessed online and articles from the day of the storm can be viewed. However, the group found that more useful information was published in the New York Times in the days after the storm. Harry’s initial search of the New York Times for articles containing the phrase super storm Sandy published on October 29, 2012 resulted in some blog postings from reporters and many stories about damage from the storm. But when Harry reentered his search without a date limit, he retrieved articles that analyzed how the region’s municipalities performed during the storm. It takes time to conduct this type of analysis, so looking for information that was published days, weeks, or months after the storm took place was a good strategy.

Many other newspapers can be accessed online or at a local library in microfilm. Microfilm is a film image of the print version of a newspaper. Most libraries hold many years of newspaper issues on microfilm. A microfilm reader is required to view the microfilm version of a document. Libraries that own newspapers on microfilm also provide the microfilm readers.

Primary Sources

Another member of Harry’s group recalled that he had cousins in New York City who experienced Super Storm Sandy firsthand. He offered to interview his cousins about their experiences during the storm. This type of information is known as a primary information or source. Primary sources are accounts from a person or persons who have firsthand knowledge of an event. Speeches, photographs, diaries, autobiographies, and interviews are all primary sources.
In this case, the primary source is still alive and is accessible to Harry’s group. However, some researchers are not so fortunate. If this is the case, primary sources can still be found in a variety of locations and formats. There are many online sites that have created digitized collections of copies of diaries and letters from historical events. It is important to remember that primary sources are not limited to a single format. You may find them in books, journals, newspapers, email, websites, and artwork.

Scholarly Journal Articles

The results of the research that Harry and his group has done are useful, but Harry is concerned that there might be too much focus on Super Storm Sandy. He wants to find more information on crisis and disaster management in general. Harry thinks that there might be general standards or practices that should be incorporated into his group’s plan. Journal articles and books might provide this information.

Harry starts his search for journal articles by using a multidisciplinary database because he is not sure which specific disciplines will cover the information he seeks. He constructs and executes a search query and finds that the abstracts included in the results help him choose several peer-reviewed, or scholarly, articles to read.

Scholarly journal articles usually include an abstract at the beginning of the article. An abstract summarizes the contents of the article. In an abstract, key points as well as conclusions are briefly described. Abstracts are often included in the database record. Researchers find this information helpful when deciding whether or not to retrieve the whole article.

Most of the articles that Harry chooses are available in PDF format from the database, but there are a few articles that look very relevant that don’t have links to a PDF. Harry really wants to read these articles so he decides to try to find out if there is another way to obtain the full text. He consults a librarian who instructs him to look for the title of the journal (not the article) in the online catalog. The catalog record will provide information on whether the journal is available online from another database or if it is available in print.

Journals, and the articles they contain, are often quite expensive. Libraries spend a large part of their collection budget subscribing to journals in both print and online formats. You may have noticed that a Google Scholar search will provide the citation to a journal article but will not link to the full text. This happens because Google does not subscribe to journals. It only searches and retrieves freely available web content. However, libraries do subscribe to journals and have entered into agreements to share their journal and book collections with other libraries. If you are affiliated with a library as a student, staff, or faculty member, you have access to many other libraries’ resources, through a service called interlibrary loan. Do not pay the large sums required to purchase access to articles unless you do not have another way to obtain the material, and you are unable to find a substitute resource that provides the information you need.

There is one more feature Harry found while searching in databases: some offer the option of an alert service. This feature allows Harry to enter the most productive search strings, as
well as his email address. When new items are added to the database that fit his search, he receives an alert. Harry found this to be a great way to keep up to date with new articles on his topic without having to initiate a new search.

Books

Next, Harry’s group looks for books on the topic. They search the library’s online catalog using search terms that were successful in their database searches. They find some great titles and head to the library stacks to retrieve them.

Most academic libraries use the Library of Congress classification system to organize their books and other resources. The Library of Congress classification systems divides a library’s collection into 21 classes or categories. A specific letter of the alphabet is assigned to each class. More detailed divisions are accomplished with two and three letter combinations. Book shelves in most academic libraries are marked with a Library of Congress letter-number combination to correspond to the Library of Congress letter-number combination on the spines of library materials. This is often referred to as a call number and it is noted in the catalog record of every physical item on the library shelves.

Harry uses the call numbers to locate some books that he found in the catalog. He is happily surprised to find that there are also some really useful books sitting on the shelf right next to the books he previously identified. This is a handy way to find additional information resources on a topic. It is more efficient to first search the online catalog to locate relevant resources and then search the shelves.

Library of Congress Classification

A General Works — includes encylopedias, almanacs, indexes

B-BJ Philosophy, Psychology

BL-BX Religion

C History — includes archaeology, genealogy, biography

D History — general and eastern hemisphere

E-F History — America (western hemisphere)

G Geography, Maps, Anthropology, Recreation

H Social Science

J Political Science

K Law (general)
KD Law of the United Kingdom and Ireland
KE Law of Canada
KF Law of the United States
L Education
M Music
N Fine Arts — includes architecture, sculpture, painting, drawing
P-PA General Philosophy and Linguistics, Classical Languages, and Literature
PB-PH Modern European Languages
PG Russian Literature
PJ-PM Languages and Literature of Asia, Africa, Oceania, American Indian Languages, Artificial Languages
PN-PZ General Literature, English and American Literature, Fiction in English, Juvenile Literature
PQ French, Italian, Spanish, Portuguese Literature
PT German, Dutch, and Scandinavian Literature
Q Science — includes physical and biological sciences, math, computers
R Medicine — includes health and human sexuality
S Agriculture
T Technology — includes engineering, auto mechanics, photography, home economics
U Military Science
V Naval Science
Z Bibliography, Library ScienceCitations
Citations

As Harry’s group starts to read and digest all of the information they have gathered, they notice that many articles and books contain references to other articles and books. Even Wikipedia entries contain references. These consist of citations to resources that authors have quoted or paraphrased in their work or have used to research for their publications. Some of these citations look like they would provide great information. But the group is confused. They don’t know if the citation is to a book or an article or something else.

Citations can be confusing. There are many different citation styles and not many hard and fast rules about when to use a particular style. Your professor may indicate which citation style you should use. If not, the general rule of thumb is that the Social Sciences and Education disciplines use APA (American Psychological Association) citation style, while the Humanities and Arts disciplines use MLA (Modern Language Association) or the Chicago style. You can find detailed information about how to format a citation in these styles by consulting the latest *Publication Manual of the American Psychological Association*, for APA citations, the most recent copy of the *MLA Handbook for Writers of Research Papers*, or the current *Chicago Manual of Style*. You should be able to find copies of these publications in the reference section of your library. You can also obtain guidance on formatting citations in the APA and MLA style from the University at Albany’s Citation Fox, available online at http://library.albany.edu/cfox.

However, just knowing what citation style is used doesn't always clear up the confusion. Each different information format is cited differently. The most common formats that you will encounter are books, chapters in books, journal articles, and websites.

Take a look at the citations by clicking the button below or looking at the images in the following pages. You can see that there are differences between citation styles. You can also see that each information format contains different elements. When you try to determine whether a citation is for a book, book chapter or journal, think about the elements inherent in each of these formats. For example, a journal article appears in a journal that is published in a volume and issue. If you see volume and issue numbers in the citation, you can assume that the citation is for a journal article. A book chapter is usually written by a different author from the editors of the whole book. A whole book is often the easiest citation to decipher. It contains the fewest elements.

Click here to explore the elements of a citation online!
Citation to a Book

APA

Author Date Title Place of Publication


Publishers

Citation to a Book

MLA

Author Title Place of Publication


Publishers Date Format
Citation to an Article from a Journal

**APA**

**Author**  
**Year of Publication**  
**Title of the Article**


---

**Title of the Journal**

---

**Volume #**

**Issue #**

---

**Page # range**

---

**Citation to an Article from a Scholarly Journal**

**MLA**

**Author**  
**Title of the Article**


---

**Title of the Journal**

---

**Volume and Issue**

---

**Page # range**

---

**Format**
This chapter has discussed citations in relation to finding resources. You will encounter citations again in the Manage chapter, which covers how to use citations to share information with others.
Sharing Information

Harry had a chance to talk with members of some of the other groups in his class about the hunt for information. This was initially done informally before class started, but he wished there was a more formal process, since it was so helpful to all the groups who participated. Harry's group shared some of what they'd learned, and also found out about some strategies others had used. The students lamented that the professor hadn't set up some sort of electronic forum where they could share tips and resources, but then decided to do it themselves! They set up a wiki on PBWorks. It felt a bit strange at first, being collaborative in this way, rather than competitive, but it really helped everyone. One group was struggling to find information that met their needs, but between working with a librarian and consulting the wiki, they succeeded with their project.

Conclusion

Harry and his classmates have spent time gathering information to help them create a realistic and accurate crisis command center. They accessed and used Web 2.0 information sources in the form of Twitter feeds and blogs. They used online newspapers and online journal articles. They even gathered some very useful hard copy books. During this process, the students learned about different ways that information is organized including the Library of Congress classification system. Harry was amazed at the wealth of quality information he was able to gather. It took him a while and the process was more complicated than just searching the web, but Harry now feels more confident about acing the assignment. He also feels that he learned more than how to set up a command center. He learned how to engage in academic research!

Exercise: Comparing Search Strategies

Find a newspaper article about a national event, such as the 2013 Boston Marathon bombing. Make note of your search strategy.

Next find a newspaper article about a local event, for example, a flood in your area or a local crime or election. Make a note of your search strategy for this search.

Compare the two strategies. How are they alike? How are they different? Which newspaper article was easier to find? Why?
Exercise: Primary Sources

Take this quiz online!

1. Where would you find a speech by Franklin Delano Roosevelt in which he said, “The only thing we have to fear is fear itself.”?
   
   a. Web site of Presidential Speeches
   b. Newspaper article dated Oct. 29, 1941
   c. A print publication titled “Vital Speeches of the Day,” which has been published since 1934
   d. All of the above

2. Which of the following sources is the most likely to contain an interview with Steven Spielberg about his film “Lincoln,” produced in 2012?
   
   a. Article from a news magazine dated November 23, 2012
   b. A blog written by a fan of Steven Spielberg
   c. IMDb—A large online database of movie and television information
   d. All of the above

3. Which source would have the original copy of a diary written by a woman who lived in Tennessee during the Civil War?
   
   a. The Library of Congress American Memory Project web site
   b. The Southern Historical Collection, University of North Carolina at Chapel Hill
   c. Local public library’s collection
   d. All of the above

4. Which of the following is a primary source?
   
   a. A review of the film “Lincoln” by Steven Spielberg
   b. A nonfiction book about the Civil War titled *The Fall of the House of Dixie: The Civil War and the Social Revolution that Transformed the South*
   c. The Facebook privacy policy
   d. A reporter’s article about an event that happened yesterday, written from information gathered from bystanders
Exercise: Identifying Citations

   a. Journal Article
   b. Book
   c. Book Chapter

   a. Journal Article
   b. Book
   c. Book Chapter

   a. Journal Article
   b. Book
   c. Book Chapter

   a. Journal Article
   b. Book
   c. Book Chapter

   a. Journal Article
   b. Book
   c. Book Chapter

   a. Journal Article
   b. Book
   c. Book Chapter