LIBRARY IS A VERB

Dean M. Riley, Professor, MARE, MALS
So how do we avoid gallivanting around Information Wonderland? Research skills will transfer because you need information to survive in this world. You need to survive and thrive at work as well as personally at home. At work, the person in the next cubicle will not be getting a raise if he/she only goes to Google and Wikipedia exclusively when they write their reports. If you have solid research skills, you will be better positioned to write better reports, précis, etc. As a student or someone doing personal research related to fun, hobby, etc., you are already busy: class time, general study for other classes, sports and practice, work, and doing other things that are important to you. Why waste your time with inefficient search methods? Why waste time evaluating things that should not have even made it to your list?

Goals

- Give you a sense of the significance of “information” from a Christian perspective.
- Library research skills transfer to ANY task!
- Efficiency – why waste time?
- Researching term papers vs. Researching for job or life.

ATTITUDE IS CRITICAL
Christian Foundation of Information

Why is this critical to research?
The Beginning – Dr. Werner Gitt

- Biologist and Information Specialist, Director of Information Technology (retired) at the German Federal Institute of Physics and Technology.
- “It should be noted that the activities of all living organisms are controlled by programs comprising information. Because information is required for all life processes (i.e., DNA), it can be stated unequivocally that information is an essential characteristic of all life.”
Infowhelm

- YouTube Clip:

  https://youtu.be/cWkQq5qmdmc
Bits and Bytes

- 1 Bit = Binary Digit
- 8 Bits = 1 Byte
- 1000 Bytes = 1 Kilobyte
- 1000 Kilobytes = 1 Megabyte
- 1000 Megabytes = 1 Gigabyte
- 1000 Gigabytes = 1 Terabyte
- 1000 Terabytes = 1 Petabyte
- 1000 Petabytes = 1 Exabyte
- 1000 Exabytes = 1 Zettabyte
- (1000 exabytes = 1 million petabytes = 1 billion terabytes = 1 trillion gigabytes)
- Current estimates: 44,000,000,000,000,000,000,000 bytes, that is!
These below may sound familiar to you:

- 1 Bit = Binary Digit
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- 1000 Kilobytes = 1 Megabyte
- 1000 Megabytes = 1 Gigabyte
- 1000 Gigabytes = 1 Terabyte
- 1000 Terabytes = 1 Petabyte
- 1000 Petabytes = 1 Exabyte
- 1000 Exabytes = 1 Zettabyte
- 1000 Zettabytes = 1 Yottabyte
- 1000 Yottabytes = 1 Brontobyte
- 1000 Brontobytes = 1 Geopbyte

In 2008-09, I saw two studies estimating the amount of information in the world. It included: DOCs and DOCx files, PDFs, web pages, computer programs, spreadsheets, databases, audio files, visual files, audio-visual files, emails, etc. They also factored in that you might forward this to various people. In 2008-09, one study suggested that there was 250 exabytes of information in the world and the other 500 exabytes (or
one-half zettabyte). Toda’s estimates are now in the zettabyte range. So how easy will it be to find exactly what you really want now ...or in the future?
You are not JUST a student, JUST an athlete, JUST a stay-at-home Mom, JUST a librarian, JUST a teacher, JUST a garbage collector. There is no JUST in God’s kingdom. God is very present in the ordinary, everyday parts of life. The same is true of information. It is not JUST information! It is critical to your everyday functioning and what you need to get through today. Sure, there are trivial elements (who won the game, etc.). God uses EVERYTHING for His kingdom. Nothing is wasted! Remember the five loaves and two fish?
Dr. Claude Shannon

- 1916-2001
- *Mathematical Theory of Communication*, 1949
- Father of modern Information Theory
- Information indefinable
Shannon’s Theory of Communication

- **Technical**: Did you hear me?
- **Semantic**: Did you understand me?
- **Behavioral**: What are you going to do?

Is this communication or research? Could it be that they are the same thing? Also, consider this – how does this relate to your Bible study session, personal quiet and worship time, or a sermon?
Dr. Dervin is Professor of Communication at Ohio State. She posits that information works on a space-time continuum like *Back to the Future* or *Star Trek*. We have gaps in our information creating chaos. Information restores order to one’s universe.
Your very life makes a difference in the information you deal with. You education or lack of it, your faith or lack of it, and your life experiences all come together to lay the foundation for how you work and deal with information.
OED suggests a different perspective of information that follows along what Dervin’s beliefs. That time continuum is in perpetual motion. Everything shapes how you view and use information. That will impact your research!
Biologist and Information Specialist, Director of Information Technology (retired) at the German Federal Institute of Physics and Technology.
Comparing Shannon and Gitt

- Shannon
  - Technical/Semantic/Behavioral
- Dr. Werner Gitt – Apobetics
  - Information has a purpose. This completes the information transfer.
    (John 5:24, Acts. 8:26-39)
Communication...

Research is all about communication. Sending a message from Point A to Point B

God to you...

...and you to your audience.
Research Methods
If you don't know where your going, any road will get you there.
Need a hint?
Yes, Lewis Carroll. And you are going to feel like a crazy Mad Hatter, too, trying to gallivant around the Information Wonderland. You will be chasing rabbits if you are not careful to plan your search strategies!
Apollo 15 was one of the most successful missions of the Apollo program and was the first to use the lunar rover. Before venturing out on their first exploration mission, Commander Scott stood on top of the lunar via the hatch and did a 360-degree survey. That survey helped them plan how and where to do their research. When it comes to research, everyone should discover the best journals, databases, books, and authors of their major field of study. Until you begin your studies in your major, you need to become familiar with the general research process and “get a lay of the land” – where things are and how things work. This also includes reference works (encyclopedias, handbooks, almanacs, dictionaries for your area of study. These will help you learn the important concepts and terms in that area. Be sure to checkout CredoReference.com. We have over 800+ books available 24/7!
Credo Reference is a great place to start if you don’t know nothing or very little about a person, concept, event, etc. You can, of course, search your topic from the home page or explore the list of subjects. On the right is a screen shot of Credo’s Mind Map to visualize concepts and connections. To have a good lay of the land, you need to understand the basic terms and concepts and Credo Reference is a great place to start.
Please don’t wait! Everyone gets frustrated when you can’t what you need when you need it. Please start your assignment prior to the night before it is due. While we can help, our options have greatly shrunk. Also, please don’t ask for help finding the blue book by that famous author!
We’re mobile!
http://hbu.edu/moodymobile
How to get to the Library Databases
These are general resources. Best databases will vary by subject. Our subject LibGuides will also have even more specific databases.
WorldCat is a great option. You can use it out in the stacks and not have to run to a computer. Be sure to sort your results by zip code. HBU’s zip code is 77074. Sometimes, WorldCat will default to New York, which does not help you very much.
LibGuides by Subject is available on the left side of the library home page. Highly useful for any class!
This is available on the left side of the library home page. Highly useful for any class!
The Research Process
So how does research work? It is very similar to how a potter works with clay on the wheel. Remember the Oxford English Dictionary’s definition of “inform” – to give form to, to give shape to. While God does with you personally, you do the same with your research and library materials. You form and shape your thoughts based on how God has uniquely created you. Then, you begin to form and shape your project just as the potter shapes the clay.
What kind of sandwich is this? People use different terms of identification in various regions of the country. What do you call the drink that you swallow to wash the sandwich? In the mid-1990s, the term “light bulb” was not an acceptable word in subject headings by the Library of Congress. The correct term was “incandescent lamp” back then. Now suppose I was doing a history of the light bulb for a class paper. If I used “light bulb” as a subject heading keyword search in those days, I would have had zero results. Thankfully, the Library of Congress loosened their thinking and light bulb is now an acceptable term!
Global Keyword Searching

Internet and library databases search and store data from every field today. Search engines (library or Internet) search the full text of articles and books or any specified field (depends on the database). The search engines perform global keyword searching by default unless you start with limits (Advanced Search). Global keyword searching is the primary cause of the high number of results. Keyword does know that Apollo is a Greek god and apart of Greek mythology or if is part of the space program. Global keyword only matches the letters (literally) that you type in the search box.
The search process is like creating a pottery using a potter’s wheel. The search process is on-going until you give it to your professor. Throughout the process, be sure to record new terms and record citations. Be sure to corroborate your information and facts using credible sources.
Research Problems and Assumptions
This is NOT a way to maximize your Google search.
Do you really want to search through 175 million pages? I don’t think so.
Spelling is important as it will impact your search. Also, use unique search terms instead of general terms. Will this be any better? Let’s see...
Wow! This is much less and is a HUGE statistical improvement (10 times)! 10 million pages is certainly better than 175 million. Now imagine doing this on library database.
Why waste time doing a global keyword search when you can limit your search options? You do want to be efficient, right? An easy choice to make from the start is to select the subject headings or abstract fields. Your search will only include these fields. Remember, “Subject Headings” means that the entire article is ABOUT that topic(s).
Why waste time doing a global keyword search when you can limit your search options? You do want to be efficient, right? An easy choice to make from the start is to select the subject headings or abstract fields. Your search will only include these fields. Remember, “Subject Headings” means that the entire article is ABOUT that topic(s).
This may be hard to see during the live presentation. Going to the library home page, I typed [business] (without brackets) in the OneSearch box. Just that one word has 35,000,000 results. That’s as big! But notice all the options available to you.

1) Matching Journal Titles
2) Additional Research Locators:
   a) EBCSO often has a “Research Starter” about many broad topics (just not this one).
   b) There is also a link to break into Credo Reference topics pages. Credo Reference has over 600+ full-fledged reference books that we would have bought physical copies for in past generations.
   c) LibGuides – your term may match something in HBU LibGuides pointing you to even more useful resources.
3) Result list: exact matches will be first. In this case both books and E-books are appearing. E-books are downloadable to smart device or just view without downloading anything.
4) LINKSOURCE – usually you see this link for articles. If no full-text is available, it will cross-check other databases looking for full-text availability.
5) Limiters:
   a) 5A – Narrow by full text, peer-reviewed, and year of publication.
b) 5B – Even more limiters beyond this screen shot: you can click academic journals to eliminate magazines and newspapers for instance. You can limit by subject headings, too.

6) These are even more links into Credo Reference. Even HBU Answers might display results and, in this case, we do have many useful Business LibGuides!

This page is LOADED with possibilities to either point you to relevant results or too narrow the result because 35 million hits is a very inefficient search!
Be a detective!

• Titles
• Abstracts
• Subject Headings
• Text (as you read)
• Bibliography for more resources
Review

- How do you limit results?
  - Use specific synonyms
  - Use unique terms
  - Add more terms
  - Utilize limiting options (options will vary by database)
Now that we have discussed the problems of databases and languages, let’s look at some basic searches to see how good they are. The better searches are on the right side because the terms are more specific. The other terms on the left are vague and have multiple meanings. Tip: Natural language searches are still problematic. We have not yet gotten to Web 3.0 (semantic web where search engines actually understand language better).

<table>
<thead>
<tr>
<th>Not As Good</th>
<th>Better Searches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog and cat</td>
<td>poodle and calico</td>
</tr>
<tr>
<td>Native American</td>
<td>Cherokee and war</td>
</tr>
<tr>
<td>Art in France</td>
<td>French painters</td>
</tr>
<tr>
<td>Indian art</td>
<td>Ram Kamur and abstract art</td>
</tr>
<tr>
<td>What is truth?</td>
<td>Truth and objectivity</td>
</tr>
</tbody>
</table>
Search Planning
Augustine’s View of Just War

- Augustine and –
  - War and morality
  - War and religion
    - War and relig* (includes religion, religions, religious). This would also capture phrases such as “religious aspects.”
  - War and nationalism
  - War and catholic* (or other religions)
  - These are all global keyword searches.

- Augustine and (SU) just war (more narrow)

These are fairly straight-forward searches. Recommendations: take notes! Pay attention to subject headings or the words in titles and abstracts to get additional ideas for more terms. Also, think of all the synonyms pertaining to that term.
Do you get the idea? This comes in to play for developing terms for search strategies as well. Be specific! Remember we talked earlier how vague language kills your searches? It makes increases your results and wastes your time by including a lot of extraneous and unneeded items and also increases the time you spend sorting through them.
Prepared Your Search

- Thesis: The United States should stop all activities in the Middle East because it is not a wise investment with our budgetary resources, the persistent threat of Al-Qaeda and ISIS, and that democracy will be tenuous in an Islamic state.

<table>
<thead>
<tr>
<th>Budget</th>
<th>Al-Qaeda threat</th>
<th>Democracy in Islam</th>
</tr>
</thead>
<tbody>
<tr>
<td>US budget statistics from 2003-2013</td>
<td>IED placement</td>
<td>Plato's Republic</td>
</tr>
<tr>
<td>Afghanistan budget</td>
<td>National security threat to Afghanistan</td>
<td>Developing army and police</td>
</tr>
<tr>
<td>Rebuilding</td>
<td>Expansion into Africa</td>
<td>Spurring economic growth</td>
</tr>
<tr>
<td>Foreign aid</td>
<td>Hiding in mountains</td>
<td>Developing personal freedoms</td>
</tr>
<tr>
<td>Congressional attitudes or support</td>
<td>Training camps</td>
<td>Human rights</td>
</tr>
<tr>
<td>Tribal cooperation</td>
<td>Terrorist cell groups</td>
<td>Women's rights</td>
</tr>
<tr>
<td>Business ethics</td>
<td>Growing causalities</td>
<td>Education</td>
</tr>
</tbody>
</table>
Preparing Your Search

- **Thesis Statement:** Participative leadership style in managers and supervisors increases job satisfaction and motivation in subordinates.
  
  *(The Effects of Participative Leadership Style on the Job Satisfaction and Motivation of Subordinates, Barbara Gordon, May 1998)*

<table>
<thead>
<tr>
<th>Participative Leadership Style</th>
<th>Managers</th>
<th>Job Satisfaction</th>
<th>Motivation</th>
<th>Subordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint leadership</td>
<td>Supervisors</td>
<td>Happiness</td>
<td>Incentive</td>
<td>employees</td>
</tr>
<tr>
<td>Team</td>
<td>CEOs</td>
<td>Quality of life</td>
<td>Inspiration</td>
<td>Worker</td>
</tr>
<tr>
<td>Cooperative</td>
<td>Boss</td>
<td>Fulfillment</td>
<td>Enthusiasm</td>
<td>Wage earner</td>
</tr>
<tr>
<td>United</td>
<td>Director</td>
<td>Approval</td>
<td>Stimulus</td>
<td>staff</td>
</tr>
<tr>
<td>Allied</td>
<td>Administrator</td>
<td>Contentment</td>
<td>Drive</td>
<td>workforce</td>
</tr>
<tr>
<td>Mutual</td>
<td>Leader</td>
<td>Gratification</td>
<td>Purpose</td>
<td>personnel</td>
</tr>
</tbody>
</table>
This slide also demonstrates another complicated search. This is broken down by the major points you want to support just like the previous slide.
God gave you a brain to use while in college. Please use it when strategizing or reviewing your results! This is a process and will take time. The time you spend working this process now will pay huge dividends when out on the daily job.
You will still have to play word detective with your results as you did with your strategy planning. Would you consider using the #1 article for your paper? I think not. This is hard to read but this result is for a computer product termed “Plato” and is not what you are looking for in a philosophy class. Look at the subject headings when in doubt. This is completely irrelevant and why I advocate planning ahead! You could save yourself a lot of time and trouble by planning out your search.
Evaluating Resources

- Consider the source (the writer and the web site).
- Consider the motivation (biases?).
- Consider the quality of the writing.
- Consider the documentation.
- Consider the currency (not necessarily true in philosophy).
- Can you *corroborate* anything?
This student caused a major headache and proved what librarians and professors have said for years. Verify your facts and information before using them – ANYWHERE!
Plagiarism is intellectual theft. After finding a good quote, try closing the book and paraphrase what the author said. You will still need to cite the source since the idea is not yours – but you won’t be plagiarism if you close the book.
Other Services

- LibGuides – over 40 subjects, 30 topics, and 20 classes.
- Interlibrary Loan – borrow resources. Shipped to HBU
- TexShare Card – use other library resources.
- OneSearch – search books, E-books, and articles.
- HBU Answers – ask questions/get answers
- LibChat – chat with librarians
- SMS Texting - 518-633-4687
- EasyBib app! Sign up at easybib.com from HBU computers.
- JIT – Just-in-time Service at the Reference Desk
- Detailed one-on-one research help (appointment)
LibGuides is a huge asset for your academic work! The home page displays subject guides but if you click “By Type” you can see subject guides as well as specific topic or course guides. We have a boatload of guides for a wide range of academic disciplines. We probably have a LibGuide for any class you have!
Do you have questions? We have answers! Please ask! Just go to the library home page and click (or tap) HBU Answers.
Google Tips and Tricks

- Put phrases in “double quotes”
- Site:nasa.gov “New Horizon” (root URL)
- Using the tilde (~) before a word looks for synonyms.
- “Star Trek” OR “Star Wars” (will look for either). No “OR” looks for both.
- (“William Shatner” OR “Leonard Nimoy”) (“Mark Hamel” OR “Harrison Ford”)
- "ancient rome" 500 BC...500 AD (range- dates, $)
- Use “-” (minus) to exclude a word (-buy -purchase)
- Filetype:pdf (or pptx, docx, etc.)
Imagine the possibilities if you and God partnered together on your research. Ask Him to guide your steps and lead on you the straight and narrow path, free from clutter and junk, to find the resources you need.

**Master and Apprentice**

- Our lives are shaped in God’s image. (Gen 1)
- Our thoughts should be shaped into His image. (II Cor. 10:4-5/ Romans 12:1-2)
- Truth should be conformed to His image and truth.
- Should not our research be also conformed into His image?
But now, O Lord, you are our Father; we are the clay, and you are our potter; we are all the work of your hand.

Isaiah 64:8
I want to conclude by sharing that information is NOT trivial. It may perhaps be irrelevant to you personally. Dr. Werner Gitt, a Christian biologist tells a wonderful story in his book “In the Beginning was Information.” He says that every piece of information is intentional (from a teleological aspect). He says,

“It does not matter whether the originally intended purpose or a different one has been achieved. It should become clear from the following episode that even the information found on tombstones can have a far-reaching effect. Some years ago, a Ghanaian professor who visited Braunschweig to complete his doctorate in architecture told me about a cemetery near Accra. The crosses planted on the graves of the first Christian missionaries are still there, and it is clear from the inscribed dates that they succumbed from tropical diseases with a few days after their arrival. Superficially, if could be said that the efforts of those people were in vain. God ended their lives before they had a chance to proclaim one sentence of the gospel. And there were no visible results. But this Ghanaian friend said that he had been moved by the silent witnessing of those crosses to take a decisive step in faith. It became clear that God must have blessed those men with so much love that they went out without regard to their own safety to tell others of this love. It is clear that God’s way is often different from our expectations. What might appear futile in our time stream, is
fruitful and permanent in God’s kairos (life). The purpose of the missionaries was to win Africans for Christ, and after a long time somebody did fulfill this purpose. Now he witnesses for the gospel to many students in his mother tongue. In their hour of death, those missionaries could not have had an inkling that their purpose would eventually be realized.”

I want to encourage you that your work and research matters. It can make a difference to your company or organization, a city, a state, a nation or a world. You may be forward-thinking that it may not be deemed important right now. Don’t quit! Be diligent! Do the work! Persevere!
Contact Us!

- Reference Desk Hours:
  - 9:00 AM - 9:00 PM (M-TH)
  - 9:00 AM – 5:00 PM (F)
  - 12:00 PM – 6:00 PM (Sat)
  - 2:00 PM – Midnight or 8:00 PM to Midnight (rotating weeks)

- reference@hbu.edu
- Reference Desk: 281-649-3180
- SMS: 518-633-4687

- Chat -

- Ask your question on HBU Answers