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?
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.”
To print the Internet, how tall would that stack be? Earth to Moon? Earth to Mars? Saturn? Pluto? 13 stacks from the Earth to Pluto! It would deforest the planet 12 times! So how much is there today?
These below may sound familiar to you:

- 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 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?
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 \text{ exabytes} = 1\text{ million petabytes} = 1\text{ billion terabytes} = 1\text{ trillion gigabytes})
- Current estimate: 44,000,000,000,000,000,000,000 bytes, that is!
- 1000 Zettabytes = 1 Yottabyte
- 1000 Yottabytes = 1 Brontobyte
- 1000 Brontobytes = 1 Geopbyte
- 1000 Geopbytes = 1 Alottabyte!
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?
Dealing with the mundane...

It’s not JUST information! It can’t be JUST information because as believers, you have the God of the Universe residing in you. His creativity, knowledge, and wisdom are endless. Imagine how this world could be different if we prayed about research first and let His spirit guide us! I can’t begin to explain how He can work through people but imagine the changes that could benefit His kingdom through your work when you give it to Him. All I know is that God can infiltrate your mind and give you thoughts and ideas that seem to come from nowhere. It doesn’t matter whether or not your research is spiritually-based or not. If Christ is Lord of all, then “all” means ALL! That includes your research. Your research can literally change yourself, a community, a company, a city, a state, or even a nation. But when you give it to Him, He will use it in His way and on His timetable -- not ours. Unleash His spirit and power on your research.
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?
Subjective Information –
Dr. Brenda Dervin

- Ordered reality (information) vs. chaos (no information)
- Information can be designed, yet it is not a “thing”
- Humans as information designers
- Information on Space-Time continuum

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.
Inform – to give form to, to give shape to something.

Is this not what you do with information? Based on your life background, experiences, education, faith, all of this shapes how you view the information you receive and the information you share (papers, presentations, etc.).

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

God to you...

...and you to your audience.
Library Preliminaries
We’re mobile!

http://hbu.edu/moodymobile

You can do your research anywhere, anytime, with practically any device! We’re everywhere! Why be sitting and doing nothing constructive. Use today’s smart devices.
How to get to the Library Databases

You will use this box the most.
HBU OneSearch is not a database but, instead, is a discovery tool. It searches all of our databases in one shot including: books, E-books, and journal articles (most of our databases).

The right hand side is an alphabetical listing of ALL of our databases. NOTICE: Looking at the top of the box, you will see tabs. These are major programs of academic study so you can click on “Education” and limit your searching to one of our databases specializing in education.
There are specific databases that we you may prefer to use. This can be a better option because your result sets will be smaller than what you would see in OneSearch.
Using Databases from Home

OneSearch lets you see results before getting full-text access. When ready, click – add your Username **NOT** username@hbu.edu.
Best Choices

- HBU OneSearch – single search
- JSTOR (archival)
- ERIC (EBSCO)
- Teacher Reference Center
- ProQuest Dissertations
- Professional Development Center

As you learn more about your major field of study, you will learn more about specific authors, books, journals, and databases in that field.

Best database choices for general resources. We have many more options on our database page at hbu.libguides.com/databases. These databases will vary by subject.
LibGuides by Subject is available on the left side of the library home page. Highly useful for any class!
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.
The Research Process is creation...

<table>
<thead>
<tr>
<th>RESEARCH</th>
<th>CREATING POTTERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Have you prepared your search terms and evaluated its uniqueness?</td>
<td>□ Wedging – knead clay like bread.</td>
</tr>
<tr>
<td>□ Research usually begins wobbly but becomes more centered (focused).</td>
<td>□ Checks quality of clay. Prepares the clay.</td>
</tr>
<tr>
<td>(Centering clay)</td>
<td>□ Centering – pot must be centered or else becomes</td>
</tr>
<tr>
<td>□ Shaping your research is from the inside.</td>
<td>wobbly</td>
</tr>
<tr>
<td>Your heart, attitudes, beliefs. (Heart of the Matter)</td>
<td>□ Shaping clay is mostly done from the inside.</td>
</tr>
<tr>
<td>□ The research wheel spins and grows with each new search iteration.</td>
<td>□ Pulling – growing the pot vertically.</td>
</tr>
<tr>
<td>□ Trim excess results and false hits with limiters.</td>
<td>□ Trim excess.</td>
</tr>
<tr>
<td>□ Fire: evaluation with your teacher</td>
<td>□ Put in the fire.</td>
</tr>
</tbody>
</table>

God shapes you … you shape your research. Your work can re-shape someone else’s thinking.

So how does research work? We need a whole new way to perceive information. In reality, the research process 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.
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 Methods
TRIVIA TIME

How you heard this quote before?
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 J 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 education. The same is true for whatever education sub-specialty that you are studying.
Because they did that 360-degree geological survey, Scott and Irwin found this – the Genesis Rock. It is the oldest rock they found on all the missions.
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.
Maximize Your Use of Language

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.
Maximize Your Use of Language

Spelling is important as it will impact your search. Not all databases have spellcheck, however. Remember that foreign words need spelled correctly or they won’t be found. Above all, use UNIQUE search terms instead of general terms. Will this be any better? Let’s see...
Wow! I’m no mathematician but 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.
Maximize Your Use of Language

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).
Maximize Your Use of Language

This is much less than Google but still too many to sort through.
Maximize Your Use of Language

Why waste time doing a global keyword search and get a lot of useless results 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).
Maximize Your Searching...

Why is this important? Databases add more publisher content all the time!
You will need an EBSCO ID to login. From any EBSCO database, just click the Sign-In option the top and create your own ID and password. We recommend using something familiar.
Look in these places on a citation for additional terms to include in your search. This is handy for mixing and matching search terms when you are trying to find a result set that looks halfway decent.
Review

- How do you limit results?
  - Use specific synonyms and unique terms
  - Add more terms
  - Utilize limiting options (options will vary by database)

Quick Review moment...
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).
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.
Prepare Your Searching

Thesis: The United States should stop all activities in Afghanistan because it is not a wise investment with our budgetary resources, the persistent threat of Al-Qaeda, 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>

This slide demonstrates a more complicated search. This is broken down by the major points you want to support. Beneath is a grid. The grid headers are very vague in terms of intent. The options beneath are more specific. As you do your research, your list will likely grow. Once you have this list, then you mix and match your terms. While going through this process, you will notice that some results will more closely match your expectations. I highly recommend breaking your searches down with grids such as this.
Thesis: Elementary students would get a better start in life if they had better diets, access to technology, and mandatory physical education programs.

<table>
<thead>
<tr>
<th>Better Diet</th>
<th>Access to Technology</th>
<th>Physical Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removal of vending machines</td>
<td>Problem of Haves vs Have-nots</td>
<td>Creating new or expanding current program</td>
</tr>
<tr>
<td>Supervision of school cafeteria</td>
<td>Funding School Library and ISD Tech Efforts</td>
<td>Initiate special incentives to encourage greater participation</td>
</tr>
<tr>
<td>Making recommendations for packing personal lunches</td>
<td>Grant-writing</td>
<td>Encourage special programs such as President's Physical Fitness Award</td>
</tr>
<tr>
<td>Developing a community garden for local families</td>
<td>Developing a bond proposal for election</td>
<td>Replace recess with mandatory calisthenics</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.
Searching Concepts

- 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>

Great thesis statement but look at the vagueness of the terms. Vagueness kills searches because they add too much extra junk to shift through. Not very efficient.
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.

Now that you have seen these basics principles the harder part is putting them into action. Also, you might notice that they overlap. Further, you may the process is circular. While you are analyzing your results, you are still being a “word detective” and finding new terms in the subject headings. You are still using the subject option from the dropdown menu or perhaps another option. You are limiting your search by date or peer-review.
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?

These work well for the Internet but can also be helpful dealing with other resources.
Corroboration Pays!

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!

Read this story at:
http://www.nbcnews.com/id/30699302/ns/technology_and_science-tech_and_gadgets/t/student-hoaxes-worlds-media-wikipedia/#.VkKAnberRQI
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)

There are many ways to contact the library and beyond...
Here are some handy tips and tricks for using Google and make the Internet work for you...

<table>
<thead>
<tr>
<th>Tip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put phrases in “double quotes”</td>
<td></td>
</tr>
<tr>
<td>Site:nasa.gov “New Horizon” (root URL)</td>
<td></td>
</tr>
<tr>
<td>Using the tilde (~) before a word looks for synonyms.</td>
<td></td>
</tr>
<tr>
<td>“Star Trek” OR “Star Wars” (will look for either). No “OR” looks for both.</td>
<td></td>
</tr>
<tr>
<td>(“William Shatner” OR “Leonard Nimoy”) (“Mark Hamel” OR “Harrison Ford”)</td>
<td></td>
</tr>
<tr>
<td>&quot;ancient rome&quot; 500 BC...500 AD (range- dates, $)</td>
<td></td>
</tr>
<tr>
<td>Use “-” (minus) to exclude a word (-buy –purchase)</td>
<td></td>
</tr>
<tr>
<td>Filetype:pdf (or pptx, docx, etc.)</td>
<td></td>
</tr>
</tbody>
</table>
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?

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.
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! Perserve!
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

Ask your question on HBU Answers

Please let us know how we can help!