LIBR/LIBT 325: LIBRARY RESEARCH AND INFORMATION LITERACY



Shelly Buchanan-Cello

Cosumnes River College

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LIBR/LIBT 325: Library Research and Information Literacy (Buchanan-Cello)

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1: TIPS FOR SUCCESSFUL ACADEMIC SCHOLARSHIP AND ENGAGEMENT

1.1: What's College For?

1.2: Evolution To College- Becoming A College Student

1.3: Speaking The Language of College

1.4: Planning A College Schedule

1.5: Navigating The College Website

1.6: Beyond Tuition- Understanding College Expenses

1.7: Hidden Money- Scholarships

1.8: Netiquette

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1.1: What's College For?

Learning is a treasure that will follow its owner everywhere.
~Chinese Proverb

What's college for? That's a little question with a big answer! A college education comes in many shapes and sizes. A 2010 report from the National Center for Education Statistics estimates that there are 4,500 different post-secondary degree- granting institutions exist in the US.

These schools may be public, private, religious, small, large, for-profit, community colleges, junior colleges. Considering the variety of college options, there is no single answer to the question, "What is college for?" Brenda Hellyer, Chancellor of San Jacinto College in Houston and Pasadena, Texas, wrote in the Chronicle of Higher Education that students "are seeking more than an education—they are seeking options, opportunities, and guidance."

How do you view college?
What will define college success for you?

People go to college for a variety of reasons. The type of college you select will help set parameters and expectations for your experiences. Before jumping into the details of going to college, it's important to stop and think about the purpose college has in your life. Traditionally, college was a place young adults went after high school to explore courses and majors before settling into a job path. Today, most people generally go to college for one of 5 main reasons:

1. **Job Opportunities**: A college degree is seen as a minimum qualification for entry into the skilled labor market. Higher education can better prepare you for work, but also increase your flexibility to change jobs and locations. A degree or certificate can act as a springboard for employment.
2. **Security in a Changing Economy**: College experience may give you the ability to better adapt to changing business conditions.
3. **More Money**: a degree or certificate may mean greater expertise to an employer and result in higher wages. Investing in a college degree may make it easier to maintain employment in economically challenging times.
4. **Better Health:** Many jobs that require college degrees are less physically demanding in terms of the labor requirements to preform them. In addition, health insurance options may be better through employers.
5. **Learning Things of Interest**: college is a pathway to exploring new studies and finding personal passions leading to alternative career paths.

What impression does this TED Talk leave you with? Which generation are you?



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Video Link: https://youtu.be/sgbzbdxTm4E

An article from 2015 in the Washington Post, What's the purpose of college: A job or an education? says that students entering college today list getting a better job as the most important reason to attend college. In the past, learning about things that interested them was listed as the top reason to attend college. When did the change in priority occur? In his article *The Day The Purpose of College Changed*, Dan Berrett says the change in priority can be linked to Ronald Reagan, when he was Governor of California.

Economic times were tough in 1967 for California. Everyone needed to "tighten their belts." At that time, California was known for excellent higher educational system. In a speech Reagan gave on Feb. 28, 1967, a month into his term as Governor, Reagan assured people that he wouldn't do anything to harm the quality of their public education system. "But," he added, "We do believe that there are certain intellectual luxuries that perhaps we could do without." Taxpayers should not be "subsidizing intellectual curiosity," he said. By the time Reagan won the presidency, in 1980, practical degrees had become the popular choice. In the 1930s, around the time Reagan went to college, about 8% of students majored in "business and commerce." When he was elected Governor, that share was 12%. By the time he moved into the White House, more students majored in business than anything else. Business, as a major, has held that top spot ever since.

What frames your value of education?
What kind of return on your investment do you expect from college?

Deciding to go to college has an "***opportunity cost***." An opportunity cost is based on the economic principle that there are limited resources available and choices must be made. Examples of resources would be things like time and money. If you are spending time doing something, you must give up doing something else you want to do. That is the opportunity cost of your choice. Going to college will have an opportunity cost in your life. An important question to ask in the beginning of your college venture is: what are you willing to trade off for going to college?

Opportunity costs are tied to the idea of return on investment. Once you make an investment of your time and money in college, what investment are you hoping to get in return? How you define success in relationship to your college experience impacts how you see the concept of return on investment. Some ways to gauge return on investment include: job opportunities after college, immediate financial benefit to earned wages, social network/connections made while attending college, development of communication and other "soft skills," and personal enrichment and/or happiness.

Short-term rewards compared to long-term rewards are another way to look at return on investment. For example, it takes much longer to become a CEO (Chief Executive Officer) of a company than it does to get a well-paid job at the same company. Different skills would be required from the CEO and it may require more investment to acquire those skills. Frances Bronet, the Dean of the School of Architecture at the University of Oregon, conducted a survey of former engineering graduates when she taught at Rensselaer Polytechnic Institute. She asked former graduates what they felt they had missed in their education. The results were very different depending on how recent their graduation was. Students who had graduated 1 year ago felt that they needed more technical skills. People who had graduated 5 years ago felt that they needed more management skills, and people who had graduated 10-20 years ago felt that they needed more cultural literacy because their work now involved more working with other cultures.

Deciding to go to college is a big decision and choosing a course of study can seem overwhelming to many students. Considering the changing world we live in, knowing what direction to go is not easy. According to Richard Riley, secretary of education under Bill Clinton, "We are currently preparing students for jobs that don't exist using technology that haven't been invented in order to solve problems that we don't even know."

Sir Ken Robinson: Do Schools Kill Creativity? (TED Talk)



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Video link: https://youtu.be/iG9CE55wbtY

Personal Inventory Questions:

1. Why are you here?
2. Why college, why now?
3. How do you define college?
4. What do you imagine college life to be like?
5. How do you know when you are ready for college?
6. What have you done to prepare for college?
7. What do you think college expects from students?
8. What does going to college mean for your future?
9. Using the list of 5 reasons students attend college provided in this chapter, rank your reasons for going to college.
10. In your opinion, is it a good idea for academic counselors to steer high school kids towards either a 4-year degree or vocational training? Should students be steered towards careers that would be a good "fit" for them?
11. Opportunity Cost Analysis: Create a pie chart identifying how you currently spend your time (daily/weekly).

Suggested Readings:

The Day The Purpose of College Changed by Dan Berrett (1/26/2015)

What's College For? Commentary Chronicle of Higher Education (4/22/2013)

How To Assess The Real Pay Off Of A College Degree by Scott Carlson (4/22/2013)

What's The Purpose of College: A Job or An Education by Jeffery J. Selingo (2/2/2015)

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1.2: Evolution To College- Becoming A College Student

The doors we open and close each day decide the lives we live.
~Flora Whittemore

When you envision yourself as a college student, what do you see? What will your daily life be like?

YouTube Video

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Jane McGonigal: Gaming Can Make A Better World (TED Talk). Video link: https://youtu.be/dE1DuBesGYM

After watching the Jane McGonigal's TED Talk, think about the following questions:

- What are gamers good at?
- What is the importance of "10,000" hours?
- Are gamers goal oriented?
- How do gamers feel about tests and being measured?
- What happens when a gamer makes a mistake?
- How do gamers handle frustration?
- How do gamers feel about change?
- Can the skills of a gamer be applicable to the skills a college student will need?

College is constant change. Not just in terms of studying and learning new material, but also in terms of how it is structured. If the college is on the quarter system, a student's classes, teachers, and the hours a student needs to be on campus will change every 11-12 weeks – 4 times a year. Semesters divide an academic year into thirds and may have short intensive sessions in between the main semesters. People sometimes use the words quarters and semesters as if they are synonyms because both divide up a school year, but they represent different units of time.

Dividing up the academic year provides an opportunity for varied learning and developing specialties, but it also means new faces in classes, unknown expectations from new teachers, and juggling a new schedule. It means you may have new routes to travel on campus as you make your way to a different building if your college has a large campus. If a student is working along with going to college, it may mean negotiating new work hours with a boss and coworkers. All of these changes can feel like chaos that comes in like a tidal wave. Every term it can feel like starting over, especially for students who are not in a specific program yet. The beginning of a college experience can seem blurry to a new student trying to navigate the system.

"There's no blinking light to say, hey, look over here, this changed!"
~Amber McCoy, Lane Community College Student

Many students come to college with at least some high school experience and expect college to be similar. After all, many classes have similar names: Biology, Algebra, Writing, Chemistry, and so on. However, the expectations that accompany those titles may be very different. College classes tend to cover course material at a faster pace and expect students to carry more of the burden of learning the material on their own outside of classroom activities.

Compared to college, high school has a straightforward curriculum. High school is segmented and chronological. Students generally go to school at the same time each morning and finish at a similar time in the afternoon. Students are assigned counselors to guide them. High school students usually don't have to buy textbooks for their classes. There are clear deadlines

and the teacher monitors progress and potentially shares progress with parents. The academic benchmarks of quizzes, tests, and projects are concrete indicators of progress. Teachers may monitor students' use of smart phones in class and help students maintain focus on classroom materials. The high school a student attends is picked for him or her, either by geographic location or their parent's choice.

College is about choice. Initially, the choice is where to go to school. The student has to find the right "fit" on his or her own and figure out the process of college admission. There are forms to fill out, submit, and process. Students may have to learn the steps for admission and enrollment for more than one college, and the process can vary from school to school. Students are expected to be able to complete the application process on their own. Students must determine if college placement tests are required and if so, when they must be taken.

The next choice for the student as part of the enrollment process is what to study in terms of declaring a major. The major a student declares may impact financial aid awards. If a student is unsure of what to study and doesn't choose a major, financial aid may not be given to the student.

A student can choose to attend classes part-time or full-time. College class times try to accommodate a variety of student needs and my can occur during the day, evening, online, or a combination of classroom and online (Hybrid). Unless the student has someone to be accountable to, probably no one will check to see if attendance happens or if a student cruises the Internet or social media while in class.

Monitoring of time and its use will be student driven. Understanding the workload associated with a college schedule can be a surprise to the new college student. The first year of college can have a steep learning curve of time management and self-responsibility. For the first time college student, starting college can feel like pushing a big rock up a steep hill all alone.

How much time do you have in your life for school?

What is Considered Half-time or Full-time Status?

The answer to this question may vary from college to college. Lane Community College's website uses the following definitions:

- **Full-Time Status**: 12 or more credits per term (limit of 18 per term)
- **3/4 Time Status:** 9-11 credits per term
- **Half-Time Status:** 6-8 credits per term

An average student full-time credit load is between 15-18 credits. This means that a student will be in the classroom 1 hour per credit. Based on the 15-credit schedule, a student would be in the classroom 15 hours/week. Students mistakenly think that is all there is to it. A schedule requiring a student to be in class 15 hours/week sounds much easier than high school where students typically attend 6-7 hours a day or 30-35 hours/week. College has hidden expectations for students in terms of outside of class "homework." What does that mean? College classes expect 2-3 hours of homework, and sometimes more, per credit. That means for 1 hour in class, a student can expect to spend 2-3 hours on homework or more. A 15-credit load expects a student to put in 30-45 hours outside of class each week on homework.

What does this mean in terms of your life?

Activity	*Hours Required/Week*	*168 hours in a week*
Full-time attendance	15 in class	-15
Homework	30 plus hours	-30 (minimum)
Sleeping	6hrs/ day x 7 days	-42
Eating	1.5hrs /day x 7	-10.5
Work	20hrs/week	-20
Subtotal	***117.5 hrs***	***168-117.5 = 50.5hrs***

Activity	Hours Required/Week	168 hours in a week
Fill in the blanks with what else you would need to do each week	How many hours will each item take to complete?	Add the hours into the spaces below
Total hours		**50.5- _____=_____**

Many students enter college with uninformed expectations. First-generation college students are at a disadvantage without family to help them understand the context of college, what to expect as a college student, and what college life is like. As a result, first-generation college students may be less prepared to handle the challenges they encounter. Students tend to be idealistic in their expectations of college. Pre-college characteristics and experiences play a role in shaping expectations.

Tee Jay: Going Back To School As An Adult Student (Non Traditional)

YouTube Video

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View this YouTube Video online

Video link: https://youtu.be/UhifZr21qxY

Things to think about:

- How prepared are you to go back to school?
- How much time can you devote to college?
- How would you rate your time management skills?
- How do you feel about reading/homework?
- How are your technology skills?
- What kind of support do you have for going to college?
- Who is your support system?
- Make of a list of the resources you have to support your college lifestyle.
- What strengths do you bring with you that will help you succeed in college?
- What skills will you need to improve?
- What tips did you gain from watching the video?

How do you know if you are academically ready for college? If you are accepted into college, does that mean you are ready?

College readiness is not clearly defined. Traditionally, completing high school was viewed as preparation for college, but course

completion in high school does not guarantee college readiness. For example, English classes in high school may focus more on Literature where as entry-level college courses may stress expository reading and writing skills. If you have gone the route of getting your GED, did you work to dig deeper into the subjects and develop your skills, or just try to pass the tests as soon as possible? How did you handle attending classes and participating in classroom activities?

Another measure of college readiness has been standardized test scores. The problem with using a standardized test to determine readiness is its inability to measure the *soft skills* college courses require. Soft skills include qualities like accepting feedback, adaptability, dealing with difficult situations, critical thinking, effective communication, meeting deadlines, patience, persistence, self-direction, and trouble-shooting, to name a few. Meeting deadlines, for example, is a key to college success. The skills and behaviors needed to thrive in college may be different from those it takes to be admitted. Being accepted into college does not necessarily mean you are ready to face the challenges and frustrations that might lie between you and your goal.

Answering the question about being academically prepared for college is tough. Test scores and grades are indicators of readiness, but don't guarantee success in college courses. Soft skills are important to college success, but without basic academic skills, soft skills alone won't be enough. Most colleges use some type of placement test to try to place students into courses that will be appropriate for their skill levels. Usually, colleges have minimum placement test scores in Reading, Math, and Writing, requiring students to demonstrate they are able to handle the minimal expectations of college courses in terms of basic content areas. The degree or certificate associated with the student's goal also influences the academic readiness required for success. Recognizing the importance of balancing the academic and soft skills, and how that relates to student goals is essential for college success and beyond.

Andy Wible: Strengthening Soft Skills (TEDx Talk)

YouTube Video

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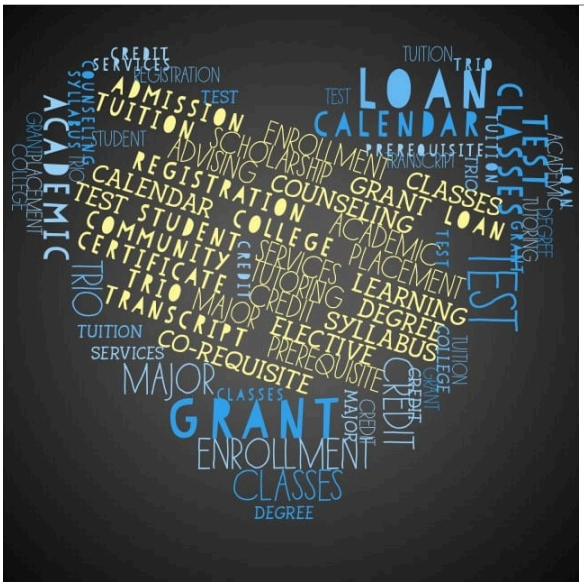
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1.3: Speaking The Language of College



Created by Alise Lamoreaux using the Visual Poetry app.

Language is the dress of thought
~Samuel Johnson

Getting started in college can seem like an uphill battle. One of the first challenges a student can encounter is navigating the college's website. In the attempt to get as much information as possible into the hands of current and future students, college websites are crammed full of information and language that may be new to the first-time college student. Trying to figure out how to get started can be confusing, even when the web site says, "Steps To Enroll." Registration, admission, enrollment... are they all the same thing? If you are registered, are you admitted and enrolled? Is enrollment in the college the same thing as enrollment in classes? And that's just the beginning of the potential for confusion! How can a student know the answers to these questions?

Learning to speak the "language of college" can seem even harder than learning a foreign language because as a new student, you have no idea what words you need to learn. If you travel to a foreign country, you know there are core vocabulary words you will need. Things that will get you the food you like and services you need. Basic needs like bread and water can be correlated among different languages. A dog is a dog all over the world and not confused with a cat. The vocabulary of college is not so straightforward.

One of the first decisions a student may need to make is if they are planning to attend college as a credit or non-credit seeking student. Even more confusing, non-credit students can also be referred to as "continuing education" students. For example, a student wants to take a drawing class. One of the first questions that may be asked is whether the student wants to take the class for credit or non-credit? Both types of students can take drawing classes. If a student doesn't know what a credit is or what one is worth, it's hard to answer the basic question in order to register for the drawing class, and the registration process is very different depending on the answer to the question of credit or non-credit. How can a student know if he/she wants to be a "credit student" or not?

What is the difference between a credit and non-credit student?

According to Lane Community College's web site the difference between credit and non-credit students is:

- **Credit Students** are working towards either a career/technical certificate or degree program at Lane, or are taking courses that will be eligible to transfer for a program at another college or university. In some cases, students take courses that are offered for credit for personal reasons or skills updating, even if they do not need the college credit.
- **Noncredit or Community Education Students** are taking courses for personal or professional interest. These courses do not offer college credit, but in some cases community education students can earn continuing education units, certification

or other evidence of class completion to meet personal or professional requirements. The terms “Continuing Education” and “Community Education” are used interchangeably at Lane, and do not refer to credit students who wish to continue with credit coursework. Noncredit classes are offered at many different locations. Noncredit community education students can take advantage of many college services.

Even this definition does not necessarily make clear to students whether to take courses for credit or non-credit. For example, if a student’s goal is to pass the State of Oregon Board certification exam for Massage Therapy, then at Lane Community College that program will be located in the non-credit side of the college, but at nearby Chemeketa Community College, the Message Therapy program is located in the credit side of the college. Students at both schools will take the same State Board Exam, but their academic preparation will not be transcribed in the same way.

One important difference between credit and non-credit/continuing education courses is whether or not a student will be able to use Federal Student Aid to pay for the courses. Check with the specific college you are interested in attending to see whether or not you can use Federal Student Aid for tuition in the program you want to study. Another important difference may be in the transferability of the course work to other institutions. A student may find credit classes are easier to transfer than non-credit classes. The importance of this factor would depend on the long-term goal of the student. The key to answering the question of credit or non-credit lies in determining what program of study a student will pursue and how the college of choice classifies that program. Learning to speak the language of the college is part of learning the school’s culture. It is important to remember that not all colleges use the same words in the same way.

Commonly Used Academic Vocabulary Used At Lane Community College

Below is a list of commonly used terminology at Lane. Without using the Internet or college catalog, see how many words you know the meaning of. Write the meaning in the space adjacent to the term.

Academic Year	
Registration	
Enrollment	
Admission	
Student Number	
Probation	
Credit Hour	
Term	
Tuition	
General Education/Gen Ed	
Elective	
Degree	
Certificate	
Career pathway	
Financial Aid	
FAFSA	
Stafford Loan	
Scholarship	
Grant	
Federal Work Study	
Transcript	

Non-Credit/Continuing Education	
Audit	
Grade Options	
Course Number	
College Level Course	
Pre-College Level Course	
Lower Division Course	
Upper Division Course	
Prerequisite	
Co-requisite	
Learning Community	
ExpressLane & myLane	

*A list of the definitions to the vocabulary words listed is provided at the end of the chapter.

As a college student, you will need to come up with a strategy for learning lots of information, like the specific language of your school. Tim Ferris has a TED Talk about mastering skills by deconstructing them**.** When you deconstruct something, it means to take something large, and break it down into smaller parts. It also means to identify why you might fail before you start and make a plan to stop failure before it happens.

Axis of Awesome is a comic music group that has created a funny video demonstrating simplicity and seeing the common factor among songs.

Tim Ferriss: How To Feel Like the Incredible Hulk (TED Talk)

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Axis of Awesome: 4 Chord Song

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Based on the ideas of simplifying and deconstructing a task in order to learn it, think of how those ideas could be applied to mastering the language of college.

- Can you see any ways to simplify the task of learning 30 words?
- Are there any connections between the words that you can see?
- Will you need all the words all the time?
- Will you need some words more frequently than others?
- When and where might you need each of the works?
- Can you think of any words not included in this list that would be helpful to know in relationship to your college vocabulary?

List the ideas you come up with in the space below:

Core Academic Vocabulary Used At Lane Community College

Word	Sample Definition
Academic Year	The academic year at Lane begins with Summer term and ends with Spring Term
Registration	The process of signing up for classes using myLane.
Enrollment	Refers to who is eligible to attend the college and the series of steps that a student must take to complete the process
Admission	The process of completing an application to the college (usually completed online via the college web site)
Student Number	Lane does not use Social Security numbers to identify students. Students are given an “L” number after the admission process is completed.
Probation	A student who does not achieve satisfactory academic progress will be placed on academic probation. Students on academic probation may be required to meet with a counselor or advisor before they can register for the next term.

Word	Sample Definition
Credit Hour	At Lane, one credit is generally equivalent to one hour of class per week over an academic term. The average number of credits for a full time student is 12-15 credits per term. Part-time students enroll in fewer than 12 credits per term.
Term	A term, or quarter, is a unit of academic time. At Lane, we have four terms per year. Fall, Winter, and Spring terms are each 10 weeks of instruction, plus one week of final exams. During Summer Term courses may be four, six, eight, or twelve weeks in length.
Tuition	Money charged for instruction. Tuition charges are different for credit and non-credit classes, and for residents and non-residents of Oregon (including international students).
General Education/Gen Ed	Refers to general education core required classes for transfer degree options.
Elective	A course that does not meet any specific requirement for a degree or certificate. Unless there is a restriction, when an academic major requires an “Elective,” students may choose any credit class in the catalog.
Degree	Degrees usually require that students complete a set of courses, often known as “core requirements.” Lane offers associate degrees in many areas. The number of credits need to complete a degree may vary. Generally, associate degrees require around 90 credits in the quarter system.
Certificate	Getting a certification usually means that you completed a specialized form of training. Also, it can mean that you have the technical knowledge of a specific field. Generally it is faster to complete when compared to getting a degree, as most certification programs take less than a year to complete.
Career pathway	Career Pathway Certificates of Completion (CPC) are between 12-44 credits and are fully embedded in an Associate of Applied Science degree or One Year Certificate. They acknowledge proficiency in specific technical skills and are a “milestone” toward completion of a more advanced program. CPCs help students qualify for entry level jobs, enhance their current program, or advance in their current field of employment.
Financial Aid	Financial aid is any grant or scholarship, loan, or paid employment offered to help a student meet his/her college expenses. Such aid is usually provided by various sources such as federal and state agencies, colleges, high schools, foundations, and corporations.
FAFSA	Federal Student Aid provided by the US Department of Education
Stafford Loan	Stafford Loans are available both as subsidized and unsubsidized loans. Subsidized loans are offered to students based on demonstrated financial need. The federal government pays the interest on subsidized loans while the student is in school and during authorized deferment.

Word	Sample Definition
Scholarship	A scholarship is a financial gift awarded to a student on the basis of academic achievement and promise. Many scholarships are based on merit; however, some are based on various criteria or financial need. Scholarships do not have to be repaid. Scholarships are worth seeking!
Grant	Unlike loans, grants—which can come from the state or federal government, from the college itself, or from private sources—provide money for college that doesn't have to be paid back.
Federal Work Study	Federal Work-Study provides part-time jobs for undergraduate and graduate students with financial need, allowing them to earn money to help pay education expenses. The program encourages community service work and work related to the student's course of study.
Transcript	A college transcript is your school's documentation of your academic performance. Your transcript will list your classes, grades, credit hours, major(s), minor(s), and other academic information, depending on what your institution decides is most important. It will also list the times you were taking classes (think "Spring 2014," not "Monday/Wednesday/Friday at 10:30 a.m.") as well as when you were awarded your degree(s).
Non-Credit/Continuing Education	These courses do not offer college credit, but in some cases community education students can earn continuing education units, certification or other evidence of class completion to meet personal or professional requirements. Noncredit classes are offered at many different locations. Noncredit community education students can take advantage of many college services.
Audit	If you choose a grade option of "Audit" you may attend class but no credits are earned. The grade recorded on your college transcript is U, which has no effect on your grade point average. The tuition charges for audit are the same as for all other grade options, i.e., you will be charged the full tuition for courses that you choose to audit.
Grade Options	When you register for a class, myLane will always assume that you wish to receive a letter grade (A, B, C, D, or F) for the course. If you prefer to take a class for a Pass/No pass or Audit grade option, you must change your grade option using ExpressLane within the first eight weeks of a full-term class.
Course Number	The CRN is a five-digit number that identifies a specific section of a course. Credit courses have a course number that includes letters and numbers (e.g. WR 121, ART 115). Non-credit course numbers have letters and numbers in the format XART 5785. The "X" before the subject and the four-digit numbers identify the course as non-credit.
College Level Course	College level courses have course numbers 100 and greater.
Pre-College Level Course	Pre-college credit courses have course numbers below 100, and do not transfer to a 4-year institution.
Lower Division Course	Courses with course numbers between100 and 299. These are generally freshman and sophomore level courses.

Word	Sample Definition
Upper Division Course	Courses with numbers 300 and above. These types of courses are offered at colleges with Bachelor's degree options and above.
Prerequisite	Some classes require that you take one or more other classes first. Consult the course descriptions in the catalog to see the prerequisites for any class you plan to enroll in. At Lane, if you try to register for a class that has a prerequisite that you have not completed, you will see the following error message in myLane: " PREQ and TEST SCORE-ERROR."
Co-requisite	Requires a student to take 2 separate classes that are linked together as part of a program or Learning Community.
Learning Community	Learning Communities are linked courses with the same students and connected content.
ExpressLane & myLane	ExpressLane is Lane Community College's web-based tool for registration, making payments, viewing transcripts, checking your financial aid status, and much more. myLane allows students to interact with the college from any computer connected to the Internet.

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1.4: Planning A College Schedule

The great majority of men are bundles of beginnings.
~Ralph Waldo Emerson

Planning a class schedule is an opportunity for students to take the lead in their educational experience. For some students it will be the first time planning a college schedule. The amount of freedom to choose classes can be exciting and frightening all at the same time!

Before beginning, there are some key factors to consider:

1. Have you met with an academic advisor or counselor?
2. Will you be going to school full-time or part-time?
3. Have you taken college placement tests?
4. Are there specific courses you are required to take?
5. How many days a week do you want to be on campus? Will you be taking online classes?
6. Do any of the classes you want to take have prerequisites or co-requisites?
7. Do any of the classes have addition requirements such as labs or other components?
8. How much time will you have to devote to school-related activities during the term?
9. What are your learning styles and habits?
10. Are you a morning person or a night person?
11. Have you balanced required classes with less intensive electives?
12. Do you need any special accommodations for the classes you have selected?
13. Do you have alternative courses in mind in case the classes you want are not available?

Balancing College, Work, and Life

Attending classes, studying, working, and finding time for family, friends, and yourself can be a hard schedule for college students to balance. How a student organizes their class load can affect their overall success when starting college. Class names may remind students of high school classes and how classes were scheduled in those years. College classes may only meet once a week or as many as 5 times a week. Not all classes are worth the same amount of credit or have the same attendance requirements. Some classes like Biology or Spanish will probably have additional lab requirements, which means a student will need to spend additional time on campus for those labs. Writing classes will require time outside of class preparing, editing, and revising papers. Many teachers require electronic submission of papers/projects. A student may need to build in extra time for meeting submission deadlines.

As a new college student, it is a good idea to take fewer classes in the beginning as you learn what college classes will mean to your daily life. Students who work full-time might want to start with 1 or 2 classes. You may find that you can handle more as you learn to manage your class time and work time. A counselor or advisor can help you with this decision. Be sure to include classes that interest you as well as required classes.

Something to think about:

Employment Obligations	Suggested Load
40 + hours/week	3 – 4 credit hours (1 course)
30 – 40 hours/week	3 – 6 credit hours (1-2 courses)
20 – 30 hours/week	6 – 9 credit hours (2-3 courses)
20 hours/week or less	12-15 credit hours (4-5 courses)

Where is class information located?

The college *catalog* will have descriptions of specific classes and the college *schedule* for each term will be the place to find the

offering. Not all classes are offered every term and some must be taken in sequence.

How to read the course numbering system

Courses are identified by a subject and a number. To search for courses when planning your class schedule, you will generally use the subject and number to identify the course rather than the course title.

WR	115	Introduction to College Writing
↑	↑	↑
Subject	Number	Course Title

At Lane Community College, courses also have a 5 digit CRN (Course Registration Number) that identifies specific sections of the class being offered. You will use that number to register for your classes.

If you have selected a specific program of study, consult the college catalog for directions on the sequence of courses to take. For example, the Retail Management One-Year Certificate program at Lane Community College has requirements that must be met before a student can enroll in the certificate program. A student must place into Writing 121 or 122; Math 065; and take BT 108 (Business Proof Reading) before starting the program. The program takes a student 4 terms or about 15 months to complete. The courses a student should take each term are listed.

Sample Fall Term:

Course Number	Course Description	Number of Credits
BA 101	Introduction to Business	4 credits
CS 120	Concepts of Computing Information Processing	4 credits
MTH 060	Beginning Algebra or higher	4 credits
Choice of: COMM 100 COMM 111 COMM 130	Basic Communication Fundamentals of Public Speaking Business and Professional Speech	4 credits
		Total Credits: 16

Know key dates and deadlines!

Organization is an important part of being a successful college student. One important aspect of organization is knowing the important dates for your classes and the college in general. Academic deadlines matter! Deadlines in college may **not** be flexible. They can have consequences for financial aid and grading that cannot be undone. A student needs to be aware of key dates throughout the term. The responsibility for knowing important dates lies with the student. The course syllabus that you get for each class you take will have important dates for that specific class. The college will put important dates to know on an academic calendar for the school.

Examples of key dates to know for a college:

- When does the term/semester start and end?
- Are there holidays or campus closures during the term?
- When is the last day to drop a class with a complete refund?
- When is the last day to make changes to your schedule?
- When is the last day to drop a class?
- When is the last day to change grading options?
- When is finals week and what it the schedule like during that week?

For an example of an academic calendar, see the Lane Community College Academic Calendar.

Using technology to stay organized

Many student use smartphones and tablets in their daily lives. There are several websites that can be very helpful to students.

The US News article *5 Apps That Can Help Students Mange College Life* includes suggestions about apps for students that can help with daily planning, capturing information in class, creating to-do lists to help with procrastination, making study flash cards, and other organizational issues. This list is just a place to start you thinking about ways you can simplify tasks and maximize productive study time.

College Info Geek has great videos for students on YouTube. Several recommended videos are below.

College Info Geek: 20 Useful Websites Every Student Should Know About

YouTube Video

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20 Useful Websites Every Student Should Know About - College Info Geek. Video link: https://youtu.be/p3O_Y5vb9Cg

College Info Geek: How I Organize My Notes, Homework, and School Files

YouTube Video

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How I Organize My Notes, Homework, and School Files - College Info Geek. Video link: https://youtu.be/yoheFZaYvLU

College Info Geek: How to Start a New Semester or School Year the Right Way

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How to Start a New Semester or School Year the Right Way - College Info Geek. Video link: https://youtu.be/Ey-cAHDme2s

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1.5: Navigating The College Website

A journey of a thousand sites begins with a single click.
~Author Unknown

A college website can be like a cookbook, full of great information and ideas, and can be completely overwhelming. Where do you start? Looking at the pictures? Reading about the author? Can you taste the food in your mind just by looking at a picture? Can you imagine a food just from the list of ingredients? Is the number of ingredients needed to make the recipe exciting or paralyzing? How experienced a cook you are can impact your reaction to the cookbook.

As you begin navigating new information, remember, Julia Child wasn't always a great chef! In fact, when she got married, she could barely cook. Experience doesn't matter. An open mind does. Let the joy of discovering be your guide.

Take risks and you'll get pay offs. Learn from your mistakes until you succeed.
It's that simple.
~Bobby Flay, Master Chef

The role of a college website has changed substantially over the past few years. Student expectations for easy, accessible information drives colleges to get as much information online as possible. It also can lead to a battle for what information makes it onto the home page and how many clicks it will take to find what the student is looking for.

Student services are increasingly utilizing the college website to communicate with students and expecting that students will be proficient in navigating the college website. Students expect to easily locate information; this is helped when the college uses logical organization to the information architecture and design of the website. College websites can be very frustrating to new users, especially if the new user is a first-time college student and is unfamiliar with the underlying structure of the college system. The people creating the college web site may be very familiar with the way they system works and not see the structure as confusing.

Adding to potential confusion can be the lack of ability to view the entire home page of the college depending on the size of monitor or mobile device the student is accessing the website from. Students are increasingly using smart phones and tablets as their primary viewing device for the Internet. Sometimes key information a student needs may be just out of view on the screen. The experienced user knows to make adjustments, but new users may not. Knowing where and how to get started may not be as easy as the "start here" button.

Logical arrangement of information for the college's needs may not be a logical progression of information for the students' needs. From the college perspective, students come in different groups/classifications. Here are some examples:

- New
- Returning
- Transferring
- Students needing accommodations
- Local residents
- Veterans
- International
- Credit
- Non-credit/Community Education
- Adult Basic Education

Each of these groups can have variations on what their first steps should be. Students aren't necessarily used to thinking of themselves in terms of these classifications/groups. It can be difficult for first time students, who may fit into more than one of these groups, to decide which one is the place to start.

Most college websites have a "Getting Started" type button on the home page. After clicking that button, a student begins to make a decision about what category of student he or she is. To an experienced user, this is not an obstacle, but to the first-time college student it may be a barrier. For example, if a student had been getting a GED at the college, which probably falls on the non-credit side of the college structure, is the person a new or retuning student when it's time to sign up for credit classes? The

person may be new to credit classes, but not to the college in general. Where does the person fit? The answer may vary from college to college.

In addition, some college websites may not be mobile friendly so that students who are trying to use smartphones or tablets may face additional obstacles. Despite the potential difficulties, today's college students need to become savvy users of the college website and recognize the role it will play in the communication process.

Website challenge:

Pick 2 different colleges and examine their websites. Try to find the following information on each of the websites.

1. Can you find the Mission Statement/Strategic Plan/Vision of the college?
2. What does the statement say and why is it important to know a college's mission/plan/vision?
3. What are the steps you would to take to enroll at the college?
4. How many locations does the college have and where are they?
5. How long would it take you to travel to the location of that college?
6. What term are you planning to attend the college for the first time? Is there an application deadline you must meet?
7. Where can you find important dates and deadlines for the term?
8. How long does a person need to live in Oregon to be considered a resident of the State in terms of college tuition at the colleges you are investigating?
9. Does the college have a student conduct code? (A document about student rights and responsibilities)
10. Does the college have placement tests a student needs to take prior to staring college?
11. Does the website explain what type of tests are required and is there a cost?
12. What are the test scores used for?
13. Is financial aid available for students who attend the college?
14. Does the website have student success stories and/or student success tips?
15. Identify a program that you might like to study at the college.

Website Challenge Reflection

1. How comfortable were you navigating the college websites?
2. Did the websites' organization make sense to you?
3. What was your strategy for finding the information you were looking for?
4. What information would you consider most important to you as a student?
5. What suggestions do you have for making the website easier to use?

The college website will be part of your communication system with the college you attend. Your college website makes you part of a learning community.

- What other social media does the college use?
- As a student, how can you use the college website, social media, and the Internet in general to strengthen you learning community and connections?

John Green: Paper Towns and Why Learning is Awesome (TED Talks)



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Video link: https://youtu.be/NgDGlcxYrhQ

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1.6: Beyond Tuition- Understanding College Expenses

Budget: a mathematical confirmation of your suspicions.
~AA Latimer

Expenses you may encounter:

- How much is the degree or certificate you want to earn going to cost?
- What factors go into the cost of the college?
- What costs are included in tuition?
- What costs are not included in tuition?
- What is college worth to you?
- How much money can you afford to spend on college?
- Where can you get financing for college if you need help paying for it?
- How much money do you think you could afford on a monthly basis to pay back a loan related to financing college?
- What is the current interest rate on student loans?
- Are interest rates all the same?
- What do you think your life will be like after college?

Paying for college is an undeniable component of the educational process. While there are political discussions underway about making college free, at this point in time, students must pay for college themselves or with the help of others. Understanding the factors that combine to create the overall cost of a college education can help a student make decisions about the college that is right for him or her.

Today's colleges are in a competitive market for students. Thinking about the services you as a student need or want from a college environment can help define what is personally important and what you are willing to pay for. The following video from John Green and Hank Green (who you may recognize from the Crash Course series on YouTube) provides a quick look at factors affecting the cost of college.

Vlogbrothers: Why Is College So Expensive?



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Video link: https://youtu.be/5-IuFSt5xWA

The President of Colorado State University made a video explaining how tuition money is spent at that school. His information is specific to his school, but the overall explanation is applicable to many colleges. Watch what he has to say:

Colorado State University: Where Do My Tuition Dollars Go?



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Video link: https://youtu.be/w_DNf92IyAY

College costs can be measured by 7 main categories:

1. **Tuition:** The price you pay for taking college classes is based on the academic program you choose. Tuition is also affected by selecting a school in the state where you live, and by whether the school is public, private, for-profit, or non-profit.
2. **Fees:** Academic programs may have additional fees beyond tuition costs. For example, a student majoring in culinary arts will need specialized tools to participate in that program. Services the college provides to students can have associated fees. For example, a student health center may have a basic fee that all students must pay whether they use the service or not. Some colleges have dining fees that give students food cards to use on campus. Student fees are not fees students can opt out of. It is important for students to examine a college's fee structure and maximize the services that are being paid for by fees.
3. **Books and supplies:** The cost of books and the supplies students will need to complete a program can vary greatly. Books and supplies can add $1000 or more to the annual tuition cost. This is an important factor that is easily overlooked by students. Finding classes that offer low cost book option/open source materials can help reduce the overall cost of college. Often times, students will end up financing the cost of books and supplies with financial aid. It is important to remember that an additional $1000 financed with aid or credit cards can quickly add up to an unanticipated cost of college.
4. **Transportation**: Getting to and from college costs vary significantly based on how close a student lives to the college campus and the transportation method selected. Some colleges may have a transportation fee as part of the student fees that might provide mass transit (trains or buses) options for getting to school. Colleges may also have parking fees for those students who drive to the campus. Seasonal weather conditions are another factor in transportation choices. As a student estimating cost of college, remember to think about the entire school year.
5. **Living Expenses:** Where will you be living while attending college and with whom? The answer to this question determines a major factor in the overall cost of attending college. Living with family may be less expensive for some, but many times is not an option for students. Answers to the question of where you will live and how much it will cost vary greatly. One thing to think about is how much did it cost you to live last year? Will going to school change that and if so, how? Will you have to eat or spend money on groceries/meals differently than in the past? If the college you choose has

a dining fee built into your tuition costs, don't overlook using it. Staying healthy is an important part of college success.

6. **Personal expenses:** Another wide open category of cost, but don't forget you will still need basic health care and hygiene. And you will still have social events and family commitments. Students tend to underestimate how much money will be needed for personal expenses. For example, many students today cannot survive without smart phones, computers, and data plans.
7. **Opportunity Cost:** Choosing to spend time and money going to college has an opportunity cost. If you are spending time and money on your education, you will not be spending that same time and money somewhere else. One example of this relationship is employment. Attending classes and doing homework may mean you can't work at a job as much as you want to. It may also mean you will have less time to spend with friends and family. If you have a long commute to school, that may impact other aspects of your daily life. The following video examines the opportunity cost of college.

Vlogbrothers: Is College Worth It?



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Video link: https://youtu.be/t_N7MAr98CI

Financial Aid Basics

Most students will need some form of financial aid to help pay for college. Before accepting an offer of assistance, it is important for a student to understand what each possible offer means and what the student's responsibility will be after accepting the offer. The Office of US Department of Education offers financial assistance to students in the forms of grants, loans, and work-study programs. Filling out the FAFSA application is the first start towards receiving financial aid for college.

The video below from Federal Student Aid (FAFSA) debunks myths about who is eligible for financial assistance for college.

Federal Student Aid: Myths About Financial Aid



A YouTube element has been excluded from this version of the text. You can view it online here: https://openoregon.pressbooks.pub/collegetransition/?p=53

Video link: https://youtu.be/K8JuaYVJ_LE

The following 2 videos created by Federal Student Aid provide an overview of your options and what it means to borrow money for college. FAFSA is the best place to get information about student aid for college. A student can contact them directly and the contact information is on the website.

Federal Student Aid: Overview of the Financial Aid Process



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Video link: https://youtu.be/H_iS7gmQd9o

Federal Student Aid: Responsible Borrowing



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Video link: https://youtu.be/mTHtn0FRMWw

Understanding interest rates and how they impact student loans is essential. Many students shy away from doing the math to understand what their responsibility will be in repaying a loan. It is also essential that students understand the difference between a ***subsidized*** and ***unsubsidized*** loan. Both types of loans may be offered to a student in an award letter for financial aid. Many of the horror stories about the burden of college debt on students when they graduate from college could be avoided if students better understood options for financing their college education and examined their college selection process in greater detail.

Wall Street Survivor has a short explanation of how interest and compound interest work. The video demonstrates the difference between a flat/annual interest rate and a compound interest rate. Compound interest can make you very happy as an investor, but it works against you as a borrower. ***Subsidized*** loans ***do not*** add interest while a student is attending college. The interest is not compounded while the student is attending college. ***Unsubsidized*** loans begin charging interest as soon as you take out the loan, like a car loan would. Watch this video to gain some basic information about interest rates.

Wall Street Survivor: What are Interests Rates



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Video link: https://youtu.be/GHHesANT6OM

Formula for Compound Interest (the formula ***unsubsidized*** loans will use)

$A= P(1 + r)^t$

P= amount borrowed r= interest rate t = time (years of the loan)

Example #1

Community College Annual In-State tuition is approximately $4,000 for each year of college

*Stafford **unsubsidized** loan rate for 2015-2016 is 4.29%

First Year of College	Second Year of College
$A= 4,000 (1 + .0429)^2$ A= 4,350.56	$A=4,000(1+.0429)^1$ A= 4,171.60

Total cost for loan over 2-year period:

$4,350.56 + $4171.60 = $8, 522.16 (money borrowed first will accrue interest the longest)

The interest accrued on the loan in a 2-year period is $522.16

Example #2

Community College Annual In-State tuition is approximately $6,000 for each year

*Stafford **unsubsidized** loan rate for 2015-2016 is 4.29%

First Year of College	Second Year of College
$A= 6{,}000\ (1 + .0429)^2$ $A= 6525.84$	$A=6{,}000(1+.0429)^1$ $A= 6{,}257.40$

Total cost for loan over 2-year period:

$6525.84 + $6,257.4 = $12,783.24 (money borrowed first will accrue interest the longest)

The interest accrued on the loan in a 2-year period is $783.24

Example #3

College offering Bachelor's Degree In-State Tuition at approximately $10,000 each year

*Stafford **unsubsidized** loan rate for 2015-2016 is 4.29%

First Year	Second Year
$A=10{,}000(1+.0429)^4$ $A= 11{,}829.63$	$A=10{,}000(1+.0429)^3$ $A=11{,}343.00$

Third Year of College	Fourth Year of College
$A=10{,}000(1+.0429)^2$ $A=10{,}876.40$	$A=10{,}000(1+.0429)^1$ $A=10{,}429.00$

Total cost for loan over 4-year period:

$11,829.63+ $11343.00+ $10,876.40+ 10429.00= $44,478.03

The interest accrued on the loan in a 4-year period is $4,478.03

The key difference between unsubsidized and subsidized loans is the amount of debt a student will leave college owing. Unsubsidized loans charge students interest while they are attending college, so the interest is growing on the loan during that time. A student might think they are borrowing $4,000.00 or $6,000.00, but unsubsidized loans add interest to the amount borrowed that adds up over time. Subsidized loans do not add interest while the student is attending college, so $4000.00 really is $4,000.00, no extras added.

Another important thing to remember when borrowing money for college is that if you add the cost of books and supplies or other needs onto the loan you have taken on for tuition, and you have unsubsidized loans, that extra money also grows over time with interest. While the tuition may have been $4000.00/year, the amount financed was more than that. Example 4 demonstrates this scenario.

Example 4

Year 1	**Year 2**

Community College tuition = $4,000.00 Books and supplies = $1000.00 New computer = $1000.00 Total Loan amount = $6000.00 A= 6,000 (1 + .0429)^2 A= 6525.84	Community College tuition = $4,000.00 Books and supplies = $1500.00 Other fees = $350 Total Loan amount = $5850.00 A=5850.00(1+.0429)^1 A= $6,100.96

Instead of owing $8, 522.16 like in Example #1, total cost for loan over 2-year period:

$6525.84 + $5850.00 = $12,626.80 which is $4,104.64 more for the same time period and degree. Be watchful when adding even small amounts of money to your loan balances. It can add up quickly!

Voices of Debt: The Student Loan Crisis – Don't Major in Debt



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Video link: https://youtu.be/uPcSYrPx3Ao

Loan Calculator

Students need to remember that they are consumers when it comes to taking on loans for college. Not thinking about what the debt means after college only compounds the issues. It is important to think about how much could you afford to pay monthly on a student loan once you have completed college. It's easy to do the math on loan costs. *The Smart Student's Guide to Financial Aid* has a free loan calculator that will do the work for you. All you have to do is plug in the numbers. The loan calculator will also give you an estimate of what your annual salary will need to be to be able to repay the loan. Of course, the loan calculator will not know your other financial commitments, so be sure to look at the monthly payment and decide if you afford that additional expense. College debt is considered a partial economic hardship if it requires you to use more than 15% of your discretionary income.

Here are 2 examples using the same colleges costs as the previous examples:

Loan Balance:	$10,000.00
Adjusted Loan Balance:	$10,000.00
Loan Interest Rate:	4.29%
Loan Fees:	0.00%
Loan Term:	10 years
Minimum Payment:	$50.00
Monthly Loan Payment:	**$102.63**
Number of Payments:	120
Cumulative Payments:	$12,315.47
Total Interest Paid:	$2,315.47

Loan Balance:	4,000.00
Adjusted Loan Balance:	$4,000.00
Loan Interest Rate:	4.29%
Loan Fees:	0.00%
Loan Term:	10 years
Minimum Payment:	$50.00
Monthly Loan Payment:	**$50.00**
Number of Payments:	94
Cumulative Payments:	$4678.45
Total Interest Paid:	$678.45

Note: The minimum monthly payment must be at least $50.00; so on the $4,000.00 loan the number of monthly payments was shortened. Also, there isn't a prepayment penalty for repaying loans early. If you pay as little as $25 more each month on the loan you can shorten the duration of the loan by almost 3 years.

It is also important to realize that even if you don't finish college, you will have to repay a loan taken out for college. According to an article titled The Feds Don't Care If You Dropped Out of College. They Want Their Money, students who dropped out of college and ultimately didn't obtain a degree or certificate, generally don't earn higher wages after leaving school. Statistics show that students who start college but don't finish struggle with student debt.

The US government backs loans that are taken out through FAFSA/Federal Student Aid. Repayment is expected. The government has the authority to garnish wages and withhold tax returns as part of repayment of loans that are not paid. Government-backed debt cannot be forgiven in bankruptcy, except under rare circumstances.

Bloomberg: Why It's So Hard to Get Rid of Student Debt



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Video link: https://youtu.be/LW6EnhdLyk4

The cost of going to college seems to be constantly increasing. Understanding the opportunity cost both now and in the future needs to be an important part of a student's decision process when selecting a college and a major. Do the math! There are plenty of resources to help you. Follow your dreams, but be informed.

Financial aid vocabulary is a specialized language that students participating in the process must understand. Try free flashcards that can make learning financial aid vocabulary fun!

Common Financial Aid Vocabulary Definitions

Terminology	***Definition***
Award package	The way colleges and universities deliver their news about student eligibility for financial aid or grants. The most common packages include Pell Grants, Stafford Loans, and Work Study.
Borrower	A person or group that obtains funds from a lender for a particular period of time. A borrower signs a "promissory note" as evidence of indebtedness.
Campus-Based Financial Aid Programs	The three major aid programs are funded by the federal government, but the disposition of the funds is handled by colleges' financial aid offices. The aid programs are: the Federal Supplemental Educational Opportunity Grant, the Federal Perkins Loan, and Federal Work-Study (FWS).
Cost of education	This includes tuition and fees, room and board, books and supplies, transportation, and miscellaneous expenses. A student's financial aid eligibility is the difference between the cost of education and the Expected Family Contribution as computed by the federal government using the FAFSA.
Default	A failure to meet a financial obligation, especially a failure to make a payment on a loan. Defaults are recorded on permanent credit records and may result in prosecution and/or loss of future borrowing possibilities.
Dependent Student	A student claimed as a dependent member of household for federal income tax purposes.

Expected Family Contribution (EFC)	The amount of financial support a family is expected to contribute toward a child's college education. This amount is part of the formula used by the federal government to determine financial aid eligibility using the FAFSA form.
Federal Direct Loan	A group of federal loan programs for which the lender is the federal government. Included in these programs are government-subsidized loans for students and unsubsidized loans for both students and parents.
Federal Pell Grant Program	This is a federally sponsored and administered program that provides grants based on need to undergraduate students. Congress annually sets the appropriation; amounts range from approximately $400 to $3,000 annually. This is "free" money because it does not need to be repaid.
Federal PLUS Loan	A nonsubsidized loan program for parents of undergraduate students under the Federal Education Loan Program umbrella
Federal Perkins Loan Program	A federally run program based on need and administered by a college's financial aid office. This program offers low-interest loans for undergraduate study. Repayment does not begin until a student graduates.
Federal Stafford Loan	A federal program based on need that allows a student to borrow money for educational expenses directly from banks and other lending institutions (sometimes from the colleges themselves). These loans may be either subsidized or unsubsidized. Repayment begins six months after a student's course load drops to less than halftime. Currently the interest rate is 0 percent while in school and then is variable up to 8.25 percent. The loan is typically repaid within ten years. Be sure to know the interest rate at the time of borrowing.
Federal Work-Study Program (FSW)	A federally financed program that arranges for students to combine employment and college study; the employment may be an integral part of the academic program (as in cooperative education or internships) or simply a means of paying for college.
Financial Aid Award Letter	Written notification to an applicant from a college that details how much and which types of financial aid are being offered if the applicant enrolls.
Financial Aid Package	The total amount of financial aid a student receives for a year of study.
Free Application for Federal Student Aid (FAFSA)	This is the federal government's instrument for calculating need-based aid. It is available from high school guidance departments, college financial aid offices, and the Internet (www.fafsa.ed.gov). The form should be completed and mailed as soon after January 2 as possible.
Gap	The difference between the amount of a financial aid package and the cost of attending a college or university. The student and his/her family are expected to fill the gap.
Gift Aid	Grant and scholarship money given as financial aid that does not have to be repaid.
Grants/ scholarships	These are financial awards that are usually dispensed by the financial aid offices of colleges and universities. The awards may be need- or merit-based. Most are need-based. Merit-based awards may be awarded on the basis of excellence in academics, leadership, volunteerism, athletic ability, or special talent.
Lender	One who provides money on the condition that the money be returned, usually with an interest charge.
Merit awards, merit-based scholarships	More "free" money, these awards are based on excellence in academics, leadership, volunteerism, athletic ability, and other areas determined by the granting organization, which can be a college or university, an organization, or an individual. They are not based on financial need.
PIN	Personal identification number.
Student Aid Report (SAR)	Report of the government's review of a student's FAFSA. The SAR is sent to the student and released electronically to the schools that the student listed. The SAR does not supply a real money figure for aid but indicates whether the student is eligible.
Subsidized Student Loan	The government is paying the interest on the loan while the student is in college at least part-time (six credits).

Tuition	Amount of money charged to students for instructional services. Tuition may be charged per term, per course, or per credit.
Unsubsidized Student Loan	The interest is accruing while the student is in college. The government is not paying the interest on the loan.

Making It Personal:

1. What is the tuition cost for the college/program you want to enroll in?
2. What additional fees can you expect to pay along with tuition?
3. What kinds of services will you get from the additional fees you pay?
4. Can you estimate the cost of books and supplies for your chosen program?
5. Are you more likely to be a full-time student or a part-time student?
6. What is your plan for paying for college?
7. If you were to take out loans, how much money do you think you would need to borrow?
8. Who is ultimately responsible for your college expenses?
9. Have you filled out the FAFSA application?
10. What do you feel like you need more help with in relation to financing college?

Susan Dynarski: Why Financial Aid Is Broken And A Simple Solution to Fix It (TED Talk)



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1.7: Hidden Money- Scholarships

When the world says, "Give up," Hope whispers, "Try it one more time."
~ Author Unknown

A scholarship is a financial investment in someone's potential to succeed. It's based on past experiences, the possibility of making a difference, and the embodiment of the core values of the organization or person sponsoring the scholarship. As a student applying for scholarships, think about what can you do to demonstrate that you are a worthy investment. What story can you tell that will make someone want to invest in you?

Describe a personal accomplishment and the strength and skills you used to achieve it. (Use no more than 150 words)

Last year I volunteered with the Art Support Services. Art support is a part of Burning Man's infrastructure that facilitates everything involving massive art installations. Being my second year I went from being a simple volunteer to a volunteer trusted with the duties and responsibilities of a radio. My job entailed communicating with the artists, figure out where they were in the building process then decide what heavy machinery they needed. Next I would radio Heavy Equipment to inform them of the artist's needs. The most important skill I gained was appropriate radio communication. I learned how to change channels and proper radio etiquette. On the radio I used terms like "ten-nine", "copy that", or "affirmative" a personal favorite. Having a radio was a huge feeling of accomplishment, because I got to play a part in coordinating all the pieces that made the art come together.
~ Student #1

- What kind of person would you say Student #1 is?
- Does the person seem dependable?
- Would this person follow through on a task he or she was given?
- What qualities stand out for you about this person when you read this personal statement?
- Would you invest in this person's future?

Coming back to school after twenty-five years is an accomplishment I'm very proud of. I didn't graduate from high school when I was supposed to, so the first strength I used was faith that I could come back and do it now. I definitely needed a little courage, going from a forty year old server in a restaurant to a first time college student was a big change. In order to figure out what I wanted to study I researched online, bounced ideas off of friends and even talked to strangers on the street. I tried to keep an open mind and think creatively about my options, and then used my experience and perspective to narrow down the long list of potential interests. Once I decided on a career path and school, I quit my job and moved to a new city, relying heavily on discipline, humor and hope. I can't tell you how many times I thought about staying in Portland and working at my old job forever, but now that I'm in school, I'm really grateful that I didn't.
~Student #2

- What kind of person would you say Student #2 is?
- Does the person seem dependable?
- Would this person follow through on a task he or she was given?
- What qualities stand out for you about this person when you read this personal statement?
- Would you invest in this person's future?

A few years ago I gathered together a group of children from my neighborhood and together we wrote an adaptation of "The Frog Prince." We then built a stage in the back yard and spent weeks painting sets and creating costumes. When we had finished all the preparations, we pulled couches and chairs into the backyard and invited our whole neighborhood over to watch our play. It was amazing to help guide and motivate the children as they performed their creation; it took an enormous amount of organization and delegation skills to make our production go smoothly. It was incredible to be able to help our community come together and watch neighbors that had lived next to each other for years finally forging connections and becoming friends. It was wonderful to be able to see the children growing in their confidence and sharing their creation with our community.
~Student #3

- What kind of person would you say Student #3 is?

- Does the person seem dependable?
- Would this person follow through on a task he or she was given?
- What qualities stand out for you about this person when you read this personal statement?
- Would you invest in this person's future?

After sorting though several scholarship applications, the scholarship committee have selected 3 finalists for their scholarship. The scholarship committee must pick only one student to give a scholarship to. As a member of the scholarship committee, you must make a choice as to who wins the scholarship. Which student would you select and why? What criteria would you use to make your selection?

Thinking about applying for scholarships can seem like an overwhelming prospect, and students have many excuses for not applying. There are so many scholarships available for college that knowing where to start is the first obstacle to the process. Remember, scholarships are the gift of money for college. A gift does not have to be paid back like a loan does.

Scholarships are offered to students who meet a specific requirement established by the sponsor, who may be an individual or an organization. Scholarships can be offered through local, state, or national sponsors. Each scholarship will have its own requirements based on the purpose of the scholarship. Scholarships are a good way to help pay for college without increasing student debt. Students may apply for multiple scholarships. Receiving a scholarship will affect the student's overall financial aid award because all the student aid added together cannot be more than the cost of attending college. However, it is important to realize that scholarships are gifts and do not have to be repaid, so trying to include a scholarship your overall financial aid package is a good idea.

Common Excuses For Not Applying For Scholarships

- Scholarships are only for people with good grades or athletic skills
- There aren't scholarships for someone like me
- You have to be a good essay writer to win a scholarship
- There is too much competition to even try
- Finding scholarships to apply for is hard and takes too much time
- Scholarship awards are for small amounts of money, so it's not worth it
- Scholarships are only for high school graduates
- GED graduates can't get scholarships

Finding scholarships requires research and effort on the part of the student, but the effort can have a financially rewarding outcome. Searching for scholarships today is much easier than in the past. Students used to have to comb through books in counselors' offices and photocopy applications to be put in the mail, snail mail!

The Internet has changed the search process. In today's scholarship search process, a student can use several websites to help find the treasure. *Never* pay for help to search for scholarships. Websites that charge fees to find scholarships may be scams. The Scholarship Fraud Prevention Act of 2000 was passed to help increase the penalties for people convicted of scholarship fraud. Before this Act was passed, the Federal Trade Commission was limited to closing operations defrauding consumers. Now the government has the power to incarcerate or fine perpetrators of scholarship fraud.

Free help can be found through the college you have selected to attend as well as through several great websites. Check with student support services at your college to see what services are offered. *Scholarship Junkies*, *Unigo, Fastweb*, and *Fin Aid* are examples of online resources for finding scholarships to apply for. *Unigo* even has a section for scholarships that don't require an essay.

25 Strange, Crazy, and Obscure Scholarships



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Video link: https://youtu.be/-VZKL5bcFvI

In the State of Oregon, the *Oregon Office of Student Access and Completion* (OSAC) is a place to start the scholarship application process. OSAC was established in 1959 by the Oregon Legislature to help fund post-secondary education. OSAC requires students to fill out the FAFSA before applying to OSAC. Each year OSAC awards over $118 million to Oregon residents seeking a college education. According to their website:

As a national leader in public/private partnerships of scholarship and innovate outreach programs, OSAC administers the following programs: Scholarships, the Oregon Opportunity Grant, the Chafee Grant, the Childcare Grant, ASPIRE (Access to Student assistance Programs In Reach of Everyone) as well as smaller funding programs.

Mistakes to avoid when applying for college scholarships

Scholarship committees want to give their money away to deserving students. It's your job to properly sell yourself so they know why you are the right choice. Build a profile that can't be ignored, one that showcases your originality, your character and your drive to be successful. Avoid these common mistakes students make. Get your application done right!

Deadlines

One of the major reasons student fail to earn scholarships is due to missing the application deadline. Deadlines matter and once they pass, the opportunity for that scholarship has ended for that year. It is important to pay attention to the time zone the deadline occurs in. The scholarship website may be located in a different time zone than you are. If the deadline says 11:30 pm EST (Eastern Standard Time) that is 8:30 pm PST (Pacific Standard Time). If the scholarship says it's due by March 15th, it means it. On March 16th you will not be able to submit the application. This is a harsh reality for some students who put off working on their scholarship applications.

Fill Out The Application Correctly

The directions on a scholarship application are not suggestions. These are the basic requirements that you need to fulfill in order to be considered for a scholarship. If you do something careless like emailing your application when you are supposed to mail it or not bothering to format your application correctly, you may not get the scholarship.

Fill Out The Application Completely

Scholarship committees request specific information because they need it. If the scholarship committee does not receive all of that information from you, the scholarship committee will likely look at your application, see that it is incomplete, and move it to the disqualified pile. If your application is submitted online and the information is incomplete, the application will not make it past the computer screening.

Make sure you are eligible for the scholarship

Read the requirements of the scholarship carefully. If there is a specific aspect of the scholarship that you do not meet, find a different scholarship to apply for.

Familiarize yourself with the sponsor of the scholarship

Use the Internet to find out as much as possible about the sponsor of the scholarship. If it is a company or organization, find out what their mission is and what they care about. If the sponsor is a person or in memory of a person, what was the person's passion?

Proofread Your Application

Always have someone proofread your application before you send it in. This will help reduce any spelling or grammar errors or other mistakes that may be in your application before you send it. If you want to earn some money, you'll want your application to be as polished as possible!

Scholarship Essay Mistakes

Word count is probably the most common scholarship essay mistake. If the application asks for a word range, hit the range. If it asks for a specific word count, hit the word count as closely as possible. This shows you're capable of paying attention and satisfying specific requirements. Another common mistake is falling off topic. You want your essay to stand out from all the others. It needs to be unique, but it needs to address the topic given.

Email Address

While a cute or risqué email address can seem clever among your group of friends, it can send the wrong message to a scholarship committee, or the professors at your college. When applying for scholarships, avoid email addresses that use nicknames, profanity, that are offensive, or that have sexual connotations. Instead, create a professional email address to use for scholarship applications and professional correspondence. Keep it simple and straight forward by using variations of your first, middle, and last name.

Personal Statements & Essays

Many scholarship applications request a personal statement or essay to gain a perspective on the student in a more personal way. This is an opportunity for a student to build a unique picture of him or herself. OSAC uses 4 topics in their application. At Lane Community College, the Foundation (the source of scholarships specific to Lane) uses the same 4 topics in their applications. A student may use the same answers for both OSAC and Lane Community College's applications. Check the college you plan to attend and see if you can find their essay questions. Chances are good, if it's an Oregon school, it will use the same questions as OSAC.

OSAC's application limits the number of *characters* you can use in a response. This is different from a word limit. Be sure to find out if the application you are completing uses words or characters in the directions for space limitations of answers.

- Explain your career aspirations and your educational plan to meet these goals. Be specific.
- Explain how you have helped your family or made your community a better place to live. Provide specific examples.
- Describe a personal accomplishment and the strengths and skills you used to achieve it.
- Describe a significant change or experience that has occurred in your life. How did you respond and what did you learn

about yourself?

Sometimes students worry that they don't have a good answer to the questions posed by the scholarship application. Your answer doesn't need to be a world-saving event. It needs to show your personality and qualities that will be worth investing in. The examples at the beginning of the chapter demonstrate real-life events that answer the question being posed. Finding small stories to tell will make better statements when you only have limited characters to use.

Zach King: The Storyteller In All Of Us (TEDx Talk)



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Video link: https://youtu.be/VMIpxqeoI1c

The final message in Zach King's video is that everyone has ideas that matter and thoughts and ideas that inspire people. The personal statements and essays in a scholarship application are the place a student can set him or herself apart from the other applicants. Sitting down and writing an inspiring essay in 1000 characters or 150 words can seem like an impossible task.

One way to get started is to write something less structured. Try writing a random autobiography about yourself. This can be a fun way to start thinking about yourself and your experiences in order to find topics to use for personal statements and essays. It's your story – you can't get it wrong. Instructions and examples for writing a random autobiography are in the next chapter.

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1.8: Netiquette

Netiquette refers to etiquette, or protocols and norms for communication, on the Internet. We create personal pages, post messages, and interact via online technologies as a normal part of our careers, but how we conduct ourselves can leave a lasting image, literally. The photograph you posted on your Facebook page or Twitter feed may have been seen by your potential employer, or that nasty remark in a post may come back to haunt you later.

Following several guidelines for online postings, as detailed below, can help you avoid embarrassment later.

Know your context

- Introduce yourself.
- Avoid assumptions about your readers. Remember that culture influences communication style and practices.
- Familiarize yourself with policies on Acceptable Use of IT Resources at your organization. (One example of a college's acceptable use policy can be found here: https://www.cocc.edu/departments/its/network-administration/files/cocc_acceptable_use_of_information_technology_resources_12.pdf/)

Remember the human

- Remember there is a person behind the words. Ask for clarification before making judgement.
- Check your tone before you publish.
- Respond to people using their names.
- Remember that culture and even gender can play a part in how people communicate.
- Remain authentic and expect the same of others.
- Remember that people may not reply immediately. People participate in different ways, some just by reading the communication rather than jumping into it.
- Avoid jokes and sarcasm; they often don't translate well to the online environment.

Recognize that text is permanent

- Be judicious. What you say online is difficult to retract later.
- Consider your responsibility to the group and to the working environment.
- Agree on ground rules for text communication (formal or informal; seek clarification whenever needed, etc) if you are working collaboratively.

Avoid flaming: research before you react

- Accept and forgive mistakes.
- Consider your responsibility to the group and to the working environment.
- Seek clarification before reacting.
- Ask your supervisor for guidance.*

Respect privacy and original ideas

- Quote the original author if you are responding to a specific point made by someone else.
- Ask the author of an email for permission before forwarding the communication.

*** Sometimes, online behavior can appear so disrespectful and even hostile that it requires attention and follow up. In this case, let your supervisor know right away so that the right resources can be called upon to help.**

Chapter Attribution Information

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2: BRIEF HISTORY OF INTERNET

2.1: Networking and Communication
2.2: Software
2.3: Internet

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2.1: Networking and Communication

Introduction

In the early days of computing, computers were seen as devices for making calculations, storing data, and automating business processes. However, as the devices evolved, it became apparent that many of the functions of telecommunications could be integrated into the computer. During the 1980s, many organizations began combining their once-separate telecommunications and information systems departments into an Information Technology (IT) department. This ability for computers to communicate with one another and to facilitate communication between individuals and groups has had a major impact on the growth of computing over the past several decades.

Computer networking began in the 1960s with the birth of the Internet. However, while the Internet and web were evolving, corporate networking was also taking shape in the form of local area networks and client-server computing. The Internet went commercial in 1994 as technologies began to pervade all areas of the organization. Today it would be unthinkable to have a computer that did not include communications capabilities. This chapter reviews the different technologies that have been put in place to enable this communications revolution.

A Brief History of the Internet

In the Beginning: ARPANET

The story of the Internet, and networking in general, can be traced back to the late 1950s. The United States was in the depths of the Cold War with the USSR as each nation closely watched the other to determine which would gain a military or intelligence advantage. In 1957, the Soviets surprised the U.S. with the launch of Sputnik, propelling us into the space age. In response to Sputnik, the U.S. Government created the Advanced Research Projects Agency (ARPA), whose initial role was to ensure that the U.S. was not surprised again. It was from ARPA, now called DARPA ((Defense Advanced Research Projects Agency), that the Internet first sprang.

ARPA was the center of computing research in the 1960s, but there was just one problem. Many of the computers could not communicate with each other. In 1968 ARPA sent out a request for proposals for a communication technology that would allow different computers located around the country to be integrated together into one network. Twelve companies responded to the request, and a company named Bolt, Beranek, and Newman (BBN) won the contract. They immediately began work and were able to complete the job just one year later.

ARPA Net 1969

Professor Len Kleinrock of UCLA along with a group of graduate students were the first to successfully send a transmission over the ARPANET. The event occurred on October 29, 1969 when they attempted to send the word “login” from their computer at UCLA to the Stanford Research Institute. You can read their actual notes. The first four nodes were at UCLA, University of California, Stanford, and the University of Utah.

The Internet and the World Wide Web

Over the next decade, the ARPANET grew and gained popularity. During this time, other networks also came into existence. Different organizations were connected to different networks. This led to a problem. The networks could not communicate with each other. Each network used its own proprietary language, or protocol (see sidebar for the definition of *protocol*) to send information back and forth. This problem was solved by the invention of Transmission Control Protocol/Internet Protocol (TCP/IP). TCP/IP was designed to allow networks running on different protocols to have an intermediary protocol that would allow them to communicate. So as long as your network supported TCP/IP, you could communicate with all of the other networks running TCP/IP. TCP/IP quickly became the standard protocol and allowed networks to communicate with each other. It is from this breakthrough that we first got the term *Internet*, which simply means “an interconnected network of networks.”

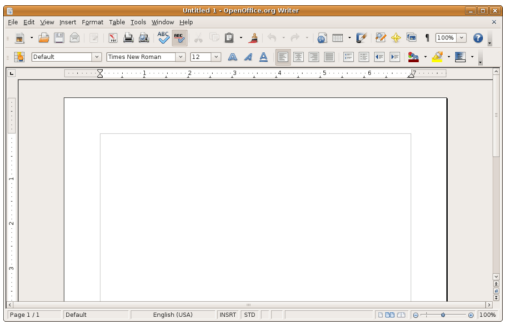
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2.2: Software

Software

Computer software (often called just **software**) is



A screenshot of the OpenOffice.org Writer software

made of one or more computer programs. Sometimes it means one specific program, or it can mean all the software on a computer, including the applications and the operating system. Applications are programs that do a specific thing, such as a game or a word processor. The operating system (Mac OS, Microsoft Windows, Linux, etc.) is software that helps the applications run, and controls the display and the keyboard.

The word software was first used in the late 1960s to show the difference from computer hardware, which are the parts of a machine that can be seen and touched. Software is the instructions that the computer follows. Before compact discs (CDs) or Internet downloads, software came on “soft media” like paper punch cards, magnetic discs or magnetic tape.

If you compare computers to music and musical instruments you can think of hardware as being the instruments and software being the musical notes.

The word *firmware* is sometimes used to describe a style of software that is made specially for a particular type of computer (or other electronic device) and is usually stored on a Flash memory or ROM chip in the computer. Firmware usually refers to a piece of software that directly controls a piece of hardware, for example the firmware for a CD drive or the firmware for a modem.

Categories

Computer software can be put into categories based on common function, type, or field of use. There are three broad classifications:

1. **Application software** are the computer programs for performing user tasks such as word processing and web browsers.
2. **System software** is used to start and run computer systems and networks. This includes operating systems.
3. **Computer programming tools** (also known as Development Software) are used to create application and system software. This is done by translating and combining computer program source code and libraries into executable RAMs. These include compilers and linkers.

Operating System

An **operating system** (also called an **OS**) is a piece of software that is needed to run the programs on a computer or a mobile device. The programs that run on an operating system talk to the hardware.

Common Families of Operating Systems

- **Linux**
  - Debian (derivatives include Ubuntu, Mint, Trisquel)
  - Red Hat (derivatives include Fedora, CentOS, Blag)
  - Arch (derivatives include Parabola)
  - Gentoo (derivatives include Ututo XS)
  - Slackware
  - Android

- **BSD**
  - FreeBSD
  - Mac OS X
  - OpenBSD
  - NetBSD

- **Microsoft Windows**
  - Windows 1.0
  - Windows 3.x
  - Windows NT 4.0
  - Windows NT 5.0
  - Windows NT 6.0
  - Windows 95
  - Windows 98
  - Windows 2000
  - Windows ME
  - Windows XP
  - Windows Vista
  - Windows 7
  - Windows 8
  - Windows 8.1
  - Windows 10

- **iOS**
  - iOS 4
  - iOS 5
  - iOS 6
  - iOS 7
  - IOS 8

- **Android**
  - CyanogenMod
  - Replicant

- **Be Family**
  - BeOS
  - Magnussoft ZETA
  - Haiku (operating system)

An operating system must be made up of different parts: (these can change depending on the operating system)

- kernel and drivers
- computer programs and software

Tasks Commonly Done by Operating Systems

- Interaction with the user, and management of attached devices (such as USB flash drives)
- Management of programs (things like starting and stopping them)

- Management of resources like processor time: Making sure each program gets a fair amount of power.
- The reading and writing of data
- Memory management: virtual memory, paging, swapping

What an Operating System Does

Most ordinary computer users take their operating system for granted. The easiest way to understand what an operating system does is to take a close look at what computers were like before operating systems were invented.

The earliest electronic computers did not have any operating system. If the user wanted to change what the computer was doing, the user had to open the back panel on the (then very large) computer, and change how the wires were connected. Changing what the computer did was very time consuming and required an expert.

Later, computer scientists decided to have the wires stay as they were, and feed instructions to the computer with punched cards (cards with holes that represented instructions) or magnetic tape. The computer would store the instructions in some kind of memory. This way of operating a computer is called thevon Neumann architecture.

Still, computers of the time generally only had enough memory to “remember” one program at a time. If the user wanted the computer to run a different program, the user had to wipe out the first program from memory and then load another program into memory.

Computer operators and computer scientists grew tired of carrying around large stacks of punch cards. They also wanted computers to run more than one program at a time. As years of work changed or replaced computers to have more memory, computer operators and computer scientists decided that some computers could hold several programs in its memory. The computer user could then simply choose which program the user wanted to run. Running a computer this way requires a “boss” program that controls all the other programs, and asks the user what program the user wants to run. Such a boss program is called an operating system.

Having several programs in memory that can be run at any time makes some new problems. The operating system itself has to remember where the programs are at in memory. The operating system also has to prevent two programs from fighting over which one gets to use the processor.

Modern desktop or laptop computers need an operating system so that they can operate. They are usually sold with it already installed. Operating systems normally start up automatically when the user turns on the computer.

Differences

Operating systems can also have other differences:

- Some are real-time systems.
- Some are distributed systems.
- Most use a GUI, some use a text-based interface.

Utility Software

In computing, a **utility** is a program or module which is used to give a general-purpose result, for many different uses. A utility is intended for a wide range of users, rather than an “app” (application program) which might be intended to serve a specific purpose for specific users.

For example, a utility program may handle computer files or guard against computer viruses.

The word “utility” has been used to mean a “general-purpose computing tool” for many decades, since at least 1960.[1][2][3]

Booting

Booting is what happens when a computer starts up. When you boot a computer, your processor looks in system ROM (the BIOS)

for instructions and does them. They normally ‘wake up’ add-in cards and searches for the boot device. The boot device either loads the operating system or gets the operating systemfrom someplace else.

People use the word “boot” to mean “to start a computer” or other device with electronics built in. For example, if a person wants to ask a friend to turn on a satellite phone, they would say “could you boot up the satellite phone?”.

Most operating systems call the first device it uses a boot device. This is because the computer is making itself go, as in the idiom. When we start a computer, we can often see the simple instructions the computer uses to start, then more complicated pictures or software.

The phrase “to boot” in this meaning is short for “to bootstrap”. This use is part of net jargon along with similar multi-use words like net or web. Often the computer is just called a box, so a phrase like “to boot the box” means “to start the computer”.

The term “reboot” can also be used in a different context to mean a restarting of a storyline established in previous iterations of a series of fiction.

To “reboot” is not only a computer reference, but is also sometime referenced in giving birth to cows.

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3. "Catalog of Copyright Entries. Third Series: 1960", 1961, Library of Congress. Copyright Office, p.350, web: BG-AAJ, notes "IBM 705 III utility program: data file print... ©10May60". ↵

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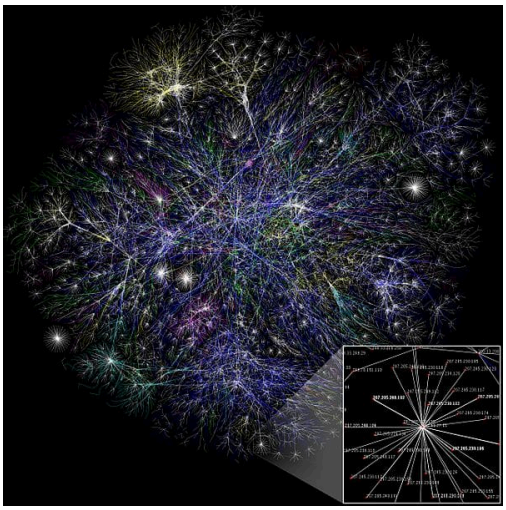
- Software. **Provided by**: Wikipedia. **Located at**: https://simple.Wikipedia.org/wiki/Software?oldid=5045190. **License**: *CC BY-SA: Attribution-ShareAlike*
- Operating system. **Provided by**: Wikipedia. **Located at**: https://simple.Wikipedia.org/wiki/Operating%2520system?oldid=5011655. **License**: *CC BY-SA: Attribution-ShareAlike*
- Utility software. **Provided by**: Wikipedia. **Located at**: https://simple.Wikipedia.org/wiki/Utility%2520software?oldid=4664396. **License**: *CC BY-SA: Attribution-ShareAlike*
- Booting (process). **Provided by**: Wikipedia. **Located at**: https://simple.Wikipedia.org/wiki/Booting?oldid=4721618. **License**: *CC BY-SA: Attribution-ShareAlike*

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2.3: Internet

Internet



Internet map

The **Internet** is a large group of computers that are connected to each other. The Internet is used to send information quickly between computers around the world. It has millions of smaller domestic, academic, business, and governmentnetworks and websites, which together carry many different kinds of information (facts and details) and services. So in other words, the Internet is a network of networks.

Services on the Internet

The Internet is used for many things, such as electronic mail, online chat, file transfer, and the interlinked web pages and other documents of the World Wide Web.

The most used service on the Internet is the World Wide Web (which is also called the “Web”). The Web contains websites, blogs, and also wikis likeWikipedia. Webpages on the internet can be seen and read by anyone (unless the page needs a password, or it is blocked).

The second major use of the Internet is to send and receive e-mail. E-mail is private and goes from one user to another. Instant messaging (such as AIM orICQ) is similar to email, but allows two or more people to chat to each other much faster.

Some governments think the Internet is a bad thing, and block all or part of it. For example, the Chinese government thinks that Wikipedia is bad. Many times no one in China can read it or add to it.[2] Some parents block parts of the Internet they think are bad for children to see. Well-known examples of the whole Internet being blocked are in North Korea[3] and Myanmar.

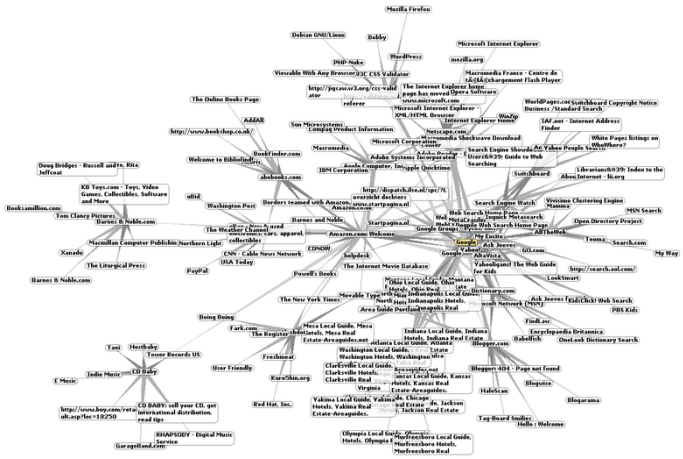
Dangers on the Internet

The Internet can also be a dangerous place. Information that people put on the Internet is not always checked, and some may not be true. Some may even be harmful. Also, if someone sends information through the internet, sometimes other people can read it even when they are not supposed to. For example,Facebook has had some problems with privacy settings. A person can post information on a website, but this is often a bad idea unless the person is very sure of what they are doing. A good way to check for a secure website is to make sure the URL starts with https:// instead of http://, this means it is a secure site. (This only stops other people from reading what a user types. It does not mean the website is safe)

- Some websites may trick people into downloading viruses that can harm a computer or spyware that spies on its users (looks

at what they are doing and tells someone else). E-mails can also have harmful files with them as “attachments.”[4]
- In Internet chatrooms, people might be preying on others or trying to stalk or abuse them.
- The Internet contains content that many people find offensive such as pornography, as well as content intended to be offensive.

Uniform Resource Locator



The URL makes sure it goes to the right website. It is easy to make a mistake as there are lots of websites. This picture shows the resources near Google.

Uniform Resource Locator (**URL**) is another name for a web address. URLs are made of letters, numbers and other symbols in a standard form.[5] People use them on computers by clicking a pre-prepared link or typing one into a web browser, to make the computer fetch and show some specific resource (usually a web page) from another computer (web server) on the Internet.

URLs consist of several parts:

- A protocol. Very often, this is the Hypertext Transfer Protocol (HTTP)
- Some separation characters: *://*
- The other computer’s name or address. It is very common, for names to start with *www.* (which stands for *World Wide Web*), but the entire name is up to that computer’s administrator.

In some cases, the URL may also contain

- The path to a document or script.
- In the case of a script, additional parameters after a question mark (?)
- Username and password needed to access a certain page
- Some text after a pound sign (#), naming a spot to skip ahead to.

The URL of this page is http://simple.wikipedia.org/w/index....source_Locator

- *http* is the protocol
- *simple.wikipedia.org* is the web site
- */w/index.php* is a script. That script gets parameters, *title=Uniform_Resource_Locator*

A shorter form, called a “relative” URL, is used when a computer could correctly fill in the full (“absolute”) URL from context. For example /wiki/URL only works for a link on wikipedia to this page on wikipedia. Absolute URLs can be shared outside of computers, even with little or no explanation.

Extensions

These are at the end of the domain name which has a period mark before it. At first there were six main extensions:

- .com – Commercial use
- .net – network / Internet Service Provider use
- .org – Organizational use
- .edu – Educational use (Schools and universities)
- .mil – Military use
- .gov – Governmental use
- .eu – European use

Today, there are many other URL extensions. These are usually either a top level domain or interest grouping. Each country has its own top level domain, for example, .ca for Canada, .us for the United States of America or .co.uk for the United Kingdom. Many countries have a government-only extension, for example the United States uses .gov or .fed.us, .gc.ca for Canada and .gov.uk for the United Kingdom. Interest group domains would include .tv (television), .pro (professionals) and .xxx (pornography). These are not used as often as the original extensions.

Internet Service Provider

An **Internet service provider**, or **ISP** maintains, installs and provides internet connection to residential or commercial areas. Some examples of **ISP** clients include – homes, coffee shops, hotels, libraries, offices. They usually charge a fee for installing the connection and a monthly fee for maintaining it.

The internet is basically a web of **inter**connected **net**works – which are maintained by a huge number of different ISP's. They keep connected around the world by giving their clients access to other ISP networks. This is called peering.

ISP's have other services as well – Sometimes they offer e-mail and or website hosting.

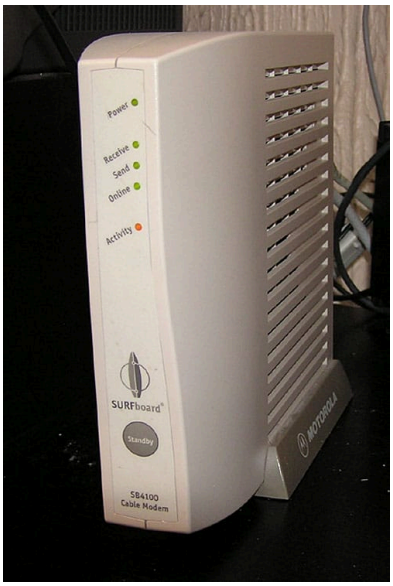
There are different types of connections ISP's can offer as well, some might be dial-up, DSL, through optical fiber wires, through a cable televisionconnection, wireless, or even satellite, usually in remote areas. Dial-up is the slowest connection, while a direct fiber-optic connection is usually the fastest.

Dial-Up

Dial-up internet access, usually just called **Dial-up**, is a slow way of connecting to the Internet by using a telephone line. A modem is connected between a computer and a telephone line and then the modem is instructed to dial the phone number of an Internet service provider (ISP) to connect to the Internet. The ISP must be a dial-up service provider with several dial-up modems waiting to accept dial-up calls. This kind of internet is slower than DSL. It is not widely used in the United States, where only one out of every ten people still use it. In most parts of the world, the dial-up has been replaced by broadband.

Dial-up was the most common way of connecting to the internet from its creation until around the middle of the 2000s.

Cable Modem



A cable modem

A **cable modem** is a modem that can be used to deliver (usually digital) data over Cable television infrastructure. Most of the time, cable modems are used to get access to the internet using the cable television network. To do this, cable modems use some channels of the Cable TV network. A cable modem usually translates the signals it receives from Ethernet or USB into Radio frequency channels. With Voice over IP (VoIP) technology, most cable modems can now also provide telephone lines.

In terms of network technology, a cable modem is a network bridge. It operates at layer 2 of the OSI model.

Digital Subscriber Line

DSL (for **Digital Subscriber Loop** or **Digital Subscriber Line**) is the base for a number of technologies used to transmitdigital data over a telephone line. Telephone lines only transmit a limited spectrum of signals (roughly 20 Hertz to 20,000 Hertz, for voice). This means that the other frequencies can be used to transmit data. The data is multiplexed onto the telephone line. At both ends, a device called *Splitter* (or DSL filter) separates the data part and the telephony part. DSL provides the physical layer, the lowest layer of the OSI Model. ATM or Ethernet is used as data link layer, IP at the network layer.

DSL signals can also be used without a telephony line (or multiplexed onto something else, for example Cable TV). Most are multiplexed onto telephone lines though.

At the consumer end, a DSL modem converts the signals to be able to travel on the phone line; at the other end, a DSLAMmultiplexes the signals onto the internet backbone of the provider.

Most DSL lines of consumers are asymmetric. This is called ADSL and means it has a higher bit rate in one direction than in the other.

Typically, the download speed of consumer DSL services ranges from 256 kilobits per second (kbit/s) to 24,000 kbit/s, depending on DSL technology, line conditions and service level implemented. Typically, upload speed is lower than download speed for Asymmetric Digital Subscriber Line (ADSL) and equal to download speed for the rarer Symmetric Digital Subscriber Line (SDSL).

Voice and Data



An ADSL filter

DSL (or VDSL, Very highspeed Digital Subscriber Line) typically works by dividing the frequencies used in a single phone line into two primary “bands.” The ISP data is carried over the high-frequency band (25 kHz and above) while the voice is carried over the lower-frequency band (4 kHz and below). The user typically installs a DSL filter on each phone. This removes the high frequencies from the phone line, so that the phone only sends or receives the lower frequencies (the human voice). The DSL modem and the normal telephone equipment can be used on the line at the same time without interference from each other.

Equipment



A DSL modem

The customer end of the connection consists of a Terminal Adaptor (a DSL modem). This converts data from the digital signals used by computers into a voltage signal of a suitable frequency range which is then applied to the phone line.

In some DSL variations (for example, HDSL), the terminal adapter is directly connected to the computer via a serial interface, usingcommunication protocols such as RS-232 or V.35. In other cases (particularly ADSL), it is common for the customer equipment to be integrated with other functions, such as routing, firewalling, or other application-specific hardware and software. In this case, the entire equipment is usually referred to as a **DSL router** or **DSL gateway**.

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2. "Chinese censors block access to Wikipedia". ITworld. Retrieved 2009-10-16. ↵
3. "Rapport @ 09 GB" (PDF). Retrieved 2009-10-16. ↵
4. "Internet Safety: Internet 101 - Viruses, worms and Trojans". Wiredsafety.org. Retrieved 2009-10-16. ↵
5. Uniform Resource Locators (URL) ↵

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3: ETHICAL USE OF INFORMATION

3.1: Information Has Value
3.2: Intellectual Property and Plagiarism
3.3: Methods of Representing the Ideas of Others

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3.1: Information Has Value

Information possesses several dimensions of value, including as a commodity, as a means of education, as a means to influence, and as a means of negotiating and understanding the world. Legal and socioeconomic interests influence information production and dissemination.



Figure 3.1.1: *J. Lightning | Value | flickr | CC BY SA*

The value of information is manifested in various contexts, including publishing practices, access to information, the commodification of personal information, and intellectual property laws. The novice learner may struggle to understand the diverse values of information in an environment where “free” information and related services are plentiful and the concept of intellectual property is first encountered through rules of citation or warnings about plagiarism and copyright law. As creators and users of information, experts understand their rights and responsibilities when participating in a community of scholarship. Experts understand that value may be wielded by powerful interests in ways that marginalize certain voices. However, value may also be leveraged by individuals and organizations to effect change and for civic, economic, social, or personal gains. Experts also understand that the individual is responsible for making deliberate and informed choices about when to comply with and when to contest current legal and socioeconomic practices concerning the value of information.

Knowledge Practices

Learners who are developing their information literate abilities

- give credit to the original ideas of others through proper attribution and citation;
- understand that intellectual property is a legal and social construct that varies by culture;
- articulate the purpose and distinguishing characteristics of copyright, fair use, open access, and the public domain;
- understand how and why some individuals or groups of individuals may be underrepresented or systematically marginalized within the systems that produce and disseminate information;
- recognize issues of access or lack of access to information sources;
- decide where and how their information is published;
- understand how the commodification of their personal information and online interactions affects the information they receive and the information they produce or disseminate online;
- make informed choices regarding their online actions in full awareness of issues related to privacy and the commodification of personal information.

Dispositions

Learners who are developing their information literate abilities

- respect the original ideas of others;
- value the skills, time, and effort needed to produce knowledge;
- see themselves as contributors to the information marketplace rather than only consumers of it;
- are inclined to examine their own information privilege.

Sourse Information:

Research Primer: Mohawk Library (French, Peggy)

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3.2: Intellectual Property and Plagiarism

Copyright and Intellectual Property

First, know that we are not lawyers and that the following discussions concerning intellectual property are admittedly limited in scope. The primary focus here is what's best to consider from a student perspective, whether you're making decisions about how to effectively cite a piece of evidence you're using in an argument or otherwise planning to create something new with someone else's work.

Now, let's get started with intellectual property and plagiarism.

If you live in any of the countries signatory to the 1886 Berne Convention (Links to an external site.), then you automatically own the exclusive copyright of whatever original work you produce. In this context, you produce a "work" whenever you manifest an idea in some physical form, and the legal rights to copy and distribute that work are yours. This is part of "intellectual property," the concept that ideas (and the things that we create in order to express these ideas) can be owned by one person or another.

Let's step back for a second and consider the first part of that last paragraph. You automatically own it. That's right, you don't have to register with a copyright office or even put that little circle-C symbol on your work; as soon as you scribble that sad little poem on a cocktail napkin, it's legally yours to do with what you want. This also applies to musical compositions/recordings, videos, visual art, so don't think that we're just talking about words here. As soon as you produce the material, as long as you aren't stealing directly from someone else, you own it.

Now, wait... what do I mean by "stealing directly from someone else?" What, exactly, does that mean? Nobody creates anything that isn't in some way based off of work that produced before them. Shakespeare borrowed stories from history and mythology and rewrote them...

Plagiarism may be considered unethical because it is:

- the ***theft*** of someone else's ideas and/or words and
- the ***fraudulent*** presentation of work that is not one's own.

We want to avoid plagiarism for several reasons:

- Our society is based (at least in some significant way) on the communication of ideas through words, whether we're talking about the Constitution, law, contracts, entertainment, whatever. When we haphazardly copy what others have said, we stunt social and economic growth.
- Our words are expressions of our unique ideas, and, as we've seen, reflect our unique identities as sovereign individuals. When we parrot the words and ideas of others, we detract from own humanity and stunt our intellectual, emotional, and professional growth.
- Our daily interactions and decisions are often guided by certification in one way or another. For example, when you have a toothache, you go to a dentist rather than a butcher because the dentist has a framed piece of paper on the wall that supposedly proves that she/he has done the necessary work and had the necessary practice to be trusted with your teeth. Next time you're at the dentist and they've got that little sharp hook thingie jabbing into your gums, look up at the wall and ask yourself, "They didn't cheat their way through college, did they?" Hopefully that illustrates how plagiarism can reverberate throughout society.
- Our academic and professional futures can be put at serious risk. Because plagiarism is considered theft, fraud, and cheating, there are any number of potential consequences for it:
    - failure of an assignment
    - failure of a course
    - expulsion from school
    - public humiliation
    - discredit to name
    - loss of a job or position
    - subject to lawsuit
    - deep feeling of shame and/or worthlessness

I'm not trying to scare you, but we need to get things straight. Here is the main idea for avoiding plagiarism: **Whenever you get an idea or a word from a particular source, be prepared to indicate exactly what you got from where**. You do this through consciously meticulous and ethical interaction with the work of others.

Defining Plagiarism

When someone infringes upon another's intellectual property rights in such a way that it constitutes theft and fraud, it's often referred to as "plagiarism."

What Counts as Plagiarism?

We typically think of plagiarism as cheating. Plagiarism, however, often occurs because the process of citation can be confusing, technology makes copy + paste so easy, and knowing exactly what to cite is not always easy! You can avoid plagiarism by learning how to cite material and keeping track of sources in your notes. Give yourself plenty of time to process sources so you don't plagiarize by mistake. Here are some examples of plagiarism:

- Submitting a paper written by someone else.
- Using words and phrases from the source text and patching them together in new sentences.
- Failing to acknowledge the sources of words or information.
- Not providing quotation marks around a direct quotation. This leads to the false assumption that the words are your own.
- Borrowing the idea or opinion of someone else without giving the person credit
- Restating or paraphrasing a passage without citing the original author
- Borrowing facts or statistics that are not common knowledge without proper acknowledgment

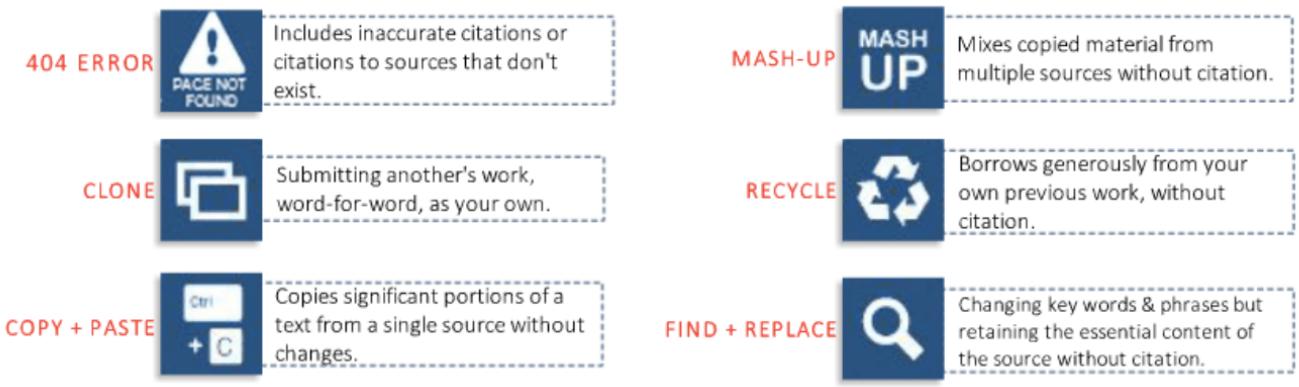


Figure 3.2.1: ***The plagiarism spectrum.*** *There are many different ways to plagiarize. It is your responsibility to know what constitutes plagiarism so you can avoid it in your assignments.*

Obvious Plagiarism	Less Obvious Plagiarism
• Turning in someone else's paper as one's own. • Turning in a paper that was bought from a service on the Internet. • Reusing a paper previously turned in for one class and then submitting the same paper or portions of it for subsequent classes without permission of the instructor (self-plagiarism). • Cutting and pasting entire sections from other authors' works into one's own paper. • Using another author's exact words but not putting quotation marks around the quote and citing the work.	• Failing to differentiate between common knowledge and something that needs to be cited. • Failing to include complete and correct citations. • Sticking too closely to another author's words by only changing a few words around when paraphrasing. • Using another author's exact words but not putting quotation marks around the quote even if one cites the work.

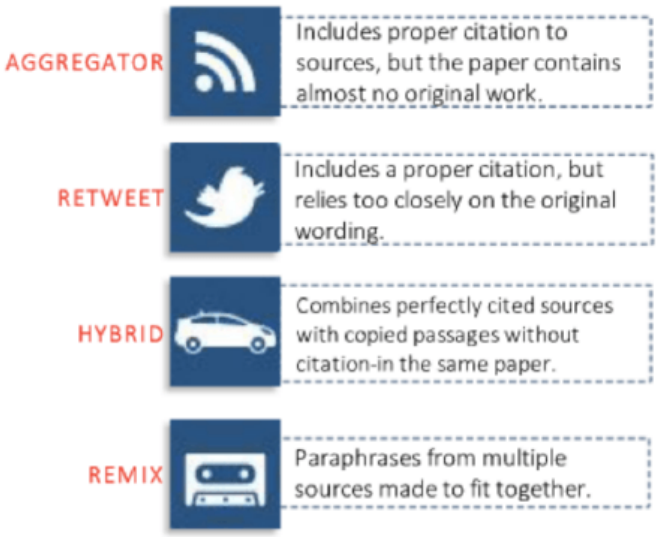


Figure 3.2.2: *More ways to plagiarize.*

Intentional Versus Unintentional Plagiarism

It can be useful to think about the difference between unintentional and intentional plagiarism. If you get stumped on an assignment, download a paper from a website, and submit it as your own work, you have committed plagiarism. This is an obvious example of **intentional plagiarism**. You know you didn't write the paper! You deliberately copied the work from a website and tried to pass it off as your own. Not good! But **unintentional plagiarism** is much more common and in many ways equally problematic. If you got stumped on an assignment, downloaded a paper from a website, and then tried to rewrite that paper in your own words, without giving proper credit to the website, you still have committed plagiarism, even your intent was to write your own paper. In this second example, the plagiarism may be unintentional. There's nothing wrong with research or using websites to advance your thinking. You must, however, give proper credit to any sources you consult, including using quotations for any words that are not your own and crediting any ideas that come from elsewhere.

Why Should You Care?

Being honest and maintaining integrity in your academic work is a sign of character and professionalism. In addition to maximizing your own learning and taking ownership of your academic success, not plagiarizing is important because

- Your professors assign research projects to help you learn. You cheat yourself when you substitute someone else's work for your own.
- You don't like it when someone else takes credit for your ideas, so don't do it to someone else.
- Plagiarizing comes with consequences. Depending on the offense and the institution, you may be asked to rewrite plagiarized work, receive a failing grade on the assignment, fail the entire course, or be suspended from the university.
- Professors use search engines, databases, and specialized software to check suspicious work, so you will eventually get caught.

Watch it:

The following video demonstrates the practical importance of always giving credit where credit is due.

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

You can view the transcript for “Just Because You Put It In Your Own Words…” here (opens in new window).

Citing Common Knowledge and Facts

If you cite information that is common knowledge or a fact, you do not need to cite that information. Everyone would agree that the Civil War started in 1861. You don’t need a citation for that information, even if you didn’t know when the Civil War started until you looked it up! Be careful, however—if there is any controversy or complexity to the information you get from elsewhere, you want to include a source. So, for example, if you are discussing the causes of the Civil War, you probably want to cite your sources, since historians might disagree about the various causes.

Think about it this way. A reader might challenge you about something in your paper, and in that case, you want a source. No reader is going to challenge you about when the Civil War began. That’s a fact—so you don’t need a source. But if you claim that the Civil War was a conflict over federalism versus states’ rights, a reader might disagree and cite instead the centrality of slavery as a cause for the war. In this case, you would want to be able to offer your source—the expert whose opinion about the cause of the Civil War you have cited. Your reader’s argument, then, is with that source and not with you.

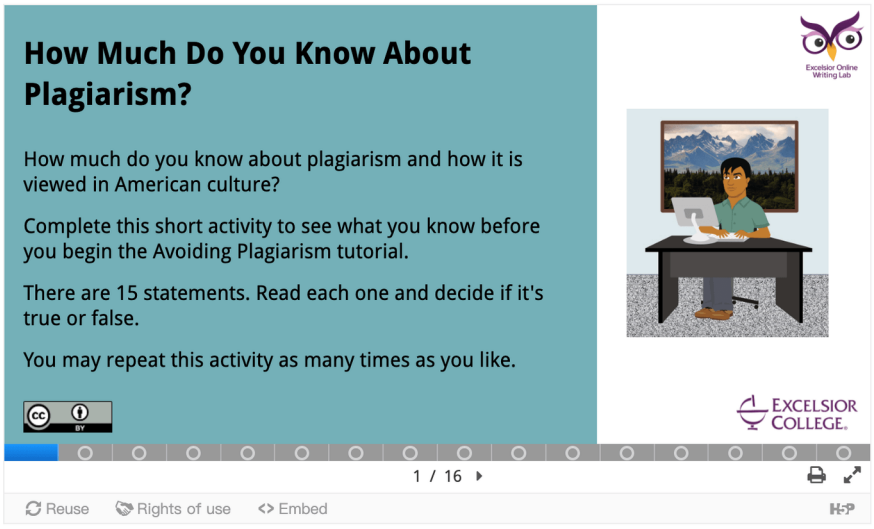


Figure 3.2.3

Avoiding Plagiarism

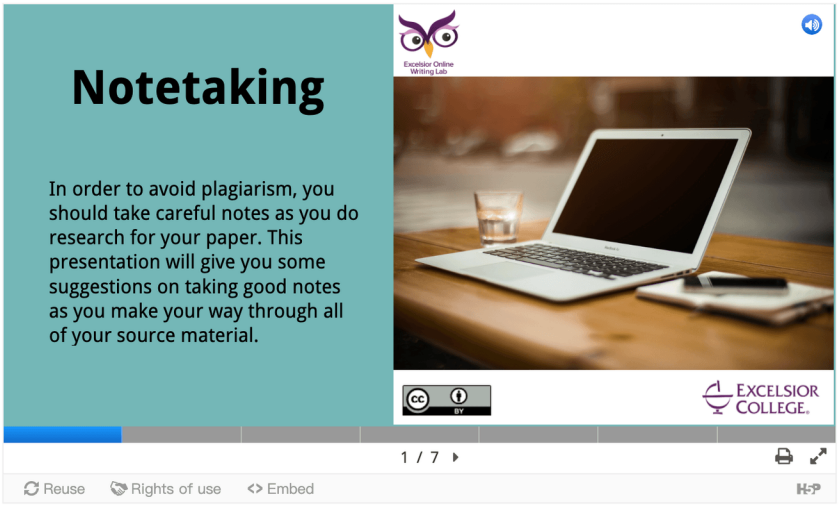


Figure 3.2.4

Licenses and Attributions

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- Quiz questions 7 and 8, from the Search for the Skunk Ape . **Provided by**: Florida Gulf Coast University. **Located at**: https://www.softchalkcloud.com/lesson/serve/cYCsWVMO9zDh8B/html (Links to an external site.). **Project**: Research Using FGCU Library. **License**: *CC BY: Attribution (Links to an external site.)*
- Plagiarism pictures from Using Information Ethically tutorial. **Authored by**: Lindsey McLean, Susan Gardner Archambault, and Elisa Slater Acosta. **Provided by**: Loyola Marymount University William H. Hannon Library. **Located at**: http://electra.lmu.edu/LGRL/UIE2014/ (Links to an external site.). **Project**: Lion's Guide to Research and the Library. **License**: *CC BY-NC-SA: Attribution-NonCommercial-ShareAlike (Links to an external site.)*
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Using Research to Support Scholarly Writing- A Critical Thinking and Research Methodology Sandbox for First year Composition (Bloom, et. al.)

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3.3: Methods of Representing the Ideas of Others

Citation

- Whenever you present someone else's ideas, whether you use their exact words or not, you must clearly communicate to your reader exactly where and who the information came from.
- There are many different standardized styles for citation, and in English courses we usually use that of the Modern Language Association (MLA). Different fields of academic and professional work require different citation styles.
- Citation formatting is one of the few areas of English class in which there are right and wrong answers, so my recommendation is that you get used to seeking out and following the directions. That's pretty much it–people can't really be taught how to follow the rules. They can be shown where the rules are (the Excelsior Online Writing Lab is a good comprehensive resource for this), but individual students and professionals have to read them and follow them on their own.

Summary and Paraphrase

- Summary and paraphrase are methods of presenting the ideas of others in your own style. In other words, you change the diction (word choice) and the syntax (word order).
- When you want to present a condensed version of someone else's ideas but with your own diction and syntax, you summarize.
- When you want to present a complete version of someone else's ideas but with your own diction and syntax, you paraphrase.
- A summary is considerable shorter than the original text, whereas a paraphrase is usually the same length (if not longer). This is because a paraphrase includes all of the detail of the original text's content, while the summary just relays the main points.
- For example, we've all had to write a book report. This is a kind of summary because the main ideas of the book are briefly communicated in different words. This is not a paraphrase because much of the book's detail is left out. If an English teacher asks you to summarize a 200-page book, read it and jot down the text's main ideas in your own style. If an English teacher asks you to paraphrase a book, initiate a withdrawal from the course (because your paraphrase would be at least as long, and would likely be longer).
- Summary and paraphrase must be accurate to the original text's meaning. Especially in the case of paraphrase, you will want to include inferences or connotations in your rewriting of their words. For example, if I were to simply tell you that my English teacher said that ours was the best class she's ever had, you would take it literally. If, however, she said it originally with an ironic tone, then her meaning would have been the opposite and in order for me to accurately communicate the meaning to you, I would need to relate the tone as well.
- To recap, in order for a paraphrase to be acceptable, it must

1. change the words
2. change the sentence structure
3. cite the source (according to required format, if applicable)
4. accurately reflect the meaning of the original content.

Quotation

- When you want to present someone else's ideas in their exact, original words, you quote.
- Make sure that your quotations are anchored in your text. Simply put, this means that every quote in your text is connected to your own voice by way of appropriate punctuation:
  - Formal introduction (use a colon)
    - My friend was clear about his position on Pop Rocks: "They're the best candy ever." (or)
    - "They're the best candy ever": my friend was clear about his position on Pop Rocks.
  - Narrating expressions (use a comma)
    - When I asked him about Pop Rocks, my friend said, "They're the best candy ever." (or)
    - "They're the best candy ever," my friend said when I asked him about Pop Rocks. (or)
    - "They're the best candy," my friend said, "ever."
  - Grammatical integration (no punctuation necessary)
    - "The best candy ever" to my friend is Pop Rocks. (or)

        - My friend's "best candy ever" is Pop Rocks.
    - NOT OKAY (unanchored)
        - My friend really likes Pop Rocks. "They're the best candy ever."
- MLA note: If you are presenting words from a source that was paginated (i.e. that had page numbers), the page number on which the quote can be found must be in parentheses at the end of the sentence (before the period):
    - My friend said, "They're the best candy ever" (34).

For additional guidance on incorporating quotations, see

[UNC CHAPEL HILL QUOTATIONS DOC]

It's about 11 pages long, so you don't need to read the whole thing like you would a short story, but please be sure to use it as a reference since you are responsible for its content.

Do your best to apply these details to your presentation of ideas in the future writing assignments. You will especially want to make sure that

- You place quotations around the exact words of a source that you're representing
- You significantly change the language of a passage that you are summarizing or paraphrasing
- Your sources are always cited with appropriate attributions

Source Information:

Using Research to Support Scholarly Writing- A Critical Thinking and Research Methodology Sandbox for First year Composition (Bloom, et. al.)

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4: HOW TO CITE

4.1: How to Cite Sources

4.1.1: Citation and Citation Styles

4.1.2: Steps for Citing

4.1.3: When to Cite

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4.1: HOW TO CITE SOURCES

4.1.1: Citation and Citation Styles

4.1.2: Steps for Citing

4.1.3: When to Cite

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4.1.1: Citation and Citation Styles

Citation and Citation Styles



Sources that influenced your thinking and research must be cited in academic writing.

Citing sources is an academic convention for keeping track of which sources influenced your own thinking and research. (See Ethical Use of Sources for many good reasons why you should cite others' work.)

Most citations require two parts:

- The full bibliographic citation on the Bibliography page or References page, or Works Cited page of your final product.
- An indication within your text (usually author and publication date and maybe the page number from which you are quoting) that tells your reader where you have used something that needs a citation.

With your in-text citation, your reader will be able to tell which full bibliographic citation you are referring to by paying attention to the author's name and publication date.

Let's look at an example.

Example: Citations in Academic Writing

Here's a citation in the text of an academic paper:

Studies have shown that compared to passive learning, which occurs when students observe a lecture, students will learn more and will retain that learning longer if more active methods of teaching and learning are used (Bonwell and Eison 1991; Fink 2003).

The information in parentheses coordinates with a list of full citations at the end of the paper.

At the end of the paper, these bibliographic entries appear in a reference list:

> Bonwell, C. G., and Eison, J. A.1991. "Active learning: Creating excitement in the classroom." ASHE-ERIC Higher Education Rep. No. 1, George Washington Univ., Washington, D.C.
>
> Fink, L. D. 2003. Creating significant learning experiences, Wiley, New York.

You can see the full article [OSU login required] from which this example was taken online.

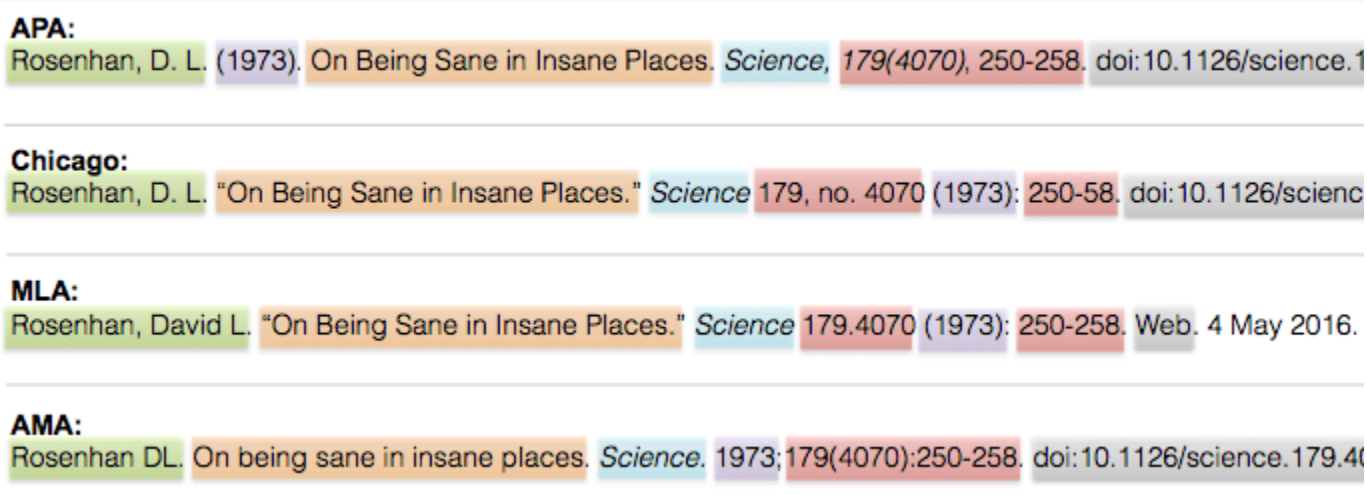
Citation Styles

Style guides set the specific rules for how to create both in-text citations and their full bibliographic citations.

There are over a dozen kinds of citation styles. While each style requires much of the same publication information to be included in a citation, the styles differ from each other in formatting details such as capitalization, punctuation, order of publication information, and whether the author's name is given in full or abbreviated.

Example: Differences in Citation Styles

The image below shows bibliographic citations in four common styles. Notice that they contain information about who the author is, article title, journal title, publication year, and information about volume, issue, and pages. Notice also the small differences in punctuation, order of the elements, and formatting that **do make a difference**.



Differences between citation practices occur mainly in formatting.

Compare citation elements (including the punctuation and spacing) in the same color to see how each style handles their information.

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4.1.2: Steps for Citing

Steps for Citing

To write a proper citation we recommend following these steps, which will help you maintain accuracy and clarity in acknowledging sources.

Step 1: Choose Your Citation Style

Find out the name of the citation style you must use from your instructor, the directions for an assignment, or what you know your audience or publisher expects. Then search for your style at the Purdue Online Writing Lab (OWL) or use Google or Bing to find your style's stylebook/handbook and then purchase it or ask for it at a library.

Step 2: Create In-Text Citations

Find and read your style's rules about in-text citations, which are usually very thorough. Luckily, there are usually examples provided that make it a lot easier to learn the rules.

EXAMPLE: Style Guides Are Usually Very Thorough

For instance, your style guide may have different rules for when you are citing:

- Quotations rather than summaries rather than paraphrases
- Long, as opposed to short, quotations.
- Sources with one or multiple authors.
- Books, journal articles, interviews and email, or electronic sources.

Step 3: Determine the Kind of Source

After creating your in-text citation, now begin creating the full bibliographic citation that will appear on the References or Bibliography page by deciding what kind of source you have to cite (book, film, journal article, webpage, etc.).

EXAMPLE: Using a Style Guide to Create an In-Text Citation

Imagine that you're using APA style and have the APA style guide rules for in-text citations open in OWL. In your psychogeography paper, you want to quote the authors of the book The Experience of Nature, Rachel Kaplan and Stephen Kaplan, which was published in 1989. What you want to quote is from page 38 of the book.

Here's what you want to quote:

"The way space is organized provides information about what one might want to do in that space. A relatively brief glance at a scene communicates whether there is room to roam, whether one's path is clear or blocked."

1. Skim the headings in the style guide to remind yourself of what its rules concern.
   Since it has rules about the length of quotations, you count the number of words in what you want to quote and find that your quote has 38, which is within the range for short quotations (less than 40), according to the APA style guide.According to the rule for short quotations, you see that you're supposed to introduce the quote by attributing the quote to the author (last name only) and adding the publication date in parentheses. You write:

According to the Kaplans (1989), "The way space is organized provides information about what one might want to do in that space. A relatively brief glance at a scene communicates whether there is room to roam, whether one's path is clear or blocked."

2. Then you notice that the example in the style guide includes the page number on which you found the quotation. It appears at the end of the quote (in parentheses and outside the quote marks but before the period ending the quotation). So you add that:

   According to the Kaplans (1989), "The way space is organized provides information about what one might want to do in that space. A relatively brief glance at a scene communicates whether there is room to roam, whether one's path is clear or blocked" **(p.38)**.

3. You're feeling pretty good, but then you realize that you have overlooked the rule about having multiple authors. You have two and their last names are both Kaplan. So you change your sentence to:

   According to **Kaplan and Kaplan** (1989), "The way space is organized provides information about what one might want to do in that space. A relatively brief glance at a scene communicates whether there is room to roam, whether one's path is clear or blocked" (p.38).

   So you have your first in-text citation for your final product:

   According to Kaplan and Kaplan (1989), "The way space is organized provides information about what one might want to do in that space. A relatively brief glance at a scene communicates whether there is room to roam, whether one's path is clear or blocked" (p.38).

Step 4: Study Your Style's Rules for Bibliographic Citations

Next, you'll need a full bibliographic citation for the same source. This citation will appear on the References page or Bibliography page or Works Cited page. (APA style, which we're using here, requires a page called References.) Bibliographic citations usually contain more publication facts than you used for your in-text citation, and the formatting for all of them is very specific.

EXAMPLE: Bibliographic Citation Rules Are Very Specific

- Rules vary for sources, depending, for instance, on whether they are books, journal articles, or online sources.
- Sometimes lines of the citation must be indented.
- Authors' names usually appear last name first.
- Authors' first names of authors may be initials instead.
- Names of sources may or may not have to be in full.
- Names of some kinds of sources may have to be italicized.
- Names of some sources may have to be in quotes.
- Dates of publication appear in different places, depending on the style.
- Some styles require Digital Object Identifiers (DOIs) in the citations for online sources.

Step 5: Identify Citation Elements

Figure out which bibliographic citation rules apply to the source you've just created an in-text citation for. Then apply them to create your first bibliographic citation.

Example: Using a Style Guide to Create a Bibliographic Citation

Imagine that you're using APA style and have the APA style guide rules for bibliographic citations open in OWL. Your citation will be for the book called The Experience of Nature, written by Rachel Kaplan and Stephen Kaplan and published in 1989.

1. You start by trying to apply OWL's basic rules of APA style, which tell you your citation will start with the last name of your author followed by his or her first initial, and that the second line of the citation will be indented. So you write:**Kaplan, R. and Kaplan, S**. and remind yourself to indent the second line when you get there.
2. Since you have two authors, you look for a rule regarding that situation, which requires a comma between the authors and an ampersand between the names. So you write:Kaplan, R., **&** Kaplan, S.
3. Because you know your source is a book, you look for style guide rules and examples about books. For instance, the rules for APA style say that the publication date goes in parentheses, followed by a period after the last author's name. And that the title of the book is italicized. You apply the rules and examples and write the publication information you know about your source:Kaplan, R., & Kaplan, S. **(1989). The Experience of Nature.**
4. Next, you look at the rules and examples of book citations and notice that they show the city where the book was published and the publisher. So you find that information about your source (in a book, usually on the title page or its back) and write:Kaplan, R., & Kaplan, S. (1989). The Experience of Nature. **Cambridge: Cambridge University Press.**
5. Congratulations, especially about remembering to indent that line! You have created the first bibliographic citation for your final product.

Step 6: Repeat the steps for creating an in-text citation and a bibliographic citation for each of your sources.

Create your bibliographic citation by arranging publication information to match the example you chose in Step 4. Pay particular attention to what is and is not capitalized and to what punctuation and spaces separate each part that the example illustrates.

Movie: Finding the Information You Need: PDF and HTML Journal Articles

An interactive or media element has been excluded from this version of the text. You can view it online here: https://ohiostate.pressbooks.pub/choosingsources/?p=1048

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View video

Tip: Citation Software

If you like, you can use citation generator software to arrange the information needed for your citation according to the style guide you chose. Learn more later in this section.

ACTIVITY: Deciphering Citations

Open activity in a web browser.

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4.1.3: When to Cite

When to Cite

Citing sources is often described as a straightforward, rule-based practice. But in fact, there are many gray areas around citation, and learning how to apply citation guidelines takes practice and education. If you are confused by it, you are not alone – in fact you might be doing some good thinking. Here are some guidelines to help you navigate citation practices.

Cite when you are directly quoting. This is the easiest rule to understand. If you are stating word-for-word what someone else has already written, you must put quotes around those words and you must give credit to the original author. Not doing so would mean that you are letting your reader believe these words are your own and represent your own effort.

Cite when you are summarizing and paraphrasing. This is a trickier area to understand. First of all, summarizing and paraphrasing are two related practices but they are not the same. Summarizing is when you read a text, consider the main points, and provide a shorter version of what you learned. Paraphrasing is when you restate what the original author said in your own words and in your own tone. Both summarizing and paraphrasing require good writing skills and an accurate understanding of the material you are trying to convey. Summarizing and paraphrasing are difficult to do when you are a beginning academic researcher, but these skills become easier to perform over time with practice.

Cite when you are citing something that is highly debatable. For example, if you want to claim that the Patriot Act has been an important tool for national security, you should be prepared to give examples of how it has helped and how experts have claimed that it has helped. Many U.S. citizens concerned that it violates privacy rights won't agree with you, and they will be able to find commentary that the Patriot Act has been more harmful to the nation than helpful. You need to be prepared to show such skeptics that you have experts on your side, too.

> **Tip: Why Cite Sources?**
>
> This section covers how and when to cite sources. For a discussion of *why* to cite sources, see Ethical Use of Sources.

When Don't You Cite?

Don't cite when what you are saying is your own insight. As you learned in The Purpose of Academic Argument, research involves forming opinions and insights around what you learn. You may be citing several sources that have helped you learn, but at some point you must integrate your own opinion, conclusion, or insight into the work. The fact that you are *not* citing it helps the reader understand that this portion of the work is your unique contribution developed through your own research efforts.

Don't cite when you are stating common knowledge. What is common knowledge is sometimes difficult to discern. In general, quick facts like historical dates or events are not cited because they are common knowledge.

Examples of information that would not need to be cited include:

- The Declaration of Independence was signed in 1776.
- Barack Obama became the 44th president of the United States in January, 2009.

Some quick facts, such as statistics, are trickier. For example, the number of gun-related deaths per year probably should be cited, because there are a lot of ways this number could be determined (does the number include murder only, or suicides and accidents, as well?) and there might be different numbers provided by different organizations, each with an agenda about gun laws.

A guideline that can help with deciding whether or not to cite facts is to determine whether the same data is repeated in multiple sources. If it is not, it is best to cite.

The other thing that makes this determination difficult might be that what seems new and insightful to you might be common knowledge to an expert in the field. You have to use your best judgment, and probably err on the side of over-citing, as you are learning to do academic research. You can seek the advice of your instructor, a writing tutor, or a librarian. Knowing what is and is not common knowledge is a practiced skill that gets easier with time and with your own increased knowledge.



Wikipedia, while good for early research and background information, shouldn't be cited as a source because it's already a summary.

Tip: Why You Can't Cite Wikipedia

You've likely been told at some point that you can't cite Wikipedia, or any encyclopedia for that matter, in your scholarly work.

The reason is that such entries are meant to *prepare* you to do research, not be evidence of your having done it. Wikipedia entries, which are tertiary sources, are already a summary of what is known about the topic. Someone else has already done the labor of synthesizing lots of information into a concise and quick way of learning about the topic.

So while Wikipedia is a great shortcut for getting context, background, and a quick lesson on topics that might not be familiar to you, don't quote, paraphrase, or summarize from it. Just use it to educate yourself.

Activity: To Cite or Not to Cite?

Open activity in a web browser.

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5: RECOGNIZING BIAS, ALGORITHM INFLUENCE AND SOCIAL MEDIA IN ACADEMIC RESEARCH

5.1: Confirmation Bias and Filter Bubbles

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5.1: Confirmation Bias and Filter Bubbles

What is Being Filtered Out of Your Search?

The idea of filter bubbles was introduced nearly ten years ago by Eli Pariser. The idea is that information providers are tracking your online activity in order to target what *they* have determined are *your* information needs.

Even almost ten years later, many people still haven't heard of filter bubbles. If you haven't, you might find the information a bit unnerving. This is Pariser's TED Talk from 2011.



Where Are We Now?

A few years ago, Eli Pariser was interviewed by *Wired* magazine to discuss how Pariser's warning of filter bubbles had evolved over time.

Reading one: From Wired website: Eli Pariser Predicted the Future. Now He Can't Escape It by Jesse Hempel

How We Confirm Our Own Beliefs

Filter bubbles are outside forces that affect the information we take in. But, there's also a lot of stuff going on in our own brains that influences the way we take in and interpret information. This is called confirmation bias.

The next reading from Scientific American explores how people can be exposed to scientific evidence, but still have doubts. It's a good introduction to confirmation bias in this context.

Wikipedia also has an extensive entry on confirmation bias that is well researched and has a lot of suggested readings if you want to explore this concept further. I included a link to it at the bottom of the page in further reading.

[NOTE TO USERS OF THIS TEXTBOOK: The following reading is not freely available online. The link goes to the Los Rios Libraries MASTERfile database. You will need to see if your databases include access to this article and if not, find an alternative.]

Reading two: Scientific American: The Science of Antiscience Thinking: Convincing people who doubt the validity of climate change and evolution to change their beliefs requires overcoming a set of ingrained cognitive biases By: Kenrick, Douglas T., Cohen, Adam B., Neuberg, Steven L., & Cialdini Robert B.

Further Reading

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5.2: INFORMATION LITERACY IN THE AGE OF ALGORITHMS (PROJECT INFORMATION LITERACY)

https://files.eric.ed.gov/fulltext/ED605109.pdf

This 10th anniversary report takes PIL into the age of algorithms. It summons educators and librarians to embrace the considerable challenge of understanding the technological and social forces shaping the circulation of news and information in contemporary society. It provides qualitative data that tell us how college students conceptualize and navigate a volatile and ever-changing information landscape. It explores what can be done to prepare students to deal with this new reality

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5.2.1: THE AGE OF ALGORITHMS

Algorithms — rule-based processes for solving problems — predate computers. It was not, however, until the word "Google" became synonymous with "to search online" in the early 2000s[7] that the idea of algorithms entered the public consciousness.[8] That was when we began to notice how clever computer code influenced our daily lives by recommending Netflix films,[9] remembering preferences for Amazon purchases, and finding our friends on Facebook's precursors, such as Friendster and MySpace. Within a few years of its founding in 1998, Google needed a profitable business model, so it began to make use of the digital trails we all leave behind to profit from personalized advertising. Facebook soon followed. The behemoth social media platform built its reputation and advertising might on its "social graph," the interconnections among people online, enriched by metrics of "friends" and "likes."[10] During the same time, the news industry began to struggle as startups like Craigslist began to cannibalize classified ad revenues and subscriptions dwindled as readers enjoyed free news online.[11] News organizations were forced to negotiate fraught relationships with platforms that increasingly dominated both digital advertising and monopolized audience attention.[12] Fast forward to 2015, when controversies around "fake news" and the splintering of global audiences into polarized camps led the public to view algorithms as powerful, efficient — and often questionable — drivers of innovation and social change. The rise of what is widely known as the "age of algorithms" has had a profound impact on society,[13] on politics,[14] on the news,[15] and on epistemology.[16,17] And yet, most algorithms are easy to ignore since we cannot see, hear, or touch them. While they are hard at work, many of us do not give much thought to the hidden minutiae of their constantly changing proprietary formulas. Their lines of complex and opaque code make lightning-fast decisions for and about us in both helpful and unhelpful ways. Algorithms are not inherently good or bad. Rather, their effects depend on what they are programmed to do, who's doing the programming and to what end, how the algorithms operate in practice, how users interact with them, and what is done with the huge amount of personal data they feed on.[18] On the plus side, these mysterious black boxes can answer in seconds a question that formerly required hours in a library (though the answer may not necessarily be entirely accurate). Social media platforms like Facebook, Twitter, and Instagram let us share photos, personal news, and links with strangers across the globe whose interests align with ours. We can organize disaster relief or a grassroots social movement from far away. We can teach machines to pinpoint the location of brain tumors or help reduce traffic congestion.[19] But algorithms also have influence we may not anticipate, since their use increasingly has political and societal dimensions.[20] Using incomplete datasets to predict odds of success, algorithms may determine who does and does not get into college based on their zip code rather than their academic efforts.[21] Algorithms may be programmed to decide who is invited to interview and, ultimately, who gets a job offer.[22] They might recommend which loan applicants are a good credit risk.[23] These invisible lines of code may even establish the length of a criminal sentence.[24]

In our daily lives, algorithms are often used to filter the news we see about the world,[25] potentially swaying decisions about what we buy and how we vote.[26] They may determine the results students get from searches in their college or university library.[27] At worst, data swept up by these algorithms can be used by state actors, criminals, or trolls bent on disruption or sabotage.[28]

5.2.1.1: The Big Picture

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5.2.1.1: The Big Picture

The world of information has been transformed in unexpected ways in the past decade. These changes can be explained, in part, by the impact of algorithms. Figure 1 summarizes some of the factors driving these changes.

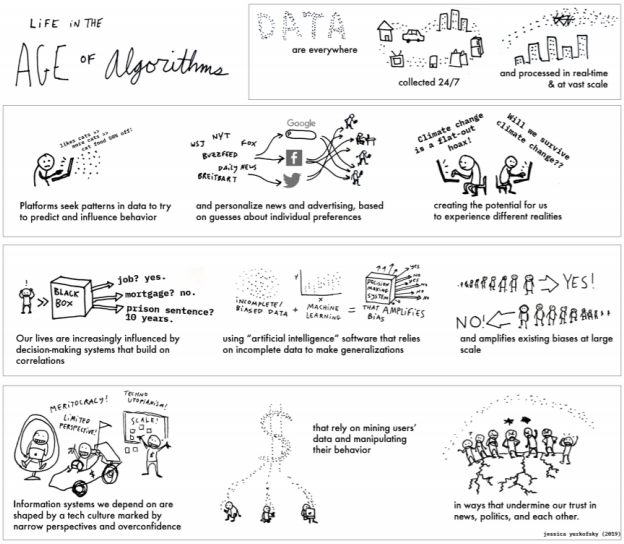


Figure 1: Life in the age of algorithms: A conceptualization

The impact of several convergent technologies and social trends helps explain how and why the world of information has changed so dramatically. A list of some of the most significant of these technological trends shows how these changes affect society.

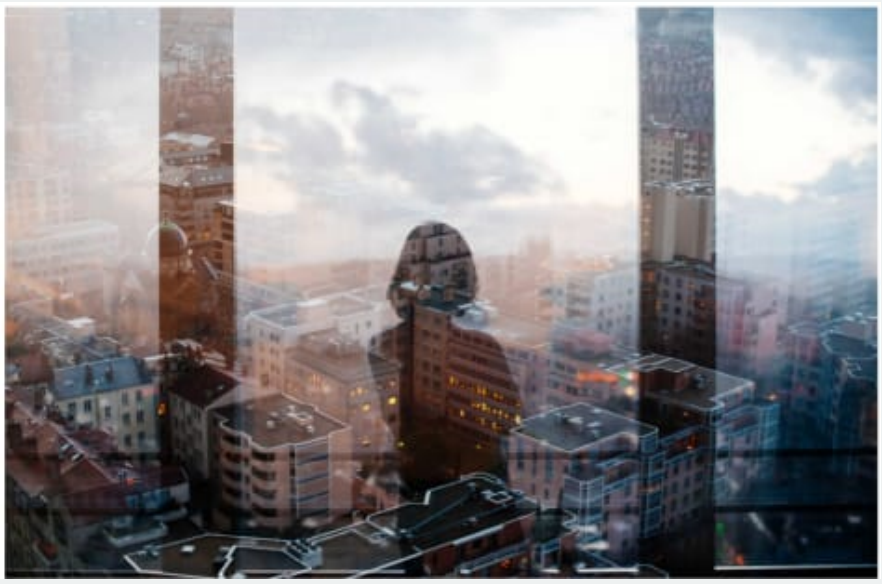
1. Data collection is happening invisibly and constantly. We carry computers in our pockets that gather and share information about our daily lives, including where we go, who we associate with, what news catches our attention, and what questions we ask. These data streams may be combined with information from data brokers[29] and harvested from our cars and household gadgets, like baby monitors, internet connected thermostats, refrigerators, vacuums, and voice-activated assistants such as Alexa, Siri, and Google Home.[30]
2. Advances in data science allow technologists and systems to collect and process data in real time, rapidly and on a vast scale (a development often called "big data").[31] This computational ability to quickly correlate enormous amounts of fine-grained, exhaustive data collected from numerous sources has opened up opportunities for companies and researchers — but also many Pandora's boxes.
3. Automated decision-making systems are being applied to social institutions[32] and processes[33] that, for better or worse, determine all kinds of things: who gets a job, a mortgage, or a loan, access to social services, admission to school or educational services.
4. Machine learning (ML) and artificial intelligence (AI), increasingly used in software products that make very significant decisions, often rely on biased or incomplete data sets. AI systems are "trained"[34] using existing, often human-edited[35] datasets, which means they can learn and amplify bias. This has implications such as teaching autonomous cars to avoid pedestrians[36] or recommending a prison sentence based on data from a criminal justice system that has a history of racial discrimination.[37]
5. The disaggregation of published information and its redistribution through search and social media platforms makes evaluation of what used to be distinct sources, like articles published in an academic journal or stories in a local newspaper, all the more difficult. This disaggregation leads to an individualized presentation of information that sorts results based on inferences drawn from personal data trails. We do not all see the same information when we search and with original context missing, it is not obvious where it came from.
6. There has been a rise of the "attention economy" or "surveillance capitalism": profitable industries gather "data exhaust" from our interaction with computers to personalize results, predict and drive behavior, target advertising, political persuasion, and social behavior at a large scale.
7. These industries appear to have difficulty anticipating or responding to unintended consequences. This may be because

companies are influenced by Silicon Valley cultural values[38] that, among other things, consist of a belief in meritocracy, indifference to or ignorance of perspectives different from those of affluent White males,[39] a global reach coupled with a lack of cultural competence,[40] and magical thinking about the preeminent goodness of individualism and free speech.[41]

8. Decades of media consolidation, deregulation, and economic trends combined with the rise of social media platforms that are designed for persuasion but have no ethical duty of care, have contributed to engineered distrust of established knowledge traditions such as journalism and scholarship, and the global destabilization of political and social institutions.

The technical infrastructure that influences how we acquire information and shapes our knowledge and beliefs has changed dramatically in ways that are largely invisible to the public — by design. We are facing a lack of public knowledge[42] about who holds power over information systems and how that power is wielded, a gap in understanding that educators need to begin to address.[43] Given this sea change, questions about what it means for students to be information literate today, and whether they know how information works in the age of algorithms, are of paramount importance.

What exactly is information literacy?



The term "information literacy" is sometimes mistakenly conflated with "library instruction," but its meaning is really much broader. Information literacy is a collective effort of librarians, media specialists, technologists, and educators across the educational spectrum. It incorporates elements of media literacy, digital literacy, news literacy, and critical thinking.

Taken together, information literacy is an integrated set of skills, knowledge, practices, and dispositions that prepares students to discover, interpret, and create information ethically while gaining a critical understanding of how information systems interact to produce and circulate news, information, and knowledge.*

* The Association of College and Research Libraries (11 January 2016) has developed a "Framework for information literacy for higher education" that offers a discussion of the phrase and outlines core concepts for college-level students, http://www.ala.org/acrl/ standards/ilframework

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5.2.1.2: Algorithms and Higher Education

How prepared are students for navigating a world of technologies that are fundamentally changing how we encounter, evaluate, and create information? Though they have grown up with internet giants such as Google, YouTube, Instagram, and Facebook, are students aware of these systems' scale, scope, and velocity as their algorithms attempt to predict and influence behavior?

What role do these platforms play in their learning as students seek information they need for school and find their way through a thicket of daily news? What does "algorithmic justice" mean to a new generation of students affected by these systems but perhaps unaware that they are at work — even in their daily interactions with campus learning management systems, such as Canvas, online textbooks and advising and retention software?[44]

Information literacy and critical thinking, dual competencies promoted on college and university campuses for decades, may come closest to addressing these weighty questions. The way these essential skills are taught, however, tends to concentrate on helping students meet their immediate academic needs: how to read texts closely and critically and how to use the web and library resources to find supporting materials for their assignments.

Drawing on 10 years of PIL studies of college students' research experiences and habits, we next identify the gaps in students' learning process and describe the skills and knowledge they will need to navigate information in the age of algorithms.

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5.2.1.3: A Decade of PIL Research

In college, students practice habits of inquiry as they are asked to find and evaluate information sources in the campus library and online. And yet, a critical review of previous PIL studies from 2009 to 2018 suggests that students' approaches to research — and the challenges they face — have not changed significantly, and neither have the kinds of research-based learning opportunities faculty provide.[45] PIL's 2010 "Assigning Inquiry"[46] study found that most assignment instructions emphasized what the finished product should look like, and allowed only a narrow range of source materials, mostly peer-reviewed articles. Likewise, scholars have argued that academic paper-writing places "technical proficiency over intellectual depth."[47]

Unsurprisingly, we found in PIL's 2010 "Truth Be Told" study[48] that students found it perplexing to figure out the nature and scope of the intellectual work instructors required of them. When left to their own devices, many took a familiar path, relying on the same sequence of steps to find "safe" sources regardless of topic, such as using Google and Wikipedia to get started on research assignments before tapping library databases for acceptable sources. The same applied in everyday life for solving information problems, such as keeping up with news, making buying decisions, or checking out health and wellness information.[49]

If the purpose of college research assignments is to prepare students to think critically and inquire deeply as they encounter new ideas, then assignments like these that encourage students to engage with information in such a limited way may miss the mark. Moreover, the information practices students develop to manage college assignments, according to our research, do little to equip them for an information environment that increasingly relies on manipulating large data sets to select and shape what they see. This is particularly true when it comes to learning how to evaluate information.

Students learn strategies for evaluating academic information to satisfy assignment requirements, but these may not transfer effectively to personal information seeking. While faculty help students gain the intellectual capacity to understand complex arguments made in scholarly books and journals through training in close reading and interpretation, this may come at the expense of equally important lessons.[50] Two PIL studies illustrate this worrisome disconnect between the critical information practices learned in college and the information skills students need in their daily lives and after graduation.[51] In 2012, PIL interviewed 23 U.S. employers who reported their new hires were inclined to rely on search engines for quick and superficial answers, had trouble seeing patterns and connections, and were reluctant to take a deep dive into a variety of information sources (see Figure 2).



Figure 2: PIL findings on students' research habits, 2009-2018

In PIL's 2016 lifelong learning study, about three-quarters of college graduates believed that school had prepared them well to search for and analyze information. But only 27% agreed that college had helped them develop the ability to formulate questions of their own. Intellectual work for college assignments largely draws from and mimics the style of academic publications, which is profoundly dissimilar from the kind of open-ended and varied tasks they face after graduation. As one graduate said, "The faculty,

the textbook author, they can carve the question any way they want, whereas in the real world it's not black and white, there's a lot of gray area and unknowns."[52] Both PIL studies point to areas where graduates' research habits may make them more vulnerable to getting incomplete information as the top search results may reflect the priorities of algorithmic filters rather than the best information available.

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5.2.1.4: Missing the Mark

Students in this study confirmed what a decade of PIL research suggests: Their college assignments discourage them from working with information outside the realm of traditional scholarship. Moreover, their courses do not address the significant social and ethical questions raised[53] about the workings of influential information systems on the public sphere. This is happening at a time when falsehoods proliferate and trust in truth-seeking institutions is being undermined. Even the very existence of truth itself has come into question. The classroom, however, seems strangely removed from this rising "post-truth" wave beating against the shores of our shared reality.

In PIL's 2018 news engagement survey, eight in 10 students agreed news is "necessary in a democracy," but journalism, most said, had fallen short of their idealistic standards of accuracy, independence, and fairness.[54] For them, staying current often meant navigating a minefield of misinformation, commercial interests, clickbait, "fast news" from social media, and political manipulation. Finding reliable information beyond the filter bubbles they knew constrained what they saw in searches and social media required work on their part. Strikingly, more than a third (36%) said "fake news" had made them distrust the credibility of any news at all.[55]

The fact that a large proportion of students, who are bombarded by news on a daily basis, do not trust any of it indicates a large gap between the information literacy skills they practice for courses and their grasp of our current information environment. Particularly concerning is the fact that many students reported they were much more careful about selecting quality information for course assignments than they were for their personal consumption.[56] In many cases, students reported they were motivated to dig deeper when a news story piqued their interest, but otherwise relied on well-informed friends or scanning a smattering of headlines in news digests to keep on top of events.

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5.2.1.5: Why this Matters now

PIL's findings from the past 10 years come full circle when trying to understand how prepared today's students will be to navigate an information landscape that has dramatically changed. These findings suggest that the shortcuts students adopt to manage academic research — and even the training they receive in carefully unpacking complex academic arguments — do not adequately prepare them for a world of abundant news and information that is deeply influenced by algorithms. These findings raise questions about whether the gap between what students learn in school and what they need to know is deepening at a time of an epistemological crisis.

Our research tells us that many of today's traditional-aged students are different from those who came before.[57] Their ethnic and racial diversity, their professional destinies, and their experience growing up just as mobile devices and social media became ubiquitous, all set them apart.[58] To hear their stories, as we did in our 2019 focus groups for this study, many students think their experiences with technology distinguish them from other age cohorts. For instance, many were assiduously warned by concerned parents and teachers that the internet could be a "bad and dangerous place" where cyber bullying, human trafficking, and predators congregated to spread their destructive messages on an epic scale.

Searching on school-issued laptops became a supplement to (or in some cases, a replacement for) using school libraries.[59] And, while teachers were giving these high schoolers ineffective lessons, such as "domains ending in .org are more trustworthy than those ending in .com," and relying on standard checklists to evaluate websites,[60] students were teaching each other how to circumvent the filters schools used to keep them from landing on the "wrong" websites. In the process, they were learning how to insulate themselves from the surveillance and control of parents and teachers.

Today, this cohort is coming of age at a time when electoral politics are playing out through social media memes, and Twitter feuds become tomorrow's headlines. Social media platforms are used to stage massive student walkouts against gun violence and a cross-generational "March for Our Lives" around the world. Turning Point USA, a conservative group, calls out faculty advancing "leftist propaganda in the classroom" with "The Professor Watchlist" website.[61] A 17-year-old Swedish climate activist[62] rallies people across the globe through social media and exchanges online barbs with the U.S. president. It is clear that today's young people will help determine what is possible as a collective society.

Many college students already see themselves as active participants in news and information flows, not passive recipients of uncontested knowledge. Our work as educators and librarians is to help students navigate information, not just for college courses but beyond — in the workplace, in their personal lives, as lifelong learners, and as news consumers, creators, and voters. The ways information is shaped and shared today has changed a great deal since we began our national research studies at PIL only a decade ago. Taken together, this means we need to change how and what we teach. But first, we must understand what students may already know about algorithms.

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5.2.2: STUDENT PERCEPTIONS AND CONCERNS

Everyone who has accessed the internet has experienced the personalizing actions of algorithms, whether they realize it or not. These invisible lines of code can track our interactions, trying to game our consumer habits and political leanings to determine what ads, news stories and information we see. Companies, using algorithms like this, work nonstop to amass behavioral data on every aspect of our lives that they can combine, use, and sell.[63] As tracking practices have become more common and advanced, it has become urgent to understand how these computer programs work and have widespread impact. How do students understand the hidden filters that influence what they see and learn, and shape what they think and who they are?

In this section of the report, we present empirical data that explores college students' awareness and perceptions of algorithm-driven platforms, and what actions they take, if any, to safeguard their privacy.[64] Qualitative data were collected from 16 student focus groups with 103 college sophomores, juniors, and seniors, and from telephone interviews with 37 faculty members at eight U.S. colleges and universities.

The findings are presented as four takeaways that detail and discuss how students experience algorithms — their individual perceptions, experiences, concerns, and opinions as well as consensus about these things among participants. These takeaways serve as the basis for actionable recommendations later in this report to guide stakeholders considering possibilities for preparing students for the future.

5.2.2.1: Takeaway 1- Students have an Ambivalent Bond with Algorithm-driven Platforms.

5.2.2.2: Takeaway 2- Students use Defensive Practices to Protect their Privacy

5.2.2.3: » Takeaway 3- Trust is Dead for many Students, and Skepticism Lives.

5.2.2.4: Takeaway 4- Discussions about Algorithms barely, if ever, make it into the Classroom.

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5.2.2.1: Takeaway 1- Students have an Ambivalent Bond with Algorithm-driven Platforms.

Almost all of the students in our focus groups were aware that platforms pushed content onto their screens. While most said they had no idea how algorithms actually worked, they had definite opinions about the effects personalization had on their online lives. As one self-described novice explained, “I’m really not a guru, but search engine algorithms take what you click on and they make this magical potion that always caters to sites you constantly use for news like CNN instead of BBC.”

Students were quick to give examples of targeted advertising, where the inner logic of algorithmic persuasion was most visible as the same ads chased them across platforms and devices. They often swapped stories about how some personalization attempts had fallen flat. One student said that a search for political internships in D.C. yielded an internship in Korea. Another said she kept getting ads for flights to a place she had just visited.

While discussions often began with reactions to advertising behavior, students also talked about algorithms used for personalizing other types of content. According to students, the use of algorithms by social media platforms was pernicious. As one said, sites like Facebook “can serve information and news, almost like propaganda, they can serve up whatever information they want to, and potentially change your worldview — it can be a double-edged sword.”

Getting news online through the internet giants revealed a growing tension between receiving the services they wanted and the psychic cost. One student, resigned to the tradeoff, admitted, “I’m giving up control of my personal data so I can get news I agree with, see my interests reflected in my feed, and shop more efficiently.”

Resignation and indignation

An important takeaway from our focus groups was the profound ambivalence — the tangle of resignation and indignation — that almost all students expressed about algorithm-driven platforms that collect data about their personal lives. While many students objected to certain advertising practices platforms used, they were nonetheless resigned to using sites like Google and YouTube. In their words, algorithms were “part of the deal” if they wanted to use “free apps.” Fewer, however, seemed to realize that their motivations to connect and get content could be exploited in ways that extended beyond targeted ads. While some said they knew Google and Facebook were “advertising companies” and “their goal is to tailor advertisements to you,” most found these sites too useful to abandon. Still for others, algorithms were necessary and welcome, since personalization helped filter the vast number of irrelevant Web results they might otherwise get from a Google search. As one student summed it up about his cohort, “We would rather have this convenience than protect our privacy.”

Comments like these suggest students have an awareness about the benefits of algorithms for sorting information to surface relevant results. At the same time, they signal students’ awareness of the pitfalls of compartmentalizing people to influence their actions and exacerbate divides. But exactly what a company might be doing with the data collected about them was often an unknown variable in students’ cost-benefit analysis. While some weighed whether the ability to use certain sites was worth sacrificing their data, many others claimed it was already too late. As one student rationalized, “Your information is 100% out there somewhere, and it’s definitely concerning, but I want an Amazon account, so I can purchase things, and I want a Facebook account, too.” There was widespread consensus by students that these sites helped them stay in touch with friends and family. As one student admitted about his ambivalence:

> I just feel desensitized to it. If I really think about it, I’m like, yeah, that’s messed up, and I don’t want them listening to me, but then I still use those apps and am letting it happen. So obviously it doesn’t matter to me that much. I mean what are you gonna do?

Contradictory feelings such as these were most evident when students were asked about their “tipping points.”[65] When had an algorithmdriven platform had gone too far? The potential for conversations to be picked up by devices and trigger related advertising was a common tipping point for them (see sidebar, “When algorithms ‘get creepy’”). Some students said they turned off their device’s microphone to retaliate against the practice; many others said that they refused to have Alexa in their residences. In the words of one student, “the phone is already doing enough listening.”[66] Another added, “It’s interesting that people who are most close to working technologies like Alexa don’t use them.”

Others questioned how wedded they were to online behemoths after learning Cambridge Analytica used algorithms to develop a targeted campaign to millions of Facebook profiles to sway users' voting habits. Still others referred to "deep fakes"[67] and viral hoaxes, such as a video clip of House Speaker Nancy Pelosi deliberately slowed to make her appear inebriated[68] that spread through Facebook, YouTube, and Twitter in May 2019. Some said Facebook's refusal to take the video down, along with widespread sharing of the video by pro-Trump supporters, had crossed the line for them.

At the same time, many students shared concerns about echo chambers that deepened social inequalities. A woman of color related algorithmic injustice to the biases that led to over-policing Black communities while failing to prevent mass shootings by Whites from affluent communities. Another student described predictive algorithms as "just a fancy technologyenabled form of stereotyping and discrimination, which is inherently problematic, but it's easier for us to overlook because it's happening online and we're not seeing it." Still another student related how he had thought about majoring in the field of computer science, but decided against it:

> I don't like the direction that technology is going. A lot of it can be used for evil, and even though it's really smart, and it's like really well implemented and effective for the people who it's serving, it's not serving the general population. And that freaks me out.

Together, these comments suggest that many students, though not all, have a broader understanding of the impact of algorithms on their lives beyond the strictly personal effects of advertising that many were eager to discuss. They were torn by the appeal of using "free sites" while knowing they were being tracked for undisclosed purposes. And almost all of them were still trying to figure out some way to circumvent online surveillance and shield their vulnerability, regardless of how effective their methods may have been. As one student described a sense of resignation combined with indignation: "It's a horrible totalitarian hellscape, but it's kind of the best we can reasonably expect."

When algorithms "get creepy"



The rich discussions in our focus groups showed that students across the country had some common concerns about algorithms.*

In an analysis of logs and transcripts, the PIL Team used eight individual themes based on whether one or more students in one of the 16 groups (N=103) had raised the concern (see Table 1). If students mentioned a concern, for instance, about "the next generation" more than once in a session, we only counted it once.

More than anything, we heard concerns from students about the "creepiness" of algorithms that violated their privacy. This happened when platforms 'overheard' their discussions or shared data with each other to pitch them products.

> I was having a conversation with my friend and joking about somebody being pregnant, and then ads started popping up on my searches for pregnancy tests and supplements. I was laughing because Google got it wrong, but it's still creepy.

While students in many groups worried about how the next generation would fare, they, themselves, were often unfamiliar with how the use of algorithms was developing and expanding. Automated decision-making that could directly affect their lives was particularly disturbing. They also remarked on the disappearance of a shared reality that results from personalized news and information. In many discussions these societal and personal concerns intersected.

* PIL researchers Alaina Bull and Jessica Yurkofsky did the coding for this content analysis from 10 October – 4 December 2019.

Table 1: What worries students about computer algorithms?

Concerns about Algorithms	Count	Percent
1. (P) Platforms "listening" across devices or platforms.	14	88%
2. (S) Algorithms & automated decision-making reinforcing inequalities.	12	75%
3. (P) Platforms shaping individual content & ads they see.	12	75%
4. (S) Online users not seeing the same reality.	11	69%
5. (S) The next generation.	10	63%
6. (P) Platforms selling personal data to third parties.	8	50%
7. (P) Permanence of data being collected about them.	7	44%
8. (S) Older generations using these technologies & adapting to changes.	5	31%

Count is based on concerns discussed per 16 student focus groups.

(P = Personal concerns, S = Societal concerns)

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5.2.2.2: Takeaway 2- Students use Defensive Practices to Protect their Privacy

Often out of frustration, some students had taken to “gaming the algos,” a combination of practical strategies to protect their privacy that we came to call defensive practices. These practices included using free apps and browser extensions to counter tracking along with a few retaliatory tactics they had invented or learned from friends to intentionally “confuse algorithms.” While some students were adamant that their strategies were effective, many more were unsure about the net effects their actions were having.

Most commonly, students were running ad blockers or had regularly cleared their browsers of cookies, two old-school tactics for protecting their privacy. A few said they used DuckDuckGo as a search tool or Firefox as a browser to protect their privacy, countering consolidation of personal information by Google, and trying to avoid being put into the filter bubble of personalized search results. Others said they ran Virtual Private Networks (VPNs) to shield their browsing activity. Still others created multiple accounts on platforms like YouTube, Google, and Instagram so they could avoid having all of their internet activities tied to a single identity. As one student explained, “I got irritated because it sees who I am, and then it funnels me into getting certain content.”

For some students being reduced to a profile based on the profligate collection of data created a problem of “context collapse” — they lost control of the ability to craft their public identity when different facets of their personality became jumbled in a single account. They solved this problem by deliberately curating multiple “selves,” or different accounts that could reflect their varied interests. This defensive practice was intriguing because it gave them control of their self-representation as they interacted with the digital communities that formed around each of those interests, engaging in a kind of digital code switching.

International travel emerged as a surprising catalyst for learning about the role of algorithms in personalizing content. While traveling abroad, students said they were forced to learn new tools and strategies like using VPNs to get around firewalls. In some cases, they described seeing firsthand how international events could be misrepresented in the mainstream Western news. It also brought home the reality that geographic location was a major factor in personalizing search results and other content.

But not all students in our sessions said they were taking action to protect their identity from prying algorithms. These were often the optimistic students who said algorithms did more good than harm. A trend that emerged was that those who discussed using one defensive practice in the focus group ended up talking about using several. The students who were most aggressive in their strategies were often STEM majors, or lived with roommates who were STEM majors and were a source of useful tactics. While some students were clearly more knowledgeable than others about how to counter online tracking attempts, there was consensus throughout the focus groups that using sites like Google, Facebook, YouTube, or Instagram had made them much more vulnerable to tracking.

No matter their major, it was clear that most students wanted to learn how to fight back against online surveillance. In fact, when the topic came up in the focus groups, it was not unusual to see students jot down a few notes about apps, like AdBlock, or server subscriptions, like NordVPN, that fellow focus participants said they were using. We found this tendency to learn from peers had likely developed earlier during adolescence as they evaded parental oversight through digitally mediated peer relationships,[69] and as they shared hints about navigating around the school’s imposed barriers. As one student explained, “Everyone just kind of shared this information around the entire school, like, ‘Oh, get the VPN and it’ll hack everything and you can access your Instagram during the middle of the day.’”

Comments like this one suggest that many students, depending on their socioeconomic status and high school resources, may enter college already knowing far more about navigating the internet than many might suspect. And yet, many students in this study were largely unaware that systems they used in their courses, like Canvas, the popular learning management system (LMS), had the potential to gather, aggregate and sell personal information. Once it was discussed in our sessions they were indignant to learn it might be happening. Though university administrations often claim that such surveillance is valuable for student retention and assessment, some educators are concerned about “learning analytics” programs that fail to offer students opportunities to provide informed consent or opt out.[70]

Breaking the news bubble

Targeted ads were clearly an annoyance, but "filter bubbles"[71] were even worse. Most students knew that algorithms showed them only part of the picture, especially on social media platforms like Instagram and YouTube. In turn, these personalization effects, these "silos," or "echo chambers," had trapped them in a narrow space of confirming and reinforcing beliefs. One student expressed frustration by saying, "Just because I watched a video on whatever subject doesn't mean that I don't want to see the opposing side, I want to be educated, I don't want to be in my box with one opinion." Another described concern about the silo effect of social media platforms:

> I often worry about getting everything because I usually 'like' pages that I agree with or 'follow' pages that I agree with, but that actually worries me because I feel like it will put me in this bubble where I don't have any exposure to different opinions, so I made a conscious effort to not unfollow pages I dislike.

Many students, like this one, tried to evade news traps, so they could see "other sides of news" and escape the perils of personalization. Often they used what academics call lateral reading, [72] a strategy for seeking out sources that would present different approaches to the same topic. For example, students might compare how the same news story was covered by one source, such as The New York Times, and by more conservative sources, like Breitbart News or Fox News. One student explained reading across content producers to get the complete story:

> I don't trust one source — I purposely follow the other side, I guess it's weird, but I want to see how they're thinking, too, because it gives me some insight on how they're forming this article or opinion.

Though many agreed that lateral reading was the best strategy to ensure a balanced view and check for accuracy, others were clearly exasperated with the amount of work that they had to put into this process:

> I see something on Facebook and I try to get the true information. I'm like, 'Okay, how do I know which websites have not just posted a bunch of bull, how many websites do I need to scroll through to find what I'm looking for?'

A few students said they were taught in college to trace scientific research reported in the news to its source. Still others, critical of the incompleteness and inaccuracy of breaking news coverage, used local news sites to get "the real story," with some waiting days — even weeks — to read a breaking news account so they could find out what had really happened.[73] As one student argued, it was the responsibility of news consumers to dig deeper and go beyond social media news feeds:

> People shouldn't just rely on social media to get news, they should hold themselves to a higher standard, and if they see something, then they should look deeper and try to find out if it's true or false. So, I think that people should just make their own decisions based on their own research, instead of just looking at social media posts and just agreeing with it, without really thinking too much.

Regardless of how they got news and information, most students were especially concerned about how algorithms tailored information to the individual in ways that reinforce beliefs, biases, and prejudices. For some, this is how algorithms went beyond simply being code and preyed on human nature. Still other students acknowledged they were willing to be categorized so they could have their thoughts, opinions, and news preferences confirmed.[74]

As one student pointed out, this is nothing new: "We surround ourselves with people we agree with and then we have conversations with them that reinforce our own ideas, so in a lot of ways, this is now just getting a third party to do all of that for us."

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5.2.2.3: » Takeaway 3- Trust is Dead for many Students, and Skepticism Lives.

The way information is delivered today, with political propaganda and opinion mingled with traditional news sources, and with algorithms highlighting sources based on engagement potential rather than quality, many students expressed concern about the trustworthiness of online content. Almost all of the students in our focus groups were critical of the current news environment. Some complained about the difficulty of knowing where to place trust. Another put it this way, “You’re getting people’s opinion on what happened versus what actually happened.”

At the same time, several students in each focus group were cynical almost to the point of believing their concerns and actions had little meaning, and that it was not possible to change things.[75] These students usually questioned the trustworthiness of news and information online but within a broader global context.

> We’re kind of a nihilistic generation, we’re more existentialist, more so than the younger generation after us. We have a feeling kind of like, we’ve basically got a fascist leadership of the country, the climate is screwed, and I could go on for an hour about the millions of problems that we’re facing, so there’s this feeling like, whatever, we’ll just suck it up.

Given the choice

The theme of choice was mentioned repeatedly in our sessions. That seemingly simple word was filled with complexity and nuance when used to discuss perceptions of online content today. Some students said they had too many choices in navigating the crowded news landscape, where credible coverage is mixed in with a deluge of poorer-quality online content and misinformation. According to students, accepting algorithmic sorting was complicated by the number of news channels and sources now available, and this required additional work to parse out:

> People have an autonomy and a free will to participate in the distribution of information. And it’s not that we’re lacking credible information. It’s that we’re drowning in like a sea of all these different points out there, and people are willingly giving themselves up to participate in that sea.

Some students had strategies for navigating the plethora of choices by relying on crowdsourcing to keep up with important news. They used Reddit to point them to the most important headlines of the day. Others preferred to curate their news feed by selecting who to follow on Twitter. As one student described it, these social media sites functioned like a news editor. Still other students pushed back against algorithmic tailoring of news content, saying it amounted to “taking away personal choice unless you make a new account, like a blank slate, of your internet personality.”

One student highlighted broader social concerns, by seeing the potential of predictive algorithms to reduce choice; presenting the illusion of personalization while actually reinforcing a more homogeneous view of the world:

> I’m more concerned about, like, the larger scale trend of predicting what we want, but then also predicting what we want in ways that push a lot of people towards the same cultural and political endpoint. I feel like that’s talked about less than, like, individual privacy aspects.

As this student insightfully pointed out, there are social harms beyond the loss of personal privacy that have the potential to influence society at scale. An example is the ways extremists have promoted radical ideas to a wide audience (see sidebar, “The mainstreaming of extremism”). Altogether, issues around choice and agency appear closely related to trust and skepticism and to students’ suspicions about being manipulated by invisible forces.

These findings suggest that taking a skeptical approach to all information has become a reflex for many students, with many considering lateral reading as the default defense. Though one student said sticking to “big trustworthy sites” like CNN and The New York Times was the best way to navigate news, another student took a more cynical stance, asserting, “I don’t consider any news source to be credible anymore.”

Schooled for skepticism

An important theme to emerge from our sessions was that no news source could be trusted at face value. This viewpoint did not appear to be a symptom of political partisanship so much as being a pervasive belief among students that they should rely on themselves to decide what to believe.[76] Students attributed this outlook to having come of age as the web has evolved from a collection of dubious websites to a dominant news portal and focal point for their social lives. Many felt they had been schooled to be critical of everything they encountered.

One student suggested skepticism in her age cohort accompanied the growth of the internet:

> When we first started, we didn't have to filter through what was a credible source, and now you kind of got to filter through everything. We have different eyes as we're looking at everything, like literally everything on the internet. We're skeptical.

Still another student suggested they were disposed to doubt even the authority of their teachers: "We're all super cynical and untrusting of information to the point that we want to find it out ourselves, so if a teacher says, 'There's five rows, then we actually look, and, yep, there's five rows.'" This skepticism, as one student described it, was a generational trait.

> It's different between students and professors, because they come from a pre-social media age and they're used to being able to trust kind of different resources that they've always gone to. Whereas we grew up with untrustworthy sources and it's drilled into us you need to do the research because it can't be trusted.

As a whole, we found that the lack of trust in traditional authority figures meant trust was placed in Google as the arbiter of truth, sometimes to a ridiculous extent. One student who is also a parent described how he had tried to explain to his child that the bogeyman was not real, but his child had not believed him until a Google search confirmed it.

Some students said learning to approach all information critically was a valuable feature of their college education. And yet, they seemed to distinguish the reflexive skepticism they developed when sorting through websites for high school projects from the kind of critical thinking encouraged in college. This practice of discernment in college involved analysis of complex texts as well as applying social and historical context to current events, as they often did when teasing out the social implications of algorithms.

The mainstreaming of extremism



Students in the focus groups were aware of how popular platforms used algorithms to shape what information they received while utilizing their engagement – their clicks and likes and shares – for profit.

What they were less aware of were the details of how companies like Facebook harness engagement by giving customers, including those promoting radical ideologies, the tools to target individuals using a menu of attributes including ethnicity, income, political orientation, hobbies. Investigative journalists have even found filters that enable clients to promote content to certain fringe factions, such as “Jew-haters” or fans of Joseph Goebbels.* These invisible fine-grained filters enable extremists to find and cultivate potential allies.

Students are not immune to such extremist appeals. During our interviews, a professor said she had been approached about a classmate posting messages about White supremacy with swastikas on his social media newsfeed. This situation was resolved, but the instructor was shaken by the incident: “We’re becoming a much more heterogeneous society in terms of worldviews and beliefs because access to that information is so easy to find to support your worldview.”

Technology is not the sole culprit in the amplification of fringe ideologies. There is a perfect storm brewing of the news industry, the attention economy, and coordinated actions of certain idealogues that have coalesced to drive extremist views into public prominence. White supremacists have become adept at harnessing the power of virality to find susceptible audiences and push their ideas and conspiracy theories into the mainstream. They have capitalized on long-term trends undermining trust in government and in those truth-seeking institutions we once turned to for authority: journalism, science, and the academy.†

Fixing the mechanisms that amplify distrust will not eliminate the underlying structural drivers of extremism. Students need to learn about the social and historical context of extremist beliefs as well as how extremism is mainstreamed technologically. Information literacy is more than knowing how to use technology and which buttons to push. It must also address how our emotional buttons are pushed, who is doing the pushing, and why.

* Sam Dean (21 February 2019), “Facebook decided which users are interested in Nazis - and let advertisers target them directly,” Los Angeles Times, https://www.latimes.com/business/tec...221-story.html; Julia Angwin, Madeleine Varner, and Ariana Tobin (14 September 2017), “Facebook enabled advertisers to reach ‘Jew haters’,” www.propublica.org/article/f...ach-jew-haters

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5.2.2.4: Takeaway 4- Discussions about Algorithms barely, if ever, make it into the Classroom.

Despite students and faculty expressing deep concern about the ways algorithms shape and influence how we learn about the world, it was surprising to learn this topic rarely came up in the college classroom. Instead, many students, like amateur sleuths, had discovered algorithms through keen observation, noticing how their content was personalized and different from what their friends were seeing.

Students' suspicions were often confirmed in informal discussions with friends or relatives. As one student said, "A lot of times I learn about technology by copying what other people are doing, like my cousin was using a VPN, so I started using one too."

When we asked instructors about the courses they teach, and if they had helped students think about how information is created and encountered on different online platforms, the responses were telling. Of the 37 faculty interviewed, only 10 came up with answers that addressed algorithmic platforms. Most strategies they mentioned were superficial, such as introducing students to DuckDuckGo as an alternative to Google when searching the Web.

One professor described a case study that used news reports of an event in the past to demonstrate how news is socially constructed. He encouraged students to look not at whether the claims made are true or false, but "what social and cultural work those truth claims are doing." Still, though, the professor did not explicitly tie that to the current information landscape to explore how algorithms could filter meaning.

Instead, it was far more common for faculty to not even consider the changing information landscape. These instructors often expressed societal concerns about personalization, mourning "the loss of a common culture" and pointing to deeper epistemological implications, but it did not influence their teaching. As one instructor put it, "The genie is being let out of the bottle and it is a problem we're stuck with now."

The large majority of faculty members said they saw value in encouraging students to use peer-reviewed research and instilling critical thinking practices through close reading and textual analysis. In a few cases, faculty said they had scheduled a visit from a librarian in their courses to provide information literacy lessons.

One faculty member seemed surprised that it had never occurred to her:

> I'm concerned societally that lots of us are getting sort of one perspective on events, and it isn't being presented, as you know, the most accurate perspective on events. And that we would all benefit from seeing a wider variety, or having more sort of similarity in the things that we see but I've never, that I can think of, specifically talked about the way that that search algorithms or algorithms that are providing news might, might have an influence.

Others thought algorithmic literacy should be part of a college education — so long as someone else took the lead.

> It probably should be happening in every classroom space, or be sort of introductory things required of all students entering higher ed. Ideally, that would be really useful as an instructor who's working with juniors and seniors, I would like to not have to teach those skills.

And yet, when asked, this instructor, like most, said she did not discuss how algorithms influenced the information environment in her courses. An important finding to emerge about faculty is they thought a greater attention to generic critical thinking and rhetorical analysis skills early in the four years of college would prepare students to navigate the current environment. Indeed, students at one institution pointed to a required course on critical thinking as the place where such discussions belonged.

But many instructors seemed to assume critical thinking skills taught traditionally were sufficient. "With critical thinking," one instructor said, "you have to teach them how to think for themselves and how to pose certain questions to themselves about the universe and their place in it and using scientific inquiry, no matter what it is that you're tackling, no matter what your research project." Since critical thinking is part of every discipline, one instructor argued, there was no pressing need for change.

Some students agreed. At one focus group, they said their institution valued critical approaches, and because it was such a strong institutional value, they were confident they could apply those skills widely (though they had previously expressed concern and a sense of helpless inevitability when it came to the workings of algorithms). Students elsewhere were more likely to draw no

particular connection between what they were asked to do for school and the kinds of information practices they needed for everyday life. As one stated, “My instructors usually encourage us to use the databases provided by the school that can let you know that you’re getting academic journals or peer reviewed journals that are solid information.”

Essentially, students thought algorithmic systems were part of life, but the information students needed for school assignments had nothing to do with life beyond college. Some scoffed at the outdated advice about the internet provided in their courses: “They talk a lot in school about .org or .edu. But now with YouTube videos, they don’t really have those things.” Because most students believed that they knew more than their teachers about algorithmic technologies, they saw no value in addressing them in the college classroom. In one focus group, students agreed that their professors were too clueless about technology to cover it in courses, but they “forgave” their professors because they had other valuable knowledge to share. In another group a student was dismissive:

> Usually, it’s like a two-day thing about ‘This is how you make sure your sources are credible.’ Well, I heard that in high school, you know, and that information is just kind of outdated for the caliber that the internet is today. I mean it’s just not the same as what it used to be.

Despite being alarmed about trends in technology, students found personal experience to be a better teacher than anything that might happen in a college classroom. Many expressed a preference for learning from peers. Yet, students were intrigued by the implications of algorithms in matters of ethics, public policy, and social inequality, and many linked their college experiences to issues of algorithmic justice. One student, who had learned in the focus group about personalization efforts by learning management systems (LMS) companies, saw these changes looming large:

> Without knowledge, there’s no way you can create change, so it’s like, you can’t fix climate change, if you don’t understand where it comes from, or you don’t know what exists, which I think is a big problem, and now I think especially of Canvas, I had no idea that LMS was tracking my information for other uses. We’re not seeing these things here, so people don’t care about them, because they’re not seeing it in the media, they’re not seeing it in their schools, or wherever we get our information from, it therefore leaves private industries to take over without anyone else knowing.

This understanding of the interplay between individual and societal impacts was evident across the focus groups. Students often expressed confidence in their own ability to work with or around algorithms, having witnessed their rise as a self-described ‘pivot generation,’ but they were worried about the wider implications for others (see sidebar, “The pivot generation”).

When the age of algorithms is in the classroom

Though few faculty members had ready answers for our questions about the classroom, there were some noteworthy exceptions. One social science professor described how he tied social theory to the ways students present themselves online.

> They very quickly see how the whole ecosystem is designed to convey not a realistic version of themselves, but an idealized one that allows them to perform a certain kind of identity. And then that links to social movements, and current events, and how we are framing current events through these platforms for consumption, but also to display our own selves as part of a group or another.

Though it was particularly relevant to his discipline, this instructor went on to argue that students are “eager to engage in that kind of inquiry, it’s crucial for any informed citizen of the world, and every student should be learning this.” Another faculty member frequently demonstrated how tracking can be revealed on websites to open discussion of how large corporations collect and use information. “I share that with every class that I teach.”

Similarly, an instructor asked students to think about how wearable technology like FitBit made their personal health data valuable in a variety of unforeseen ways, saying “perhaps the most profound issue of our time is understanding how science and technology in society interact with one another, and it clearly interests students at all grade levels. We’re crazy if we don’t address it.”

Other faculty members raised the topic more circumspectly. Courses that taught students quantitative understanding provided an opening. As one instructor said, “I can’t have a data source, and not talk about biases and heuristics.” Students also drew connections between algorithms and critical approaches to data; learning about confirmation bias, statistical modeling, and questioning the sources of data contributed to their ability to understand the ways algorithms shape what they see, even if algorithms were not addressed directly in class. The well-being aspects of technology also provided openings:

> We talk about mental health and the effect of living online, and in that sense it kind of comes up. We don’t get into specifics

about different platforms, but I'd gladly have that conversation with them.

Though a minority of faculty members had found ways to incorporate algorithmic literacy into their courses, several thought it was important for their institution and speculated that the solution was to develop new interdisciplinary courses. One faculty member suggested that the best way to teach about the intersection between technology and society was to bring humanities professors into the discussion since they are accustomed to reasoning through ethical questions. Another faculty member, who teaches an information literacy course, argued that the power of algorithms should be repeatedly addressed throughout the curriculum as a crucial part of understanding the role of information in society. A single "vaccination" approach might be counterproductive.

Students often don't think about how their cell phones track so much of their lives and how the internet tracks so much of their lives in turn, and what this could mean for them as individuals and for society as a whole. So just by bringing that back into the forefront of their mind, they're often very surprised. When it's just brought up once, maybe twice, it's something that you can easily push aside, because it's a scary thought. And if you only think about it once and then you get kind of freaked out, you maybe just want to never think about it again. So it needs to be reinforced over and over again.

All in all though, faculty in our interviews were divided: Though nearly all expressed great concern about the effect of algorithms on our information environment, only a few embraced the challenge of incorporating discussion of algorithms in their courses. Others were hopeful about adding something new to the curriculum, but the majority still believed that their current curricula about critical thinking, and encouraging students to use peer-reviewed sources rather than internet-based sources were applicable and sufficient. As one faculty member pointed out, however, there's no guarantee those lessons have lasting value for students: "Are they going to learn the lesson so well that they will take it with them when they leave and apply it to everything they see for the rest of their lives? That is the challenge."

The "pivot generation"



Throughout the focus group sessions, students expressed concerns about the ability of people older than themselves to navigate systems designed for algorithmic attention and persuasion. As one student said, "My grandfather says 'Oh, man, Facebook is so addicting.' I'm like, 'Yeah, because it's designed to keep you there, like heroin.'" Another student offered an incisive reflection, "Everyone was so focused on making sure that kids learned that they forgot they also needed to teach grandparents."

Students were even more worried about the effect of technology on younger people growing up with tablets and phones, especially related to privacy and wellness.* As one student explained:

> Now that kids are like learning with iPads and all this new technology from the first day of school, it's important to make them aware of all the things that are going on behind the scenes, like how they're personalizing and using all the data from it. Our generation is kind of different, because we've learned how to do it right when it came out, and so we are more aware of what's going on. But if you grew up completely with all this technology and all that, then you would just have no idea about potentially some of the negative effects that it could have.

Faculty also differentiated the news awareness of this group of students from others they have taught in recent years. As one noted, "They all know about it already, there's a sense that they have a set of shared knowledge, because they are very up to the minute. They are aware of a difference in terms of how quickly they get information, and they're aware that it spreads differently through their generation than it does through my generation." A student echoed this perspective, but worried that these changes came with a cost:

> When I listen to younger kids, like kids that are in middle school and high school, they're talking about climate change, and bias in the media and corruption in politics. And I'm, like, all I cared about when I was 13 was whether my mom would let me get like a bigger pen; what I wanted was moon boots.

While there are many valid criticisms of categorizing people by birth cohort,† students in this study characterized themselves in generational terms as "the pivot generation." This is in and of itself unique from prior PIL studies with college students. This sample of students identified as members of a distinct group who came of age at a pivotal moment in the history of technology. Or, as one student put it:

> Since we were raised at least for a period of time without this omnipresent influence of social media, we had more of a choice to join the world of social media than the next generation. And I think that we have a lot more perspective on it than the other generations will have.

* Some research suggests young children are fairly sophisticated about testing the limits of technology, though many questions remain. See Tanya Basu (6 December 2019), "Why kids don't trust Alexa," MIT Technology Review, www.technologyreview.com/s/6...nt-trust-alexa; Judith H. Danovich (2019), "Growing up with Google: How children's understanding and use of internet-based devices relates to cognitive development," Human Behavior and Emerging Technologies 2, 81-90, DOI: doi.org/10.1002/hbe2.142

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5.2.3: CONCLUSION AND RECOMMENDATIONS

Our report is one of the first multi-institutional investigations into college students' awareness of and concerns about how algorithms are shaping the news and information they receive from internet giants, such as Google, Amazon, YouTube, Instagram, and Facebook. Qualitative data were collected from students participating in one of 16 focus groups, and 37 faculty telephone interviews, at eight U.S. colleges and universities. Together, these discussions examined how students were experiencing dramatic changes brought on by algorithms, while exploring the extent to which the issues of personalization, privacy protection, machine learning, and AI have entered the classroom.

This research was conducted in the wake of coverage of the Cambridge Analytica scandal, one of the most-read news stories in 2018.[77] Powerful algorithms had trawled through 87 million people's Facebook profiles to sway voters during two hotly contested campaigns: support for Brexit in the U.K. and the presidential election of Donald Trump in the U.S. Since then, algorithms have clearly entered the public conversation, and students in our study, like so many around them, were frustrated with the opaque lines of coding trying to influence their interactions on popular websites.

Most students recognized that as information has become ubiquitous, the hidden levers that personalize results and nudge us toward selected information often camouflage complexity behind the appearance of simplicity and efficiency. Moreover, many, though not all, were aware that data-driven algorithms, if unexamined and unchallenged, could threaten representative democracy and the cultivation of informed and engaged communities.

Importantly, students were both resigned to and indignant about algorithmic-driven ads, news, and information. Yet, many found sites like Google, YouTube, Instagram, and Facebook too useful to abandon. Many seemed resigned to the powers of an unregulated media environment, but were willing to engage with the platforms to exert their agency and protect their privacy. Their concerns were often accompanied by a sense of impotence, and for some, nihilistic dread. While some students worried about the "creepiness" of algorithms that eavesdrop on their offline conversations to try to sell them a product, others had concerns about the real-life consequences of automated decision-making systems that reinforce societal inequalities.

Faculty in our interviews often expressed frustration and powerlessness with ubiquitous algorithmic systems that affect society. They lamented the "loss of a common culture," and compromised privacy without accountability to the public. Their response was largely to stick to a narrow set of information sources, like The New York Times or NPR, and avoid social media platforms altogether.

5.2.3.1: A Wide and Concerning Gap

5.2.3.2: Recommendations

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5.2.3.1: A Wide and Concerning Gap

More than anything, findings from this study identify a wide gap between students and faculty as algorithms, put to both good and bad use, are changing the online information landscape in opaque and unknown ways. In a major finding to emerge from this study, students were far more eager than their faculty to fight back in practical ways against algorithmic control with strategies they learned from friends and peers, but not in class. They realize that it takes reading across different content producers to get the full story, and that this takes time and effort. They know that “choice” is a tricky prospect with online news, so some have figured out how to use social media sites, like Twitter and Reddit, as their “news editors” to help them exert a little control and break out of filter bubbles.

While students’ willingness to contest the workings of these internet giants is encouraging, our findings suggest the age of algorithms demands that teaching strategies be reconsidered as we redefine information literacy. Students should not have to learn these critical information skills on their own. Nor should it be assumed that all of their strategies are necessarily effective.

In our focus groups and interviews, we found a troubling trend aligned with what we already know about students and their information practices from a decade of PIL research studies. That is, the critical work of understanding the torrent of information flowing through a variety of channels, from social media to commercial search engines, is rarely considered in assignments and classroom discussions.

It was surprising to discover how rarely current information systems, and the social and economic conditions that shape and influence their design, were discussed in the classroom. The persistence of this static approach to information, which fails to acknowledge how the world has changed in the 20 years since Google began capturing and exploiting individuals’ digital trails, has powerful consequences. While our exploratory study sample was small and the methods qualitative, these findings warrant further investigation by future researchers.

Nonetheless, it must be acknowledged that the information environment our students inhabit is not a cloister of scholarly knowledge. It more closely resembles an overgrown jungle where every resource must be tested for toxicity, and where students are stalked relentlessly, their data harvested as fodder for unknowable uses.

We do a disservice to our students and to society by confining research assignments and information literacy instruction efforts to the walled garden of peer-reviewed scholarship, where truth is plucked from well-pruned sources and carefully packaged for instructors following explicit instructions. When students are given so limited a range of exploration that they graduate feeling ill-equipped to ask their own questions, higher education has failed them.

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5.2.3.2: Recommendations

These recommendations are provided for key stakeholders — educators, librarians, administrators, and journalists — involved in promoting truth and knowledge in the "post-truth" era. They are grounded in findings from this study, lessons learned from a decade of PIL research, and from discussions with a cross-disciplinary panel of experts convened at the Harvard Graduate School of Education in November 2019.[78] Above all, they are aimed at enhancing algorithmic literacy.

For the large part, they make students partners in addressing algorithmic education in order to promote widespread awareness of algorithms and strategies that may preserve human agency and autonomy. Striking a balance between being idealistic and practical, they build on what teachers, librarians, and journalists already do to advance public understanding and engagement with information in a fast-changing world.

Recommendation 1: Use peer-to-peer learning to nurture personal agency and advance campus-wide learning.

Students in our focus groups almost always identified their peers as knowledge sources about algorithms. This self-described "pivot generation" felt they were better positioned to question and counter personalized information flows than their older family members and instructors. They learned how systems worked through observation and comparing notes and workarounds with their friends and younger relatives.

In other cases, they connected this personal experience to broader classroom discussions of social justice and politics, bringing a sophisticated critical lens to bear on complex issues related to the flow of information. In stark contrast, the faculty we interviewed for this study were concerned and curious about how algorithmic systems are influencing public life, but they rarely felt personally prepared to broach these issues in their classrooms.

Together, these findings point to the potential of "students as partners" initiatives to raise awareness of algorithms on campus. The emerging literature on developing partnerships between students and faculty, staff, and administrators provides models for practice that actively and authentically involve students in curriculum and service design, and in research and teaching.[79] Campus teaching and learning centers often have programs already in place to support these partnerships.

In this scenario, educators' disciplinary understanding of information and society could be combined with students' knowledge and creative practices to develop a curriculum that meets the needs of students as citizens, not just as scholars. Rather than advocating algorithmic abstinence, as many of the faculty we talked to might choose to do, this could lead students to examine how algorithms affect their lives. It could lead them to consider when and how they might respond, from employing defensive tactics to pushing for social or legislative change.

At the next level, co-learning positions students as peer teachers. Peer-to-peer teaching is well established in college classrooms including its use to foster digital literacy.[80] Formalizing the everyday habits of learning students already have while leveraging shared experiences, concerns, and language may be an effective way to increase algorithmic literacy on campus.

This teaching role could be further supported and extended beyond the classroom with students providing assistance for learners, including faculty and staff, as they develop digital and algorithmic literacy. To highlight students' ownership of their knowledge, a skill-share session could be organized on campus with stakeholders from student affairs, academic departments, IT, and the library in which students lead conversations about the social implications of data-driven decision systems and provide hands-on training on tools and strategies, such as surveillance self-defense.

As institutions examine their own use of personal data, particularly in learning analytics, there is also a role for students to play in designing for transparency,[81] and such efforts could open campus-wide discussions about the intersection of algorithms and agency. At the very least they might spark investigations by student journalists.[82]

The concern students showed for the naiveté of those with less awareness of the media environment could inform peer learning outreach work beyond the institution to the wider community. As communication studies and political science departments develop deliberative democracy programs,[83] students could lead discussions about the social and political ramifications of

algorithms and how they influence our understanding of current events, especially relevant during a heated political season. (This peer learning model could also be folded into school and adult learning partnerships as sketched out in Recommendation 2.)

Reconceiving of students as partners and incorporating co-learning into the curriculum will require some thoughtful realignment of roles, while calling for vulnerability and trust.[84] Teachers need to be willing to ask and welcome questions they cannot answer. Students must take responsibility for developing and sharing their knowledge and listening to one another.[85] Both parties must be willing to set aside the reassuring familiarity of hierarchies of power and information and, instead, encourage curiosity and tolerate ambiguity, even if the result of such learning is difficult to predict and entails risk for both students and the faculty who must, ultimately, assign grades.

Finally, we cannot leave it solely to students to be change agents on campus; librarians and educators need to address their own knowledge gaps. Instructors need to develop a greater understanding of how algorithms affect their own teaching and research, and shape the lives of their students. Librarians could take the lead on campus, forming communities of interest among faculty, identifying campus experts, sponsoring an “algo book club” and using instructional partnerships to help instructors integrate algorithmic literacy into their courses. To build their own knowledge, librarians could form a journal club to share readings, add a “skill share” or “what’s new” technology component to regular staff meetings, and strategize how the library can support learning about the age of algorithms through programming, services, interdepartmental initiatives, and the library’s instruction program.[86]

Recommendation 2: The K-20 student learning experience must be interdisciplinary, holistic, and integrated.

Students in this study described their exposure to information literacy and critical thinking from elementary school through college as scattered, inadequate, and disconnected. Critical thinking practices that focus on closely analyzing texts can be valuable, but must be accompanied by a nimbler set of evaluative strategies for sorting through new information on the fly to cope with the volume of choices we face in a world saturated with information.[87] News and information is no longer something we seek, it seeks us through a variety of channels that clamor for attention.

As algorithms continue to have a pervasive presence in our lives, more must be done to make information literacy instruction coherent and holistic throughout K-20. This is especially true in light of concerns we heard from students about the targeting of children by algorithm driven platforms promoting commercial products. Students need a greater understanding of how news and information work in, and on, society as they flow and are shaped by algorithm-driven and market-influenced intermediaries. Moreover, we should explore how the domains of reading, writing, and quantitative skills connect to efforts across the lives of students to introduce them to media, news, digital, and information literacy. This integrative work will require the formation of alliances at the local and national levels.

At a tactical level, local efforts could start with finding stakeholders on college campuses who have already built bridges to the local schools and into the community. These may be teacher education faculty, coordinators of programs that pair college students with elementary school students, community outreach programs and student participants. Working through existing connections, educators, students, librarians from public, school, and academic sectors, and representatives from local news organizations could be invited to an open-ended discussion and workshop. Such a gathering could audit what students are learning, map connections across the learning experience, identify gaps, and seek ways to continue working together.

Rather than focusing on inventing new curricula, these conversations could engage participants with questions, such as: What are students at different levels actually learning? How can that learning be improved and scaffolded so there is greater cohesiveness from K-12 to college and beyond? What will it take to give learners of all ages a better grasp of the hallmarks of trustworthy information and how can they learn about the ethical standards undergirding journalism, scholarship, and science? What do they need to know about how news content is produced and disseminated to develop discernment, and ultimately, where warranted, trust in the news? What do they need to know about how algorithm driven systems work and affect the information they engage with? Considering the impact of algorithms on information systems and our daily lives, what else needs to be folded into existing instruction, and how can educators and the broader public get up to speed?

More strategically, endorsement from local leadership such as a school superintendent, a college president, or a dean of students could kick start conversations by providing a meeting space and lending their imprimatur to the effort. At the same time, national organizations could work on bridging the different cultures and needs of K-12, college, and community educators, developing a shared understanding of what it means to be information literate today. For example, the American Library Association could facilitate a meeting of interested parties from the American Association of School Librarians, the Association of College and

Research Libraries, and the Public Library Association to collaborate on a vision for integrating information literacy efforts across the lifespan.

Another configuration would bring together representatives from professional organizations, such as the Society of Professional Journalists, the Association for Education in Journalism and Mass Communication, and the International Society for Technology in Education, and leading scholars in the field of Science and Technology Studies. Policy experts at The Knight Foundation, Pew Research, and others in the nonprofit sector have a key role in seeking common ground and develop a blueprint for educating the public about the impact of algorithms on news and information. Library-focused organizations could meet with those in other domains to build connections. The idea would be to better coordinate and update information literacy and related programs, find common ground, and promote public understanding.

These national efforts would be costly, but not as costly as ignorance. Ideally, funding and sponsorship could be sought to design a sustainable cross-disciplinary curriculum toolkit that could collect and curate exemplary learning materials for learners at all levels,[88] as well as launching a newsletter to update stakeholders on what's new at the intersection of information, technology, and society.

Recommendation 3: News outlets must expand algorithm coverage, while being transparent about their own practices.

While participants in this study could see the personal effects of algorithms in the news and advertisements served up to them, it takes the contextualization of solid reporting to demonstrate that these are part of larger patterns with social consequences.[89] Reporting that includes practical tactics — defensive practices like those we heard about from students — could help counter the narrative of helpless resignation we heard in our student focus groups and faculty interviews.[90] New tools make it easier for journalists to track the trackers and investigate the algorithms.[91] "Open Sourced," an initiative from Vox, is a promising development, looking beyond hype and hysteria to focus on "explaining the risks and benefits when it comes to AI and digital privacy so you can make informed decisions."[92]

Greater public awareness may shape what companies do and what policies governments enact. There is evidence that there are deep concerns with algorithmic personalization, particularly when it comes to news[93] and that this backlash is having an effect on data-gathering efforts and corporate strategy.[94] Public pressure may lead to improved access to information about proprietary algorithms that would facilitate more third-party monitoring by experts and journalists; so far the internet giants have shown little interest in facilitating this.[95]

As the news industry has come under greater scrutiny, journalists have been called upon to help people distinguish objective news coverage from misinformation and outright lies. These demands of journalistic duty to democracy have become greater as algorithms permeate daily life. Journalists must use their platforms to shed light on how algorithms work and de-mystify them in clear language. This requires developing deeper expertise of their own and working with a wider array of academic and technical experts to deepen their investigations.[96]

Too often, journalism plays into dangerous anthropomorphization, granting more agency and power to the systems than they actually have. We need reporting that questions both good and bad uses of algorithms, including their benefits and harms, and tells the stories of impact on individuals within the context of wider society.[97] This need is real: In our focus groups and faculty interviews, it became clear that many people, no matter how educated, did not understand the way algorithms shape the flow of information.[98]

As editors and journalists at professional news outlets weigh the benefits of integrating algorithms into their business and reporting models, they have a responsibility to be transparent and ethical about their own practices, too. Algorithm-based tools have also become integral to the production of news, from story generation to source identification.[99] As journalists learn to use these resources, they need to understand the limitations and ethical implications of relying on automated filtering and decision making.[100]

While audiences for news may be increasingly aware that algorithms shape what they see, they may not know that similar sets of filters are determining what alerts the journalist to a story, or directs the sources reporters contact or angles they develop.[101] This confirms our findings about the general lack of knowledge our students — and others — have about the way that news is

produced. Media organizations need to be transparent about how they're using these tools to create their content.

Greater transparency, however, is even more urgently required around the use of algorithms by news outlets to target news and advertising.[102] Students and faculty in this study expressed concern about the quality of news available to them. Many stated that algorithm-driven personalization increased their distrust of news and raised additional issues, particularly the potential for news silos. Some media organizations are responding to this concern by making their personalization policies more openly available,[103] undertaking deeper studies to ensure a responsible approach,[104] and in some cases, moving away from data sharing with other platforms.[105] Still, on most news sites, transparency information is difficult to find, hard to read, and incomplete.[106] To regain the trust of their audiences, media organizations need to be much clearer about what information they collect, how they use it and with whom they share it.

Recommendation 4: Learning about algorithmic justice supports education for democracy

Despite their aura of sophisticated cynicism, students in our focus groups often became energized when discussing the impact of algorithms on equality, status, inclusion, and opportunities. As one student noted, "It worries me if it's systemically allowing certain groups to succeed over others." Another observed "our moral compass seems to be broken online." Comments like these present a rich opportunity for engaged learning and civic engagement. Though students in our study expressed helplessness in the face of powerful corporations, they became motivated to challenge them as they learned more. This fault line between the perception of helplessness and a desire to create change is a productive site of emotional friction that opens opportunities to engage in "education for democracy."[107]

News reports remind us daily that there is work to be done: Cities debate the ethics of facial recognition systems[108] and residents question the use of doorbell surveillance to monitor neighborhoods;[109] legislators wrestle with regulating data-gathering;[110] extremists and pedophiles use popular platforms to groom the vulnerable;[111] librarians and educators raise concerns about commercial products that harvest data from students;[112] software engineers question the morality of their work.[113] Every day new issues surface. It is around pressing topics like these that students can break through a sense of helplessness, be emboldened with personal agency to grapple with complex issues, and feel empowered to take on the challenge of promoting algorithmic justice.

At a practical level, individual instructors can look out for stories in the news that link their subject matter to issues of algorithmic justice: How does the digital surveillance of children influence child development? What information could help hospitals follow up with patients without introducing bias? How does microtargeting ads for jobs and housing relate to the history of redlining? Librarians who serve as liaisons to academic departments could support these efforts by creating ongoing curated collections of relevant news stories targeted to specific courses and disciplines, strengthening their own algorithmic literacy while broadening the working definition of information literacy on campus.

By injecting current controversies around the algorithmic systems that influence our lives into their course material, educators can tie their disciplinary knowledge to pressing questions of ethics, fairness, and social justice. As we learned in PIL's 2018 news study, the classroom is an influential incubator for the discussion of news and the interpretation of current events; almost two-thirds of survey respondents had learned about news from faculty discussions during the previous week.[114]

Librarians have developed programs of their own that can be shared across and beyond the campus. Two programs funded by the Institute of Museum and Library Services develop capacity for librarians to take on the challenges of our digital environment. The Library Freedom Project trains librarians to become local experts on privacy practices who can take their knowledge into their communities.[115] The Algorithmic Awareness Project is developing a curriculum, syllabi and software for educating librarians and developing open educational resources.[116] Many libraries have stepped up to develop guides and workshops for their communities[117] as well as credit-bearing courses and open educational resources.[118] More than ever, librarians are bringing issues of social justice and information systems into their teaching, tying digital ethics to information literacy.[119]

Several research programs are developing interesting resources for algorithmic literacy. Researchers at the University of Amsterdam's Department of Media Studies are developing tools to allow users to compare and reflect on how social media platforms personalize and filter their information, enabling "data activism" — an intervention that could be used to help students understand and conduct research on social media.[120] The UnBias Project in the U.K. has created "youth juries" to involve students

in weighing concerns about algorithms and proposing solutions.[121] Their Fairness Toolkit can be downloaded and adapted in classrooms K-20 to encourage civic learning and action.[122] Student-centered activities like these promote a "collective approach to imagining the future as a contrast to the individual atomizing effect that such technologies often cause." At the same time, a team of researchers at MIT's Media Lab is working on an "Algorithmic Justice" program to help students understand how to navigate algorithmic systems from the inside out, by designing them from scratch using a series of low cost "unplugged" activities.[123]

Instruction in racial literacy[124] intersects powerfully with algorithmic literacy. The computer science curriculum must include a component of racial literacy to ensure future coders are cognizant of the ethical considerations they must bear in mind as they design new systems.[125] History courses could develop a unit on how early computing efforts melded with eugenics contributed to the Holocaust, and link that history to contemporary controversies about the rise of online extremism. One programmatic idea is to pair a scholar of racism with a computer scientist to lead public discussions of how social media platforms and the communities that use them could address online harassment, race-based targeting, and the spread of extremist propaganda.

Opportunities to introduce learning about algorithmic justice can be found throughout the curriculum. At the college level, a group of interested faculty from across the curriculum could conduct a curriculum-mapping project to engage students in the social dimensions of the present moment. As students proceed through their education, they could encounter the rich intersections of the humanistic, social, technical, and quantitative aspects of algorithms that could help them connect their lives with social trends, their learning across disciplines, and their personal lives with broader issues of social justice.

We are facing a global epistemological crisis. People no longer know what to believe or on what grounds we can determine what is true. It is imperative that truth-seeking institutions — education and journalism — take the lead in healing the social fractures that technology has widened. The technical infrastructure that channels and shapes so much of our understanding and social interaction was created in the utopian belief that making information universally available and giving every individual a voice would improve our lives. But as that infrastructure became an engine of surveillance and persuasion, trading in the intimate details of our lives to create sophisticated marketing tools to sell consumer goods and ideas, that utopian ideal has become dystopian. The power of machine learning and artificial intelligence has been unleashed without regulation or informed consent.

It is no wonder both students and faculty in this study felt helpless and anxious about the future. These recommendations show a path forward. As students claim their authority as learners, as algorithmic literacy is woven into education across the curriculum and students' life spans, and as journalists give the public tools to understand this epistemological crisis, we will be better prepared to tackle both the unchecked power of algorithms as well the social problems they expose and exacerbate. This education for democracy — both formal and beyond — can empower us to reclaim our role in shaping the future.

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5.2.4: LEADING THINKERS

To explore the implications of this study's findings, we brought together a select group of leading thinkers in education, libraries, media research, journalism, and technology for a half day workshop at Harvard Graduate School of Education (HGSE) on November 7, 2019. PIL coresearchers presented early findings from the Algo Study, and participants were invited to share and discuss the implications of our findings and ideas, experiences, solutions, challenges, and puzzling aspects about life in the age of algorithms. Further, they were asked to use their expertise to inform different solutions to issues "truth workers" — educators, librarians, and journalists — face when helping young adults understand the complexities and challenges of our current information environment.

As a final step in the workshop, each participant was asked to submit a reflection responding to this prompt: What do people need to know most about the impact of algorithms, and where and how can we effect change?

5.2.4.1: Steven Braun

5.2.4.2: Kasia Chmielinski

5.2.4.3: Jason A. Clark

5.2.4.4: Andrea L. Guzman

5.2.4.5: Nate Hill

5.2.4.6: Alex Hodges

5.2.4.7: Momin Malik

5.2.4.8: Panagiotis Takis Metaxas

5.2.4.9: Eni Mustafaraj

5.2.4.10: Ronald E. Robertson

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5.2.4.1: Steven Braun

Visiting Assistant Professor, Northeastern University https://www.stevengbraun.com

Every day, we interact with systems that have been engineered to carefully control our access to information, often without realizing that access has been rearranged and modulated by the same systems we trust to read the news, connect with friends and family, or do our work. The rapid proliferation of these algorithm-driven platforms — encouraged under the guise of making our daily lives more efficient, productive, and profitable — has displaced our capacity for doing the critical interpretive work these systems demand, stripping individuals of the responsibility to interpret the facticity of the information these systems give us when that interpretation has been performed by the algorithms themselves.

These algorithms pervade nearly every domain in our lives, and in that ubiquity, we are subconsciously challenged to flex many different literacies — information, data, visual, statistical, and technological literacies, to name a few — to interrogate the intentions of those systems, how they are constructed, and how they control our access to information. Whether we realize it or not, this continuous assault can quickly fatigue our ability to question those systems themselves, tightening the control they have over us even further. In the face of this engineered reality, it can feel easy to become nihilistic about the agency we exercise in responding to these systems as they reconstruct our daily lived experience. Perhaps, the most radical act we can perform, then, is to reject that nihilism and recognize our role as actors in exposing how these systems deprivilege complex, nuanced, and situated knowledges in favor of objective, privileged, and canonical narratives. By reclaiming the responsibility for doing the interpretive work these algorithms have taken from us, we can become more critical consumers of the information they yield and ultimately encourage a culture in which those systems are designed and consumed in more intentional, ethical ways.

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5.2.4.2: Kasia Chmielinski

Project Lead and Co-Founder, Data Nutrition Project[126] www.linkedin.com/in/kchmielinski/

Although the impulse is to believe in the objectivity of the machine, we need to remember that algorithms were built by people. When a human judge makes a decision, it is within our right to respectfully disagree. We understand that people are not infallible and we leverage frameworks like the appeals process to address what we feel are injustices. We should consider algorithmically-determined judgements in the same exact manner; if we blindly accept algorithmically-determined decisions, we are giving up the very important right to appeal and investigate what could be injustices on the part of the algorithm. The algorithm is only reflecting what it has been taught to believe, and often by a very homogenous group of people. Thus, the ability to appeal, alongside the importance of diversifying the pool of people who are building algorithms, can move us along a path towards better artificial intelligence.

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5.2.4.3: Jason A. Clark

Professor, Head, Special Collections & Archival Informatics, Montana State University Library http://www.jasonclark.info

At the risk of wearing the tinfoil hat, I'm suggesting that the first thing people need to know about algorithms and their impact is that many of our everyday decisioning systems are applying algorithmic processes. Insurance coverage decisions, medical analytics, credit card eligibility decisions are increasingly subject to these computational rules. The technological turn in our society, which let me be clear, I have built my career within and love the potential of this turn, makes algorithms an everyday fact. Abstaining from social media or making informed decisions while participating in common technologies will not fully protect you. As for next steps, we have recognized within our Algorithmic Awareness project work[127] that teaching around the primary concepts and introducing essential data literacies that underpin algorithms is a start, but it's not enough. Beyond basic algorithmic literacy, three approaches come to mind: transparent tools, regulation, and technological watermarks. First, we need to start building and introducing tools where transparency about data use and computational decisions is a feature, not a bug (e.g., see tools like the Brave Web browser or the DuckDuckGo search engine). Second, we need more regulation like the General Data Protection Regulation (GDPR) which asserts and confers the "right to explanation" (a right to information about individual decisions made by algorithms).[128] And finally, we need to consider how technological watermarks such as public/private key fingerprints or an array of byte sequences within files could "watermark" when files have been subjected to algorithmic processes or enhancements (e.g., in the era of deep fakes, this digital authenticity fingerprint will be an essential marker).

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5.2.4.4: Andrea L. Guzman

Assistant Professor, Department of Communication, Northern Illinois University https://andrealguzman.net

An ongoing challenge regarding algorithms and related technologies, such as artificial intelligence, is demystifying these technologies so that people can act upon knowledge grounded in the reality of the technology instead of its imagined nature. Because algorithms lack a concrete form, people often struggle to clearly articulate what algorithms are and what they do. Conceptualizations of algorithms also may vary from person-to-person. This abstract nature of algorithms contributes to some of the attitudes captured within this study: that algorithms are technological actors that are too difficult to even try understanding or that are beyond the control of the average person. Efforts to help people understand algorithms need to continue moving away from a focus on building awareness of algorithms — people increasingly know about “those things called algorithms” — and toward explaining algorithms in such a way that people have a more consistent conceptualization of what algorithms are, what algorithms do, and — what often is overlooked — what algorithms cannot do.

Key to these efforts is delineating between the role and power of humans in relation to that of the algorithm, so that people understand that algorithms are technologies produced by humans and enacted within human systems. Discourse surrounding algorithms must be careful to not overplay the agency of the algorithm relative to that of people, which often is the result of anthropomorphizing algorithms and their actions. Furthermore, while people need an understanding of algorithms that enables them to take practical actions regarding their personal technology use, such educational efforts should not place the entire onus of taking advantage of or mitigating the effects of algorithms on the individual. There are implications of algorithms, both positive and negative, that are well outside the control of an individual that may be better addressed within institutions, among community members, or by the government.

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5.2.4.5: Nate Hill

Executive Director, Metropolitan New York Library Council (METRO) http://natehill.net/

Listening to the preliminary findings from the algo study left me reflecting on networked spaces as a medium made for individuals, rather than communities. This is a bit counterintuitive. I think we all expected the opposite. We planned for this utopian, freeing “cyberspace” community, but instead we have been sold a network for mass personalization that ultimately rewards individual vanity over community building. This really clicked when I heard about study participants (students) embracing a certain amount of targeted advertising as long as it benefited them, but then transitioning to calling this “creepy” when they were reminded of the scale of this kind of activity. My takeaway: we need to stop talking about the internet as some kind of inherent good, some kind of human right. This is inaccurate; advancing the interests of individuals above those of the greater community is wrong.

Shortly after the “thinking leaders” session I attended a talk featuring the leader of an excellent organization that is focused on connecting all communities to affordable broadband. The speaker kept on talking about our “transition to a digital society” as some kind of inevitable phenomenon. I know librarians frequently talk about the need for ubiquitous and equitable internet access by citing examples like “people cannot even apply for jobs without going online now.” Have we as a society just succumbed and accepted that efficiency and profit will drive all activities into a networked space? What are the ramifications of that? It seems problematic to accept that all activities will inevitably move online, therefore people all need to be online. Perhaps, at the same time that we focus on connecting everyone, we should talk more about what activities should and shouldn’t happen on a network. Should we do all of our reading online? Should the census be digital? If we did disagree with some kind of activity moving online, how would we handle that? So as grumpy as it may sound, I am concluding that human beings need less mediated connection and more human connection.

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5.2.4.6: Alex Hodges

Director of Gutman Library and Faculty, Harvard Graduate School of Education http://orcid.org/0000-0003-1712-2816

As teachers of information literacy, librarians, in conjunction with their teaching partners, absolutely must alert students to better understand their information privacy rights. This concern is especially true as students engage more and more with nonuniversity-supported, third-party products for digital scholarship creation (e.g. citation management, data visualization, multimedia presentation tools, etc.). Our contemporary scholarly communication tools and their connected learning analytics capabilities have broadened the need for society's deeper understanding of digital literacies. We need to have constant dialogue about who owns and has access to individual user data. Such literacies require that learners (or users of various products) understand how to reason for themselves. In addition to these literacies, students also need broader instruction on the information architecture that scaffolds so much of our digital economy — this is where machine learning and algorithms present frontstage in the information literacy constellation. As higher education adopts new models for core curricula and required data science courses, I foresee a ripe future for librarians to expand their teaching and curation roles to advance these additional concerns within information and digital literacy learning.

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5.2.4.7: Momin Malik

Postdoctoral Data Science Research Fellow Berkman Klein Center for Internet & Society, Harvard University https://www.mominmalik.com/

A core function of humanities and social science education is to reveal and interrogate the categories, concepts, and logics by which we make sense of and act in the world. Machine learning is reifying one specific logic: that of statistical correlations, with no consideration of causality or meaning, a point lost amidst the focus on the "algorithms" that calculate and apply these correlations. The task of higher education will now have to engage with the limits of this logic. To quote William Bruce Cameron on how "not everything that can be counted counts, and not everything that counts can be counted," the old maxim that "correlation does not imply causation," and George E. P. Box on how "all models are wrong but some are useful," we can consider when, how, for what, and to whom it is useful to see the world only through correlations between measurable quantities.

For example, "creditworthiness" is an abstract idea, neither the same as future loan repayment, nor of past repayment behavior: we can easily imagine a financially responsible person whose circumstances would nevertheless prevent repayment and are correlated with others as "defaulting." Should that person be deemed creditworthy or not? Using machine learning to decide forces an answer: The only thing that matters is what correlates with aggregate past behavior. Intention, effort, individuality, and circumstances do not matter, since they do not exist in data. Nor do causal relationships, as studied in econometrics, nor measurement validity, as studied by psychometrics (both statistical fields with their own narrowness and legacy of racism and inequality), nor the possibility of systems being gamed, insofar as they limit the complexity of correlations that can be considered.

Articulating and challenging the frames of "algorithmic" systems will encourage deliberation on the sorts of uses we will accept, and what we will organize to reject.

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5.2.4.8: Panagiotis Takis Metaxas

Professor and Chair, Computer Science, Media Arts & Sciences, Wellesley College https://www.wellesley.edu/cs/faculty/metaxas

What do people need to know most about the impact of algorithms?

People need to understand that “algorithms” are not something new or unusual: It is any process that we follow to achieve a goal (from baking a pie to figuring out how to change a broken tail light on our car). While we casually refer to “algorithms” as the technology that has created the problem, it is really a specific type of algorithms we are worried about: machine learning algorithms that are solving a problem (their output) by looking at the ways that people have already solved it in the past (their input). However, as a famous motto in Computer Science goes, “garbage in? garbage out!” When we give as input to these algorithms data that are problematic, we should not expect that we will get back magically unproblematic solutions.

The problems propagated by these algorithms are mainly related to the way they are used in social media. It is not just a matter of protecting our privacy or keeping our thinking clear of propaganda. It is the fact that the social media companies that use these algorithms do not respect us as individuals. They do not even see us as customers — it is the advertisers that are their customers. They see us as the raw material used to study our behavior so that they can change it to benefit their customers.

Where and how can we effect change?

Education is still the major tool we have to protect ourselves, our cultures, our democracies. It is encouraging that some young adults are aware of the problems created by the algorithms and try to protect themselves, but the challenging issue is to educate the vast majority of our adults, young and old. And we need an education that is reaching people widely and fast. Semi-jokingly, I would say that we need an education that reaches people at the speed of religion.

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5.2.4.9: Eni Mustafaraj

Assistant Professor of Computer Science, Wellesley College http://cs.wellesley.edu/~eni/about.html

OK Computer,[129] let's count the ways in which computing devices connected to the internet have rewired human's media consumption and communication habits in a modern, privileged society. We used to read ink-printed newspapers delivered daily at our doorsteps, whereas now we skim headlines in our favorite online news aggregator on a mobile phone. We used to wander around in department stores' aisles where new music was sold in packaged CD-ROMs with colorful artwork, whereas now we stream it non-stop on Spotify, often without knowing the artist's name. Such a list is long. Technologists and venture capitalists want us to believe that this progress is good, desirable, and unstoppable, but we must pause and ask ourselves: who chooses the news headlines we read, and how? Who recommends the next music track to listen, and whose music is left out? The answer is that increasingly algorithms are in charge of these decisions.

But couldn't we humans make such decisions better ourselves? Why rely on algorithms? A pro-algorithm argument would posit that to include most of humanity in this new modern and interconnected world, we also need speed and scale. An algorithm, which resembles a recipe for cooking a dish, can be executed at light-speed by millions of computers, accomplishing in just a fraction of a second something that would take humans years. If we want more people in the world to have access to the total human knowledge accessible on the Internet, we need algorithms. However, what we need to object against are the values driving the companies that own these algorithms. To effect change, we must collectively advocate for algorithmic-driven information platforms that operate like public libraries: a common good, whose primary goal is not to serve as money-generating machines for share-holders, but to become shared spaces for intellectual and spiritual human flourishing.

References

29. This is the title of the third studio album by the English band Radiohead that came out in 1997.

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5.2.4.10: Ronald E. Robertson

Doctoral student, Network Science, Northeastern University http://ronalderobertson.com

The impact of an algorithm is inherently tied to the people who designed it, the information systems it operates on top of, and the people who use it. For example, financial incentives often dictate what algorithms are optimized for, historical data are often biased in ways that perpetuate injustice, and users often have dynamic strategies which guide their behavior. It's important to know that algorithms built upon existing sociotechnical systems, and examining their components in isolation will never tell the whole story. Attempting to do so is like trying to explain tides without considering the moon.

Interdisciplinary research collaborations are therefore essential to understanding the impact of an algorithm. Digital trace data is useful but insufficient. We must also understand who is using them, how they are using them, the information ecosystem they operate in, and how the biases in these dynamic elements interact. However, interdisciplinary research is hard, and we should expect growing pains. Indeed, computer scientists often miss or neglect important theoretical work, social scientists are often not equipped with the technical skills to gather digital trace data that could ground their theories, and both groups are often critical of one another.

In order to effect change, we will need to bridge this gap — by fostering collaborations, acknowledging the shortcomings of our approaches, and building an appreciation for the value of theoretically-driven mixed methods. As we wait on legislation for protecting users, and on industry collaborations for obtaining data, change will come from independent algorithm audits. Under the incentives of capitalism, and with growing user privacy concerns, we cannot expect or wait upon corporations to cooperate. We must come together to identify the values embedded in their algorithms, spread awareness of their impacts, and develop tools for exposing those impacts and empowering users to overcome them.

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5.2.5: METHODS

The research findings presented in Part Two of this report are based on qualitative data collected from a random sample of students (N = 103) and faculty (N = 37) at eight U.S. colleges and universities during Fall 2019. Prior to any data collection for this study, a research protocol was submitted and approved to the Institutional Review Board (IRB) at the Harvard University, where the study was based and at several schools requiring their own IRBs.

Those who voluntarily participated in this study were asked questions in three areas: (1) their awareness and experiences with influential online platforms that use algorithms to shape the flow of information, (2) their perspectives on how information quality may be affected by algorithms, and how they think their own realities and abilities to distinguish truth from falsehoods is affected, and (3) whether and to what extent the impact of algorithms on society was discussed in class.

A script with the five open-ended questions was developed for use with students and faculty.[130] Demographic data about each of the two sample groups were collected as part of the participation. In both sessions, algorithms were defined as “lines of coding you don’t see that are intentionally used by many online platforms to personalize content to match users likes and dislikes.” News was defined as “information about events happening all around the world.”

5.2.5.1: Data Collection

5.2.5.2: Student Sample

5.2.5.3: Faculty Sample

5.2.5.4: Coding Procedures

5.2.5.5: Methodological Limitations

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5.2.5.1: Data Collection

Between September 9, 2019 and October 9, 2019, a six-person PIL Team collected empirical data from 16 student focus groups and 37 telephone interviews with faculty at eight U.S. colleges and universities. Institutions in the sample were selected for regional diversity, students' demographic variation, and whether they were located in red or blue states, given the 2016 definition of these voting categories; both a R1 university and a community college were included in the sample (Figure 3 and Table 2).

An email invitation was sent to a randomly selected sample of full-time students on each campus asking them to participate in an hour-long focus group. Two focus groups were held on each campus. A $20 gift card was offered to all participants who attended all or part of the student focus group. An email invitation was also sent to faculty to participate in a 25- to 30-minute telephone interview. At schools with a sizeable number of teaching faculty, a random sample was used.

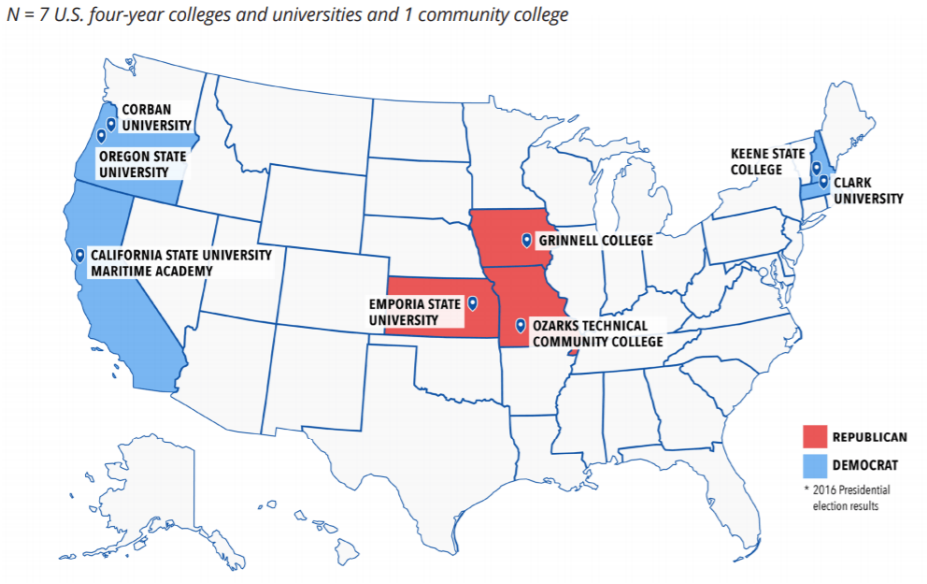


Figure 3: Institutional sample map

Table 2: Institutional sample

College or University	Location	Type	Focus Groups	Faculty Interviews
California State University Maritime Academy	Vallejo, CA	Public	10	2
Clark University	Worcester, MA	Private	15	8
Corban University	Salem, OR	Private	16	3
Emporia State University	Emporia, KS	Public	12	5
Grinnell College	Grinnell, IA	Private	17	5
Keene State College	Keene, NH	Public	14	4
Oregon State University	Corvallis, OR	Public	8	7
Ozarks Technical Community College	Springfield, MO	Public	11	3

References

30. These scripts are available on the "PIL algorithm project" landing page at https://www.projectinfolit.org/algo_study.html

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5.2.5.2: Student Sample

A total of 103 students from a variety of disciplines participated in one of the two 60-minute focus groups we held on each campus in the library. Groups ranged in size from two to eight students. Qualitative data were collected about students' use of what we call "internet giants": sites massive in scale and scope such as Google, YouTube, Twitter, Facebook, and Instagram, that are frequently used by students and faculty for news and information.

As Table 3 indicates, the focus group participants were 18 years of age or older and registered as full-time students in their second-year (29%), third-year (31%), fourth-year (28%), or fifth-year or beyond (12%) at the eight colleges in the institutional sample. More than two-thirds of the sample was female (67%). The most common major for participants was social and behavioral studies (18%) and arts and humanities (14%) while far fewer declared computer science (1%) as their majors.

Table 3: Description of Student Focus Group Sample

Major	Count	Percent
Architecture and Engineering	3	2.91%
Arts and Humanities	14	13.59%
Business Administration	10	9.71%
Computer Science	1	0.97%
Education	7	6.80%
Mathematics	3	2.91%
Occupational Training	7	6.80%
Social or Behavioral Sciences	18	17.48%
Life or Physical Sciences	9	8.74%
Undeclared	4	3.88%
Multiple	18	17.48%
Other	9	8.74%
Total	**103**	**100.00%**
Class standing		
Sophomore or second-year student	30	29.13%
Junior or third-year student	32	31.07%
Senior or fourth-year student	29	28.16%
Fifth-year student or beyond	12	11.65%
Total	**103**	**100.00%**
Age		
18 years old	15	14.56%
19-20 years old	42	40.78%
21-22 years old	27	26.20%
23-25 years old	9	8.74%
Over 25 years old	9	8.74%
Prefer not to answer	1	0.97%

Major	Count	Percent
Total	**103**	**100.00%**
Gender		
Female	69	66.99%
Male	31	30.10%
Prefer not to answer	1	0.97%
Total	**103**	**100.00%**
Race/Ethnicity		
Asian	6	5.83%
Black/African American	5	4.85%
Hispanic/Latino	4	3.88%
Pacific Islander	2	1.94%
White/Caucasian	74	71.84%
Multiple (more than one selected)	11	10.68%
Prefer not to answer	1	0.97%
Total	**103**	**100.00%**

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5.2.5.3: Faculty Sample

During the same timeframe as the student focus groups, the PIL Team conducted and recorded telephone interviews with a voluntary sample of faculty at the same schools. The interview script included the same five open-ended questions that were used to collect qualitative data from the student focus groups.

As Table 4 indicates (see the end of this section), the faculty interview sample were 30 years or older than students. Two-fifths of the faculty sample were older than 50-years-old at the eight colleges in the institutional sample (Table 4). Faculty had taught at the institution where they now worked for 1-6 years (32%), 7-10 years (11%), 11-15 years (19%), or more than 15 years (38%). The sample had almost as many female (49%) faculty members as male (51%) members.

Table 4: Description of Faculty Interview Sample

Disciplinary expertise	Count	Percent
Arts & Humanities	10	27.03%
Business Administration	2	5.41%
Computer Science	2	5.41%
Education	3	8.11%
General Education	1	2.70%
Interdisciplinary	1	2.70%
Life or Physical Sciences	6	16.22%
Mathematics	1	2.70%
Social or Behavioral Sciences	11	29.73%
Total	**37**	**100.00%**
Years at institution		
1-6 years	12	32.43%
7-10 years	4	10.81%
11-15 years	7	18.92%
More than 15 years	14	37.84%
Total	**37**	**100.00%**
Gender		
Female	18	48.65%
Male	19	51.35%
Total	**37**	**100.00%**
Race/Ethnicity		
White/Caucasian	31	83.78%
Asian	2	5.41%
Multiple (more than one selected)	3	8.11%
Prefer not to answer	1	2.70%
Total	**103**	**100.00%**

Of 19 men interviewed, 14 (73.7%) identified as White, and of 18 women interviewed, 17 (94.4%) identified as White; these racial/

ethnic and gender distributions were much higher than the national average for U.S. colleges and universities. The most common academic fields that faculty taught in were social and behavioral studies (30%) and arts and humanities (27%) while far fewer were teaching mathematics (3%) or interdisciplinary studies (3%).

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5.2.5.4: Coding Procedures

Manifest and latent coding methods were used for analytic reduction and a systematic interpretation of underlying patterns in the student focus group data logs. Transcripts of the sessions, recorded using Otter.ai software, were also used once participants' names were removed from the files and machine transcription errors were fixed. Focus groups, not individual student responses, were used as the unit for our coding. Eight coding properties were used to analyze comments in all 16 focus groups. These properties were intended to capture what kinds of experiences students, in their own words, had with computer algorithms. In cases where students in a single group mentioned a concern, e.g. "the next generation," more than once in a session, we only counted it once in our final coding results.

Krippendorff's alpha (KALPHA), considered the most rigorous means of testing intercoder reliability, was run on two pilot test round of focus group logs and coded by two PIL researchers. KALPHA takes into account chance agreement among content analysis coders. While there is no universally accepted standard for intercoder reliability using Krippendorff's alpha, communications researchers have suggested that a coefficient between 0.81 and 0.99 is "almost perfect," between 0.61 and 0.80 is "substantial," and 0.41 to 0.60 is "moderate." Two pilot coding rounds of three interview logs each were used. During the second pilot round, the coding practices reached the acceptable reliability level of 0.84. Thereafter, we coded the focus group logs using eight individual properties for "concerns."

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5.2.5.5: Methodological Limitations

There are challenges associated with the use of interviews and focus groups in any research study. For instance, the usefulness of qualitative data collected from interview methodologies depends on participants' provision of accurate and complete answers. Accordingly, the interviewer must endeavor to establish trust and rapport with participants.

Bias on both sides of this kind of exchange is always a formidable issue, too. Bias can be readily introduced in the way the interviewer frames a question, or the way in which a respondent interprets and then answers a question. To enhance the reliability of our interview technique and the consistency of the questions we asked, we used a scripted interview with both student and faculty participants. The script was piloted and a few small changes were made to the wording before the focus groups and interviews began.

Another issue is self-selection of volunteer samples like the ones used in this study, since those that choose to participate in a study may have a special interest in a research topic. While taking all of these limitations into account, we point to the main purpose of qualitative research: interviews are not necessarily used to produce generalizable findings about a sample; rather interviews are used to arrive at a deep understanding of a specific situation, as respondents decide to report them. Despite making every attempt to address these limitations, we acknowledge that future research is required to confirm these findings. Therefore, our findings should not be viewed as comprehensive, but rather as part of our ongoing research about the impact of content from algorithm-driven platforms on information quality.

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5.3: Foundations and Value Judgements (KRISTIN CONLIN)

We use the internet for a lot. We typically find mostly what we want, and we engage in a lot of value judgements about what we find. Asking the questions:

1. Is this what I need?
2. Is this enough?
3. Can I trust what I'm looking at?

Those three questions may not be all you ask, or the questions may be too much. In a lot of cases, we simply ask, "Is what I've found good enough?". This is called, satisficing. The judgement of good enough comes from our beliefs and knowledge about where we place importance. How much control do we have over that belief and knowledge structure?

The goal of developing information consumption literacies is to give you more control over that belief and knowledge structure. To inform you of all the influences that shape the media we consume. Build a set of skills that you can put into practice when you are performing mundane tasks like finding a good place for lunch to more complex and important tasks.

Dr. Safiya Noble addressed the importance of understanding the tools that shape our belief and knowledge structure in a 2016 Personal Democracy Forum talk.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Source Information:

Strategic Information Literacy: Targeted knowledge with broad application (Kristen Conlin and Allison Jennings-Roche)

- Pressbooks, University of Baltimore OER Press
- https://ubalt.pressbooks.pub/strategicil/
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5.4: A Historical Perspective

Overview

The history of SM is not confined to the technical innovations created in the last 15 years or so. In fact, one of this week's presenters, Tom Standage, claims that SM has been around for 2000 years!

In this chapter, you will find that throughout history, SM has proliferated in various forms and with various audience types: literate gentry, common folk, computer geeks, and others.

While the focus of this course is on present-day trends and concepts of SM, it is important to understand that social interaction through media is not a new experience. The Internet Age is different from past systems because it has offered the lowest entry point for mass communication in human history, *on a global scale*.

Kevin Kelly begins by explaining how technological innovations evolve and assimilate into our culture. He goes so far as to say, "Technology is who we are," today's interaction is part of a continuing trend of self-organization and is an extension of our humanity.

Then we will hear Tom Standage's presentation which describes SM as a concept that transcends our simple notion of contemporary SM system. Evidently, what we are familiar with today is not that much different than what people did 2000 years ago.

So how did SM find its way to the Internet? Andrew Keen, in "*Digital Vertigo: How Today's Online Social Revolution Is Dividing, Diminishing, and Disorienting Us*", offers an intriguing theory. In the mid-1960s, west coast hippies – known for a community-driven culture – happened to converge in the Silicon Valley area with the pioneers of computer technology companies.

Keen states, ."... the history of Silicon Valley must be understood in terms of its social values, moral judgments and economic ideas – in the context of what some sociologists would call its 'ideology'." (Keen, A., 2012, p. 97). An example of his thesis is found in the Community Memory Project (below) which originated in the San Francisco, CA area.

The Computer History Museum



Figure 5.4.1: The Community Memory Project: **1973**, Berkeley and San Francisco, California. Excerpts from flyers:

"COMMUNITY MEMORY is the name we give to this experimental information service. It is an attempt to harness the power of the computer in the service of the community. We hope to do this by providing a sort of super bulletin board where people can

post notices of all sorts and can find the notices posted by others rapidly."

"... a tool for collective thinking, planning, organizing, fantasizing, and decision-making."

"By being open and interactive, Community Memory seeks to present an alternative to broadcast media such as TV. The nightly national TV news – both commentary and commercials – gives people the 'word' from on high, telling us 'that's the way it is.' Community Memory is different. It makes room for the exchange of people-to-people information, recognizing and legitimizing the ability of people to decide for themselves what information they want."

From the library resource: "The Community Memory Project: An Introduction," 1982, Community Memory records, Lot X3090.2005, Box 12, Folder 20, Catalog 102734414, Computer.

Other primary resources: "Community Memory" catalog search.

We will also review how The Well [http://www.well.com/] emerged as the prototypical networked SM platform for our age, how it was envisioned by its creators, and how its members' lives were changed. This media is offered as primary testimony by The Well's developers who describe their philosophy and motives in creating the first virtual asynchronous (not realtime) online community.

Key Terms

Disruptive – In the context of this course, we will define "disruptive" as the *ability to displace or marginalize an existing tradition, process, or model*. The causes of disruption often involve technologies, but sometimes involve an innovation in process. The effect of a disruption is a change in the structure of social, political, economic, personal, or interpersonal traditions.

What should you be focusing on?

Your objectives in this module are:

- Trace how present-day social media fits in the historical continuum of social communication.
- Identify the motives for creating social communication.

Readings & Media

Thematic narrative in this chapter

In this chapter's readings and media, the authors will present the following themes:

1. SM is a technology that was created within the context of many other technologies.
2. SM, as we know it today, is not the first form of SM – there is a long historical trail of SM systems and technologies that precede what we see today, each with their respective disruptive influence.
3. Online SM, as we know it today, was inspired by its first creators within a particular social and political context that influenced the rationale for its existence.

Required Video: Kevin Kelly's *"How Technology Evolves"* presentation

Kevin Kelly begins the story by describing the historical motive for change through the human invention of technologies. However, Kelly's presentation *is not about SM*.

This presentation will help us to step back and view SM as a technology: one that is embedded among other contemporary technologies and built upon prior needs and technologies.

> **Kelly:** "The question that I came up with was this: what does technology want? And by that, I don't mean, does it want chocolate or vanilla? I mean, what are its inherent trends and biases? What are its tendencies over time?"

What to look for as you watch:

- Consider that SM is just a point on an existing continuum spanning ALL technological inventions created by humans for some purpose or another. This may help you to get a sense of how SM fits into a historical narrative of ongoing technological innovation.
- Consider how Kelly proposes the need to be *engaged* with technologies rather than fearing them. What are the steps we should take to discover their usefulness?
- Identify the connection between "what technology wants" and the larger question of why SM was invented.

https://www.ted.com/talks/kevin_kell...es?language=en

Required Video: Tom Standage – *"Lessons from Ancient Social Media"* presentation

We leap from a broad conversation about technology, what propels it, and how we manage it, to a narrower story about SM as a concept.

Standage claims that SM isn't new at all – it is simply an extension of other forms of communication going back *2000+ years*. The critical proposition in this presentation is about how each step in the evolution of social communication carried with it **a disruptive shock** to the balance of life and society at that time.

What to look for as you watch:

- Consider why people throughout history have been trying to communicate through media.
- How have these forms of SM been disruptive? To whom or what?

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

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Required Videos: The WELL – Hippies in Cyberspace

The following short videos describe the historical background of The WELL, the first online network-based social media platform in a form similar to what we recognize today.

What's particularly valuable about these presentations is that they are *primary testimony* from the individuals who were involved from The WELL's inception.

One of the speakers, Howard Rheingold, is a prominent author on the subject of digital culture. In the video, he refers to "The Farm" and "living on a bus." These are details related to a time in the late 1960s when groups of hippies formed farm-based communes. One group pooled their money to buy a fleet of old buses, drove them to a plot of land in Tennessee and parked them in an arrangement to form a new community.

These kinds of alternative social relationships, he claims, inspired the communitarian culture found in SM.

What to look for as you watch:

- What were the underlying social ideals that motivated the creation of The WELL?
- How are the early principles of communitarianism reflected in the modern concept of an "online community?"

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

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connectConnect to Howard Rheingold @hrheingold – Website: www.rheingold.com

WARNING!!!

In your online research for this topic DO NOT CITE THE ARTICLES BELOW. They are inaccurate and not suitable for use in our studies.

DO NOT CITE THIS ARTICLE: "Complete History of Social Media: Then And Now", May 8, 2013 by Drew Hendricks.

DO NOT CITE THIS ARTICLE: "The History of Social Media: Social Networking Evolution!" by the History Cooperative.

Optional: The History of the Commodore 64

Check out this brief section about modems in the history of the Commodore 64 home computer system. **Go to the part at 28:37** where it describes the introduction of a modem to get onto the Internet to access some of the online social interaction at that time. The Quantum Link system operated from 1985 – 1995.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

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Optional: Video Documentary – "The History of the the Bulletin Board System (BBS)"

If there was an infinite amount of time available for this topic, this documentary would be assigned watching. The History of the BBS is told by the original creators of the systems that were used to interact over primitive Internet connections. BBS are the earliest forms of electronic network social media.

Source Information:

Trends in Digital & Social Media *(*Covello, Steve)

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5.5: What is a Social Network?

Overview

Students in prior terms of this course have been surprised to discover that there is a lot more to SM than Facebook or Instagram. The variety of SM ranges far and wide. This module is a deeper inquiry into what makes media “social.”

For example, eBay.com has community groups where sellers can congregate. Does that make eBay *social media*? How much “social” must there be for something to rightfully be called “social media?”

And what is the difference between “social media” and a “social network?” Are they one-and-the-same or are they different entities?

In this chapter, we set the stage for discussing where the line is drawn between systems that can be called SM and systems that don’t qualify. The value in this discussion is in thinking about how your final project ideas can be constructed as a SM platform or how SM is integrated into your work of fiction.

Readings & Media

Thematic narrative in this chapter

In the following readings and media, the authors will present the following themes:

1. SM is comprised of several functional building blocks. Each SM system is strong in some aspect (or more) of these building blocks according to its intended purpose or use case.
2. There are many more types of SM than the few we see or hear about most frequently.
3. Each SM system provides its users with a certain value proposition in exchange for something the user gives to the system.

Required Slideshow/Video: Jan H. Kietzmann’s Honeycomb Model of SM

Jan H. Keitzmann deconstructs SM systems into their functional components. The purpose of this model is to help identify the ways in which any given SM system is intended to serve its users. The slideshow is designed for a business audience but it is equally useful for a general conversation about the characteristics of SM.

What to look for as you watch:

- How do you imagine the balance of your final project idea’s features and functions based on Keitzmann’s model? What aspects of the Honeycomb Model are stronger or weaker in your idea?

YouTube Video

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Source Information:

Trends in Digital & Social Media (Covello, Steve)

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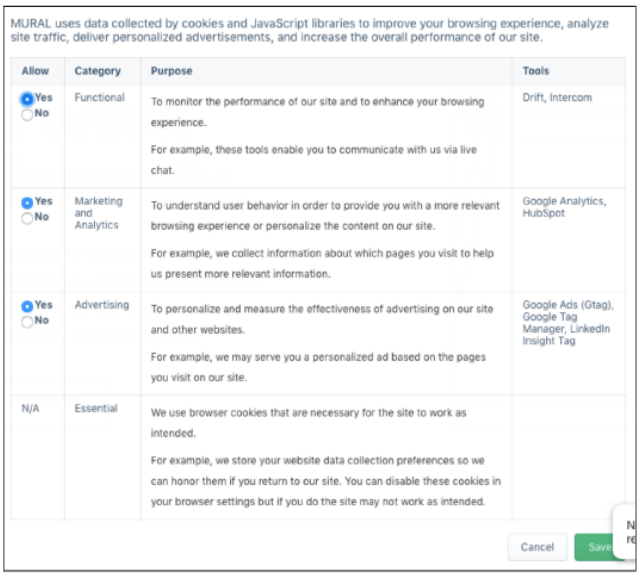
6: PRIVACY, ACCESS AND INFORMATION PRIVILEGE

6.1: Metadata, Tracking and the User's Experience
6.2: SWK- Social Justice and Information Access (Video)
6.3: Information Power and Privilege
6.3.1: Information Power and Privilege Documents

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6.1: Metadata, Tracking and the User's Experience

Below: Tracking cookie notification from Mural.co





Overview

The concepts and technologies described in this module are perhaps the most important (and most controversial) when it comes to understanding the fundamental commercial value of SM and mobile apps. You may have noticed that SM and many mobile apps are free. How can these systems earn a profit if they are giving away the service for nothing?

It has everything to do with the "digital footprints," or **metadata**, that people generate as they surf the Internet, view content, create posts within SM systems, and move around in their daily lives with their cellphones turned on. Metadata is then collected from Web browsers by tracking systems embedded within websites and from mobile apps transmitting data to data partners. This data is then used to algorithmically predict an individual user's interests, preferences, geolocation, movement patterns, and personal characteristics.

Research shows that ordinary people don't like the idea that they are being tracked (Pew Research Center, 2014). 96% of iPhone users have opted out of app tracking since iOS 14.5 launched. But then how bad is it, really? Aren't there benefits to being tracked, from the user's perspective, for the privilege of accessing all of these apps at no cost?

We will explore the value proposition of this arrangement in terms the unique circumstances of your proposed final project idea.

Key Terms

Before you get deeply involved in this week's readings and media, there is one very important clarification you will need to understand when we refer to *privacy* in the context of this week's discussion.

Personally Identifiable Information (PII): When we refer to metadata collected while surfing the Internet and using mobile apps, **we are not referring to PII**, or Personally Identifiable Information. An example of PII would be your name, Social Security number, passport ID, credit card numbers, and other similar information.

Instead, we are referring to tracking techniques that collect metadata through the use of cookies and similar technologies.

The difference is significant. PII can identify you as an individual, such as "Joe Schmo owns a house in Weare, NH, has four mountain bikes, has a son named Joe jr. who has ADD and goes to the Winchester private school."

Tracking, however, is *not* intended to identify someone individually. Instead, it is intended to synthesize *a profile* of an unnamed individual for the purpose of grouping him or her with other people with similar profiles, such as: "A man in his early 50s who owns a house, has a family with school-age kids, and likes to do outdoor recreational sports."

If you respond to this week's discussion in terms of PII, you will have misinterpreted the focus of this week's topic.

Consumer journey (or Consumer life journey): Refers to two basic concepts: the path a person takes through online navigation to arrive at a desired location, and the actual path in physical space that a person follows as part of their daily movement. In both contexts, marketing analysts seek the points in the consumer's journey that are most likely to gain their attention.

HTTP Cookies: HTTP Cookies are small pieces of data sent from a website and stored on the user's computer by the user's web browser while the user is browsing on the Internet. Tracking systems embedded in a website can collect and store cookie data and use it to form profiles of users for marketing purposes.

Location data (or Geo-Location): Location data can be acquired according to the mapping of IP addresses (physical locations of Internet access points) or from the GPS data that is recorded from an activated cellphone.

Metadata: A set of data that describes other data, or "data about data." For example, when a person navigates the Internet, the Web browser collects *information about what the user is seeking* such as which Web pages had been visited, how much time was spent on the page, what was clicked on, objects hovered over, and which ads were clicked. The metadata does not identify the user, but it describes what the user interacted with. Marketing systems (trackers) are able to collect this information and **algorithmically** derive the user's interests and preferences without actually ascertaining the user's PII.

Online Behavioral Targeting (OBT): The process of placing targeted online ads that are specifically tailored to a user based on their metadata profile.

Social Informatics: The name of the area of research that is concerned with the design and development of "recommender systems" based on metadata.

What should you be focusing on?

Your objectives in this module are:

- Identify the technical methods used to track an individual's online behavior and location.
- Explain how tracking technologies affect what someone sees as they navigate the Internet and physical space.
- Develop arguments that support or oppose the use of tracking ***from the user's perspective***.

Readings & Media

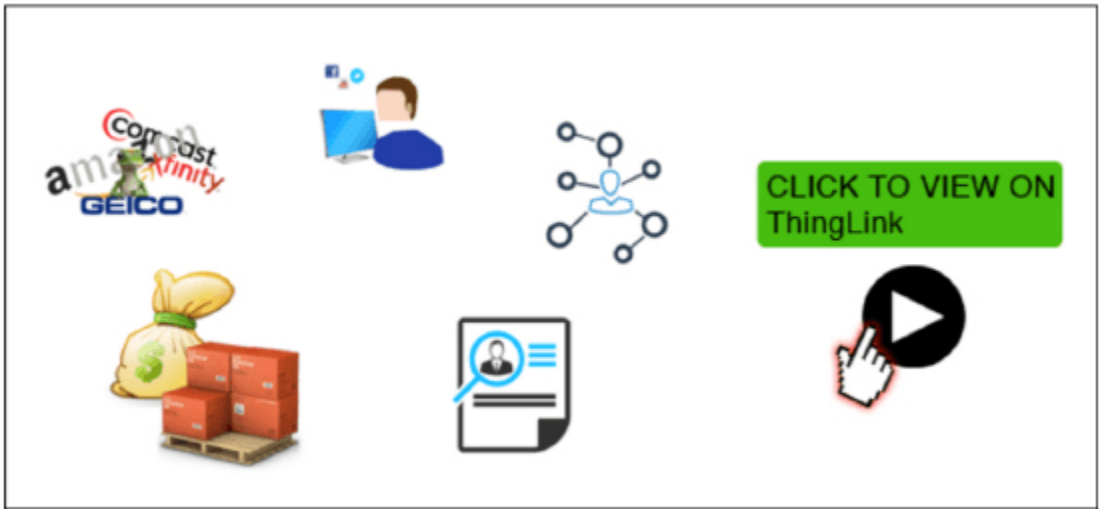
Thematic narrative in this chapter

In the following readings and media, the authors will present the following themes:

1. Your online behavior and physical movement in real space is being compiled and quantified into metadata that can be used to personalize your Internet and media marketing experience.
2. There are hundreds of trackers reading your metadata and feeding you content and ads that are designed to match your preferences, interests, and location.
3. While this process might sound creepy, there are actual benefits for users according to marketing industry professionals.
4. Research indicates that there are generational differences in how people feel about their online presence, location, and sense of privacy.

Required Interactive graphic: What is Tracking and How Does it Work?

Figure 6.1.1: The interactive image below is a simplified description of how SM works to personalize your online experience. Start at 12 o'clock, then move clockwise through the model. Click on each image to see an explanation.



Required Radio (3:44): WBUR *Here and Now*: "The Anatomy Of The Microtargeted Ad." Retrieved 5-18-2018. This short segment includes an interview with Here & Now media analyst John Carroll who explains how a microtargeted ad is placed in front of a user. Key themes to listen for:

What is *computer vision* (also known as "machine vision")? Here is company that provides this service.

What is *consumer journey mapping*?

What is a *micromoment*?

Interactive Content

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Required Article: How behavioral advertising works

Neil Patel blog: "Behind the Scenes of Behavioral Advertising" by George Mathew. Retrieved 12-12-2015. This describes how behavioral advertising works. You only need to read the sections under the headings:

- How Behavioral Advertising Works
- Online Behaviors That Advertisers Use
- How Advertisers Use Retargeting

Required Article: What is an online tracker and what do they do?

Review the business proposition for Optimizely, a randomly selected tracking company found in a browser's tracker data:

> Welcome to Optimizely.com: *"Let's personalize digital experiences for your customers. Optimizely is the easiest and most powerful solution for transforming your customers' experience."*

Note how they refer to a personalized Internet experience as "delightful?"

Required Video (22:00): How is cellphone location data used to track human patterns of movement?

This webinar video is produced by The Local Search Association (now Localogy), a not-for-profit industry association of media companies, agencies and technology providers who help on-the-ground businesses market to local consumers. It explains in clear detail how smartphones allow anonymous data to be collected everywhere a person goes and how that location data can be used in a surprising number of ways to predict the best times and places to market to targeted audiences.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Optional Article: One Nation, Tracked – An investigation into the smartphone tracking industry

Optional Article: Do you have a Google account? Try checking how Google has determined how to configure your personalized ad experience.

Optional Article: Google is moving away from third-party cookies to its new Federated Learning of Cohorts (FLoC) system which collects metadata from direct us of their products.

If the articles above made you feel as though your privacy is being encroached, perhaps the next few articles will persuade you to think about the positive effects of tracking.

Under what conditions would a person *appreciate* having their Internet experience personalized to their interests?

Required The *benefits* of Online Behavioral Targeting (OBT)

Read the following excerpt below from an article, "Optimizing Revenue – The 411 on Behavioral Targeting" (No author indicated),

October 29, 2011. Retrieved 12-12-2015.

Benefits of Behavioral Targeting for the User: Most users are strapped for time and only go online to catch up on the latest news or read some articles in between breaks from work or at night before going to bed. Site visitors will obviously appreciate it when they are greeted with content that jives with their interests. This saves the user time and provides the visitor with a richer experience.

For example, when you reach your personalized homepage on Yahoo!, you will be greeted with news articles and editorials that are customized to match or fit your interests. You have the option to stick with the recommendations made by the site, or change the settings so that the content that is displayed is exactly what you're looking for.

Behavioral targeting can expand the reach of websites, which makes it extremely useful for online publishers and website owners. It also benefits users and advertisers in the process. When properly implemented and optimized, it can serve to benefit all three parties, hitting multiple targets with one stone.

Required Article: Facebook describes how targeted ads are beneficial

Gizmodo: "Facebook's New Ad Campaign Tries To Remind You That Targeted Ads Are Good, Actually" by Shoshana Wodinsky, February 25, 2021. Targeted ads contribute to small businesses' livelihood. Be sure to watch the brief embedded video in this article.

Required Article: Targeted marketing working too well

Forbes: "How Target Figured Out A Teen Girl Was Pregnant Before Her Father Did". You've probably heard this story before, but here is the *whole* story from Forbes which you should read even if you already know the main details. By Kashmir Hill, February 16, 2012. Retrieved 12-12-2015 from Forbes Magazine. [Note: If your Web browser uses an ad blocker, you may need to disable it to see this article or open it in a different Web browser that does not have an ad blocker enabled.]

Required Data: Generational differences in perceptions of Internet privacy

The Pew Research Center's Internet & American Life Project is a non-partisan research group that conducts surveys to monitor public sentiment in a variety of topics. Read about "Public Perceptions of Privacy and Security in the Post-Snowden Era" which surveyed American adults describing their views about privacy, and "Teens, Social Media, and Privacy" which shows how teens share information about themselves online.

What to look for:

- Compare these two reports. What jumps out at you as the major differences between adults and teens in their willingness to disclose their online presence?
- What factors can explain this difference?

Optional: Supplemental resources related to tracking, metadata, and privacy:

People don't want to be tracked: Hoofnagle, Chris Jay and Urban, Jennifer M. and Li, Su. "Privacy and Modern Advertising: Most US Internet Users Want 'Do Not Track' to Stop Collection of Data about their Online Activities" (October 8, 2012). Amsterdam Privacy Conference, 2012. Available at SSRN: https://ssrn.com/abstract=2152135

Facebook's average revenue per user as of 4th quarter 2017, by region (in U.S. dollars).

An infographic that shows all of the categories of companies that operate on consumer data between you and marketers.

A list of companies that provide **data analytics services for marketing**:

- SafeGraph – Processes and predicts areas of physical space optimized for marketing.
- LiveRamp – "Identity resolution" to connect individuals to marketing spaces.
- Unacast – Provides information about human traffic patterns for marketing and product development.

- Fysical – Provides data on foot traffic for use in smart cities, retail, real estate development, and predictive modeling/forecasting.
- Foursquare – The "check-in" SM app is developing a location technology platform.

Business Insider: "From Start To Finish, This Is How Beacons Send Ads To Your Phone While You're Shopping" describes how little tiny beacons can be installed in a business to transmit weak Bluetooth signals to a nearby smartphone to promote an ad.

Optional: Supplemental resources related to social informatics

If you are interested in the contemporary issues related to social informatics, user privacy, and the science of social networks, look through the latest SocInfo 2017 Conference program. Look through the conference topics and follow the proceedings. Here is a list of the presenters and their topics.

References:

Pew Research Center (2014) *"Public Perceptions of Privacy and Security in the Post-Snowden Era"*http://www.pewinternet.org/2014/11/12/public-privacy-perceptions/

Source Information:

Trends in Digital & Social Media *(*Covello, Steve)

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6.2: SWK- Social Justice and Information Access (Video)

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SWK: Social Justice and Information Access (Video)

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6.3: INFORMATION POWER AND PRIVILEGE

6.3.1: Information Power and Privilege Documents

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6.3.1: Information Power and Privilege Documents

Why Are We Reading This?

This week's readings are designed to challenge our thinking about the voices in academic spaces. Whose voices are the loudest? Are there voices that aren't being heard and why? What does this mean for you as a student? Are you hearing the voices you need to hear?

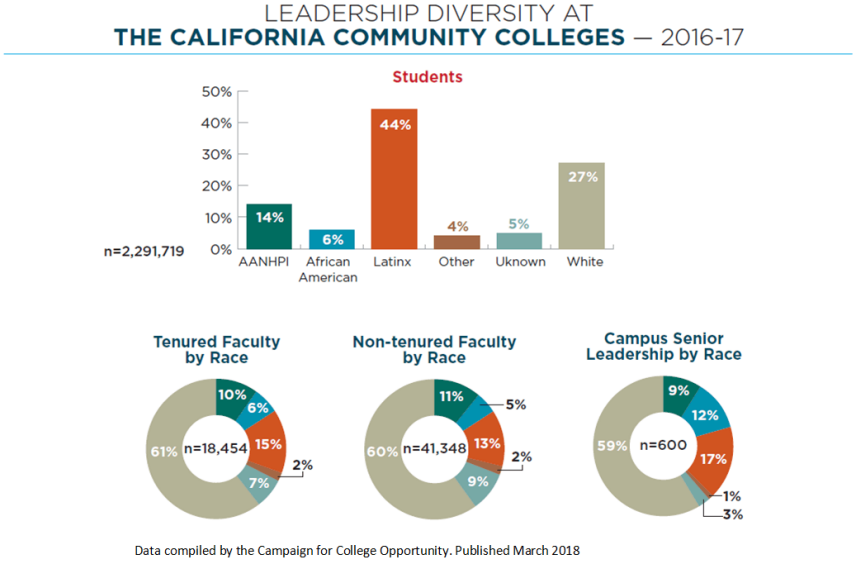
These are questions I'd like you to think about as you read selected articles this week. For some, you will find this reading empowering. Others might find it uncomfortable. And some might fall somewhere in between. I think it's important that both students and educators understand the system in which we're working. It's important to have these conversations to push the needle and create a more representative educational system. You'll have a chance to share your thoughts in one of this week's discussion forums.

Makeup of Students, Faculty, Administrators

In 2018, The Campaign for College Opportunity (a non profit organization) released an alarming report describing the makeup of students, faculty, and administrators at California campuses. Alarming because the ethnicities and genders of faculty and administrators in no way mirror those of the students.

The report is titled, *Left Out: How Exclusion in California's Colleges and Universities Hurts Our Values, Our Students, and Our Economy*. The authors looked at 2016-17 data from databases connected to California colleges and universities as well as federal databases. They found that student populations are increasingly diverse with more than two-thirds of those enrolled identifying as something other than white. However, the data shows that campus faculty and leadership do not match the racial and gender diversity of the student populations.

This is true in all state systems: California State Universities, University of California campuses, and California Community Colleges (CCCs). For CCCs, the data shows that 68% of students identify as Asian American, Native Hawaiian and Pacific Islander, African American, American Indian and Alaska Native, and Latinx. However, only 33% of tenured faculty, 31% of non-tenured faculty, and 38% of campus leadership fall into these categories. Tenured and non-tenured faculty and campus administration is overwhelmingly white.



Machine readable text description of preceding graphic.

The authors discuss why these statistics are problematic:

College leaders set the tone, values, and direction of their institutions and when that leadership is not reflective of the diversity of the student population, student success suffers. When campuses are inclusive and reflective of the student population, the culture, practices and policies align with the needs of the students. Students experience a greater sense of belonging and have more role models who understand and validate their experiences (executive summary, 2018, p. 4).

The authors call on the state and college and university leadership to commit to racial equity in higher education, including examining hiring practices and establishing both statewide and campus-wide goals to close equity gaps.

The executive summary was used to write this section and is linked in the citation. The full title at the beginning of this page links to the full report.

Other Readings

The rest of the readings for this week come from other voices that I want you to hear. The first is from a student who attends a predominantly white school. The second discusses the tenure process at four-year colleges and universities. And, the third is a letter from faculty members who once taught at a predominantly white institution. I have included them this week so that you can better understand what is happening in higher education and how it affects the information that is created and consumed.

Black Students in White Spaces

This article appeared in 2018 on the National Association of Independent Schools (NAIS) website. It is written from the student's perspective and what it's like to be a Black student in a predominantly white school. She describes her experiences at independent schools, but I'm certain that students at public schools often have similar experiences.

Reading One: From the National Association of Independent Schools Website: Being Black in White Spaces by Kalah Brown

A Call to Change the Tenure System

This essay appeared in 2014 in Inside Higher Education. The author outlines the current measures of promotion in most 4-year institutions, argues what's wrong with the system, and offers some suggestions on how to change it. I've included it this week so that you have a better idea of how professors are hired and promoted at transfer institutions and why some people feel these systems need to be revisited.

Reading Two: From Inside Higher Education Website: Change the Tenure System by KerryAnn O'Meara

Black and Brown Faculty in Predominantly White Spaces

The last reading for this week is a letter published in 2016 on the Huffington Post website. It was written by people of color who were formerly employed by the University of Missouri (known as Mizzou). This is the perspective of one group from one institution. However, some of the experiences they had at this predominately white school (especially related to relationships with fellow faculty and administrators), are experiences that are well documented at many colleges and universities.

This letter hits at the concept of white privilege, a phrase that can often stir emotions or confusion. Emotions because some equate the phrase, white privilege, with racism; it is not the same. Confusion because some equate the phrase solely with socioeconomic status - "I'm white, but live in poverty - how can I be privileged?" But, it is about more than socioeconomic status. It is about what activist, Peggy McIntosh calls "unearned advantage." If you are not familiar with the nuances of white privilege or the phrase is stirring emotion or confusion, I encourage you to read McIntosh's short 1989 essay, "White Privilege: Unpacking the Invisible Knapsack" before you dive into this final reading.

The faculty of four-year colleges and universities tend to be even less diverse than community colleges. This letter outlines some major problems and offers some suggestions to make higher education more inclusive and diverse.

Reading Three: From Huffington Post Website: As People of Color Formerly Employed by Mizzou, We Demand Change by Bryana H. French, Ph.D., Dr. Zakiya R. Adair, and Kevin Cokley, Ph.D.

Whiteness of Librarianship

I think it's important for me to acknowledge that my own profession struggles with this issue; librarians across the country are overwhelming middle-aged white females.

The articles I've listed below are not part of your required reading this week, but I'm including them here for the curious and to show that I am aware of this issue. I take this information very seriously and am trying to do my part to create a more inclusive world of information experts.

Further Reading:

Bourg, C. (3, March 2014). The unbearable whiteness of librarianship [Blog post]. https://chrisbourg.wordpress.com/2014/03/03/the-unbearable-whiteness-of-librarianship/

Hathcock, A. (7, October 2015). White librarianship in blackface: Diversity initiatives in LIS. *In the Library with the Lead Pipe*. http://www.inthelibrarywiththeleadpipe.org/2015/lis-diversity/

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References

Campaign for College Opportunity. (March 2018). *Left out: How exclusion in California's colleges and universities hurts our values, our students, and our economy: Executive summary.* https://collegecampaign.org/wp-content/uploads/2018/03/2018-Left-Out-Executive-Summary-Final.pdf

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7: EVALUATE SOURCES

7.1: Authority is Constructed and Contextual

7.2: Socially Constructed Knowledge QandA Networks and Wikis

7.3: Four Fact Checking Strategies

7.4: Has it already been fact checked

7.5: Fact Checking Sites

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7.6.6: Consider Currency

7.6.7: Check for Purpose and Accuracy

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7.6.9: Putting it all together

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7.1: Authority is Constructed and Contextual

Information resources reflect their creators' expertise and credibility, and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required.



Figure 7.1.1: *H.L.I.T | Authority | flickr | CC BY*

Experts understand that authority is a type of influence recognized or exerted within a community. Experts view authority with an attitude of informed skepticism and an openness to new perspectives, additional voices, and changes in schools of thought. Experts understand the need to determine the validity of the information created by different authorities and to acknowledge biases that privilege some sources of authority over others, especially in terms of others' worldviews, gender, sexual orientation, and cultural orientations. An understanding of this concept enables novice learners to critically examine all evidence—be it a short blog post or a peer-reviewed conference proceeding—and to ask relevant questions about origins, context, and suitability for the current information need. Thus, novice learners come to respect the expertise that authority represents while remaining skeptical of the systems that have elevated that authority and the information created by it. Experts know how to seek authoritative voices but also recognize that unlikely voices can be authoritative, depending on need. Novice learners may need to rely on basic indicators of authority, such as type of publication or author credentials, where experts recognize schools of thought or discipline-specific paradigms.

Knowledge Practices

Learners who are developing their information literate abilities define different types of authority, such as subject expertise (e.g., scholarship), societal position (e.g., public office or title), or special experience (e.g., participating in a historic event);

- use research tools and indicators of authority to determine the credibility of sources, understanding the elements that might temper this credibility;
  understand that many disciplines have acknowledged authorities in the sense of well-known scholars and publications that are widely considered "standard," and yet, even in those situations, some scholars would challenge the authority of those sources;
- recognize that authoritative content may be packaged formally or informally and may include sources of all media types;
- acknowledge they are developing their own authoritative voices in a particular area and recognize the responsibilities this entails, including seeking accuracy and reliability, respecting intellectual property, and participating in communities of practice;
- understand the increasingly social nature of the information ecosystem where authorities actively connect with one another

and sources develop over time.

Dispositions

Learners who are developing their information literate abilities

- develop and maintain an open mind when encountering varied and sometimes conflicting perspectives;
- motivate themselves to find authoritative sources, recognizing that authority may be conferred or manifested in unexpected ways;
- develop awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview;
  question traditional notions of granting authority and recognize the value of diverse ideas and worldviews;
- are conscious that maintaining these attitudes and actions requires frequent self-evaluation.

Source Information:

Research Primer: Mohawk Library (French, Peggy)

- Pressbooks
- https://ecampusontario.pressbooks.pub/mohawkresearchprimer/
- Creative Commons Attribution-NonCommercial 4.0 International

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7.2: Socially Constructed Knowledge QandA Networks and Wikis

Overview

When people acquire information from online resources created by non-experts, how can anyone determine what is true?

In this chapter, we extend this concern by asking how *all knowledge* is constructed. As you will see in David Weinberger's "*Too Big to Know*" presentation, the concept of knowledge has undergone a re-examination since the emerging proliferation of network-based information systems like Wikipedia and Q & A systems.

The traditional model of knowledge – or, "what is knowable" – has been challenged: Is knowledge best embodied in the singular, immutable form of an expert's document, such as what is in a book? Or is knowledge best constructed by the combined input of many people so that "what is knowable" reflects a more broad range of perspectives?

Key questions emerge:

- Which form of knowledge is more *reliable*?
- Which *kinds* of topics are better suited for social construction? Which ones are more trustworthy when presented by single experts?
- What are the *indicators* in socially constructed knowledge that convey its credibility? How reliable are these indicators?
- What *strategies* can an individual employ to form a conclusive position or belief about *anything* given the rich socially constructed resources freely available on the Internet and social media?
- How much *weight* should be given to each form of knowledge when a person processes a conclusion?

Weinberger proposes that *knowledge is contained in networks* – virtual spaces or interactive groups such as the Internet and social media – not in individuals. However, he says, while there is more input from more people on any given topic than ever before, there is less agreement about what is actually true.

In this chapter, we put our hands on the instruments of traditional and socially constructed knowledge and compare them.

What should you be focusing on?

Your objectives in this module are to:

- Describe how traditional and socially constructed knowledge are both different and complementary.
- Describe how you determined the degree of credibility and usefulness of each source in your assignment research, including the indicators you found in each resource.

Readings & Media

Thematic narrative in this chapter

In the following readings and media, the authors will present the following themes:

1. From a historical perspective, knowledge and "what is knowable" has been presented as "the stuff in books and in the heads of experts." SM has dramatically changed this perception and calls into question what knowledge really is and where it is located.

Required Video (33:22): David Weinberger's "Too Big to Know" Presentation

This video presented below is interactive. It includes several stopping points where I have provided a preface to each major section of the presentation. Please take brief notes that pertain to Weinberger's theories and explanations that support the notion that "what is knowable" has been migrated away from individuals/books and into networks.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

If you are interested in Weinberger's book, please review the dedicated website.

Required Wiki: An example of social knowledge construction about drugs

Erowid: The Erowid wiki is a moderated knowledge resource that ."..provides access to reliable, non-judgmental information about psychoactive plants, chemicals, and related issues. We work with academic, medical, and experiential experts to develop and publish new resources, as well as to improve and increase access to already existing resources. We also strive to ensure that these resources are maintained and preserved as a historical record for the future."

One of the factors that makes Erowid different from other knowledge resources is that it includes anonymous firsthand testimony from individuals who have actually used the drug and describe its effects and risks. Browse through some of the entries to get a sense of how each entry is populated. Here is the cocaine entry.

Required Blog: "Think Like a Doctor" – An example of social knowledge

Review the blog at the link below and observe how a medical problem is presented to a general community of experts and non-experts alike in the field of medicine and how the comments they offer contribute to solving the medical problem. Scroll down to the bottom of each blog article to see the Comments link. Review the *Readers' Picks* and then look for the link that reveals the correct diagnosis.

How is this an example of social knowledge? Often, you will see a combination of expert diagnosticians and common people contributing their first- or second-hand experience of a medical ailment. This is a relatively new phenomenon which has been enabled by the natural openness of the Internet.

Observe how similar this model of social media interaction resembles how humans actually construct knowledge. Think about how you seek the combination of input from your friends, family, colleagues, and professionals when you are trying to solve a problem or confront an unfamiliar and complex issue.



Figure \({7{.}2{.}\eatSpaces{1} \endSpaces}\

Required Research: Social media contributes to Truth Decay

RAND Corporation illustrated summary: "Truth Decay: An Initial Exploration of the Diminishing Role of Facts and Analysis in American Public Life." Among the trends listed is "Increasing disagreement about facts and analytical interpretations of facts and data," which is consistent with Weinberger's thesis. This report illustrates the factors that contribute to a sense of loss in the integrity of information and facts. **Optional**: To read the full report, access the PDF from the RAND website. The Summary section beginning on page nine elaborates on the infographic illustration.

Optional: Supplemental resources related to social knowledge construction

Article: TechCrunch – "ResearchGate raises $52.6M for its social research network for scientists" Retrieved December 24, 2017. ResearchGate is attempting to reinvent the way scientists interact with each other. ."..One of the key things that helps ResearchGate stand apart from the rest is that up to now a lot of the focus in the world of science has been about publishing successful research, while ResearchGate also provides a platform for failures."

Consulting platform: Wikistrat is a consulting firm that operates as a crowdsourced collective that can be employed to help businesses and governments make strategic decisions.

Alternative social media debate platform: Kialo is ."..a debate platform powered by reason. Kialo cuts through the noise typically associated with social and online media, making it easy to engage in focused discussion."

References

Gottfried, J., & Shearer, E. (2017, September 07). Americans' online news use is closing in on TV news use. Retrieved December 24, 2017, from http://www.pewresearch.org/fact-tank...s-tv-news-use/

Source Information:

Trends in Digital & Social Media (Covello, Steve)

- Pressbooks
- https://granite.pressbooks.pub/comm601/front-matter/title-page/
- Attribution 4.0 International License

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7.3: Four Fact Checking Strategies

When students are looking for information on the web, there are strategies they can use to help them determine whether the information is accurate.

- **Previous verification –** Check to see if someone has already fact-checked the accuracy of information.
- **Locate the source** – Find the original source of the information or claim to determine its trustworthiness.
- **Credibility of source** – Verify the credentials of the author or creator of the source and read what others have said or written about the source.
- **Start over** – If you are not able to find sources to substantiate the information or claim, look for another source.

If any of these strategies prove to be successful in verifying the content, your work is done.

When you encounter a claim that you want to verify, your first step is to see if any fact-checking sites like *Politifact*, or *Snopes*, or even *Wikipedia* have already verified or disputed the claim. If this proves to be a dead-end, your next step is to locate the source of the information.

If the claim is about research, try to locate the journal it originally appeared in. If the claim is about an event, look for the news publication in which the event was originally reported. If the source of information is reputable, such as the journal *Science* or the newspaper the *New York Times,* you can stop here. If not, your next strategy is to find out what others have written about the source.

Look for information about the author of the claim, as well as any credentials and affiliations that they may have. Are there any reviews or commentaries about the information?

If you find that the source of the information is not trustworthy, or cannot be verified at all, then your last strategy is to circle back, and start the process over again. Try finding an alternate source that can be verified.

Source Information:

NEW Web Literacy for College Students 2nd Ed NSCC Edition (NSCC and Mike Caulfield)

- Pressbooks, NSCC
- https://pressbooks.nscc.ca/webliteracy2nded/
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7.4: Has it already been fact checked

When fact-checking a particular claim, quote, or article, check to see if someone has already done the verification work for you. A reputable fact-checking site or subject wiki may have already successfully traced claims to their source, identified the owners of various sites, and linked to reputable sources for counterclaims.

If the fact checking site is reputable and trustworthy, then you can be confident in using the source or not.

Constructing a Query to Find Previous Fact-Checking

Check for previous fact-checking by searching known and trusted fact-checking sites for a phrase or keyword from the story. Use the “site” function in search engines such as *Google* and *DuckDuckGo* .

Site Search. The Site Search function allows you to search a specific domain(s) for a search term instead of the entire internet.

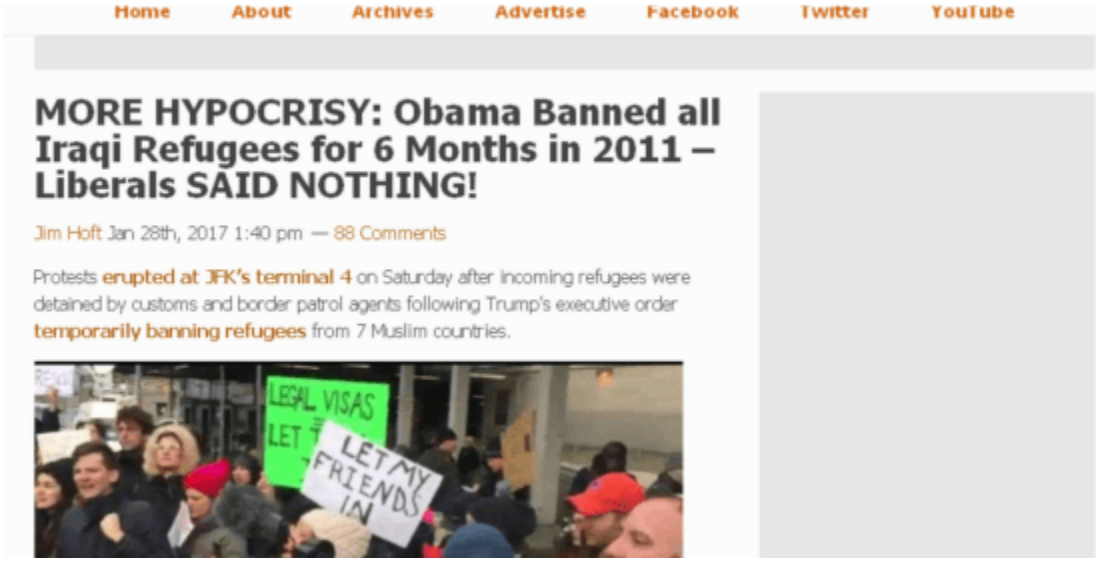


Figure 7.4.1: *Screenshot of an article posted in the Gateway Pundit*

In this example, we used the *DuckDuckGo* search engine. For our query, we use Politifact and Snopes (well-known fact-checking sites) as well as keywords from the story in the following syntax:

> obama iraqi visa ban 2011 site:snopes.com site:politifact.com

Here are the results of our search:

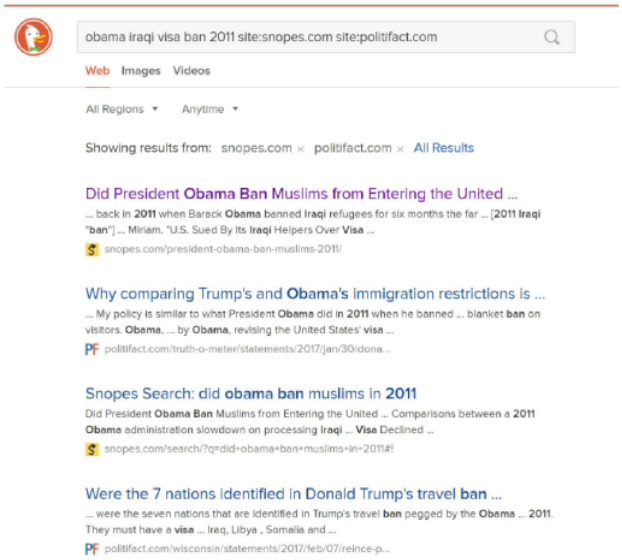


Figure 7.4.2: *A set of DuckDuckGo search results. The top results are from fact-checking sites Snopes and Politifact.*

The results show that work has already been done in this area. In fact, the first result from S*nopes* answers our question almost fully. Remember to follow search engine best practice – scan the results and click on the best result in the result list. There are similar syntaxes you can use in *Google*, but for various reasons this particular search is easier in *DuckDuckGo*.

Let's look at another claim, this time from the President. This claim is that police officer deaths increased 56 percent from 2015 to 2016. Here it is in context:

can to help you meet those demands. That includes a zero tolerance policy for acts of violence against law enforcement. We all see what happens. We all see what happens and what's been happening to you. It's not fair.

We must protect those who protect us. The number of officers shot and killed in the line of duty last year increased by 56 percent from the year before. Last year, in Dallas, police officers were targeted for execution -- think of this. Who ever heard of this? They were targeted for execution.

Figure 7.4.3: *An excerpt of a President Trump speech*

Let's ramp it up with a query that checks four different fact-checking sites:

> officer deaths 2016 increased 56 percent from 2015 site:factcheck.org site:snopes.com site:politifact.com site:www.washingtonpost.com/news/fact-checker/

This gives us back a helpful array of results. The first, from the *Washington Post*, actually answers our question, but some of the others provide some helpful context as well.

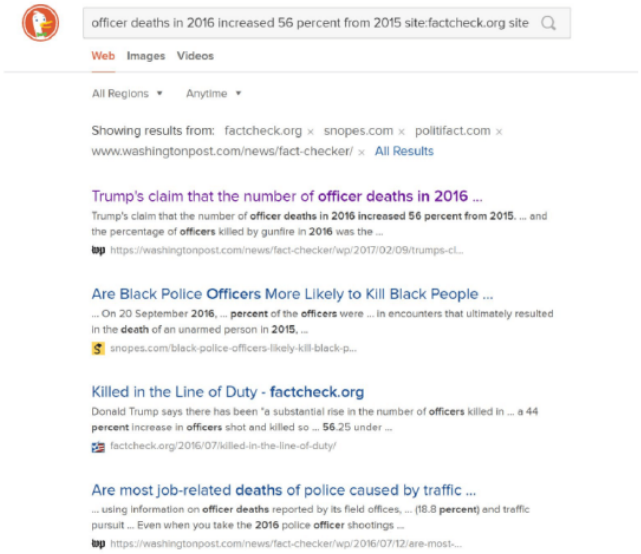


Figure 7.4.4: *DuckDuckGo search results. The top search result is an article from the Washington Post fact-checker and we can see the highlighted text that matches our query.*

The *Washington Post* confirms that this claim is true. We do not need to search any further.

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7.5: Fact Checking Sites

Advise from Professional Fact-Checkers

1. Leave the site to research it.
2. Ignore the order of search results in Google.
3. Are the sources cited? Is there documentation?
4. Watch for “click-bait.”
5. Watch for inflammatory language, as well as more subtle forms of persuasion.
6. If the site allows readers to comment, read them.
7. Read multiple sources of information to get a variety of viewpoints and media frames.

Some Reputable Fact-Checking Organizations

The following organizations are generally regarded as reputable fact-checking organizations focused on U.S. national news:

- *Politifact*
- *Factcheck.org*
- *Washington Post Fact Checker*
- *Snopes*
- *Truth be Told*
- *NPR Fact-Check*
- *Lie Detector* (Univision, Spanish language)
- *Hoax Slayer*

Respected specialty sites cover niche areas such as climate or celebrities. Here are a few examples:

- *Climate Feedback*
- *SciCheck*
- *Quote Investigator*

There are many fact-checking sites outside the U.S.:

- *FactsCan* (Canada)
- *El Polígrafo* (Mexico)
- *The Hound* (Mexico)
- *Guardian Reality Check* (UK)
- *BBC Reality Check* (UK)
- *Channel 4 Fact* Check (UK)
- *Full Fact* (UK)

At the TEDSalon in London, Markham Nolan shares the investigative techniques he and his team use to verify information in real-time, to let you know if that Statue of Liberty image has been doctored or if that video leaked from Syria is legitimate.[1]

http://www.ted.com/talks/markham_nol...fiction_online

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7.6: EVALUATE YOUR SOURCES SECTIONS

Source Information:

Doing Research A Student's Guide to Finding and Using the Best Sources (Brinkerhoff, Celia)

- Pressbooks
- https://kpu.pressbooks.pub/doingresearch/
- Non-commercial-ShareAlike 4.0 International

7.6.1: Library Research Tools and When to Use Them

7.6.2: Put all your strategies to work

7.6.3: Checklists

7.6.4: Question Authority

7.6.5: Who is the author?

7.6.6: Consider Currency

7.6.7: Check for Purpose and Accuracy

7.6.8: Beyond Checklists- The SIFT Method

7.6.9: Putting it all together

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7.6.1: Library Research Tools and When to Use Them

Throughout this module, we have referred to various library research tools, but we have not discussed when to use them. Learning which tools to use at the various stages of your research is also another strategy for finding the sources best suited to your assignment, and will decrease the amount of time you spend looking.

(Click the tools below for an image of their search interfaces.)

Tool	What's in it?	When should I use it?
Summon	Everything the library has in its collection: • books/ebooks • journal/magazine/ newspaper articles • government documents • reference books • videos	Start here when you are new to your topic or assignment. Summon is great for seeing the breadth of what is available on your subject.
Catalogue	Almost everything the library has in its collection, except articles • books/ebooks, • government documents • videos	Use this when you know you are looking for a book or ebook, or when you are looking for a specific title. You will NOT find journal articles here. The catalogue does not have the full-text of items, but many books will have a table of contents.
Article Database	Specialized or multi-disciplinary • peer reviewed journal articles • some trade/ professional publications • some newspapers	Use a database when you know you need peer reviewed journal content. Learn which databases are focussed on particular subjects.
Google Scholar	• scholarly journals articles • conference proceedings • research/ government publications	While not technically a library tool, Google Scholar with its Library Links feature will bring you results from beyond the library's collection as well as subscribed content. Ask us how to enable this feature. NEVER pay for articles!

ACTIVITY: Which Research Tool is Best?

Pick which tool would best serve the research need. Click the arrow to answer the next question.

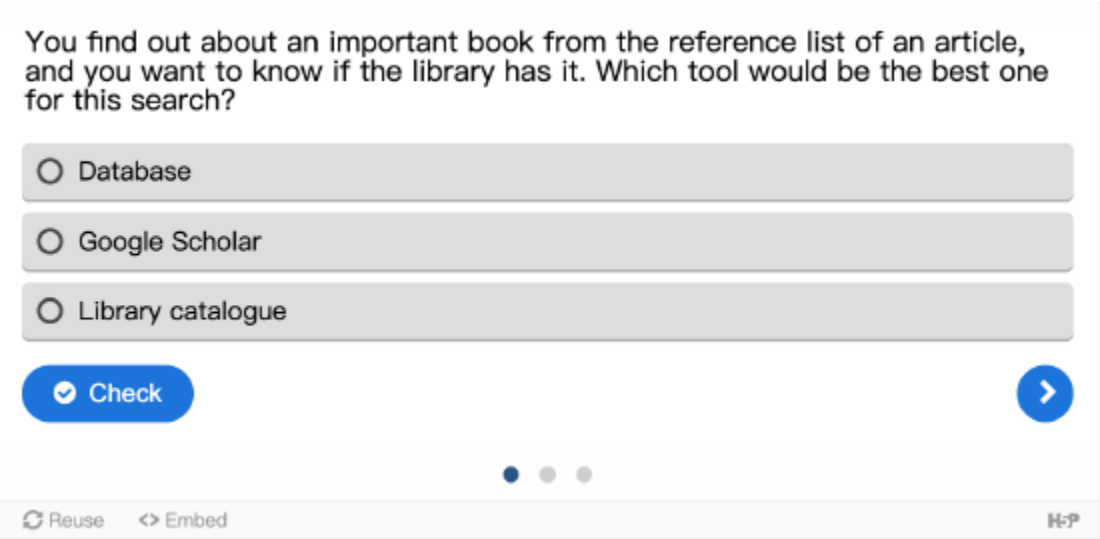


Figure 7.6.1.1

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7.6.2: Put all your strategies to work

ACTIVITY: Summing up Module 3

Pick the correct statements.

Choose the statement that best describes using the reference list of an article as a research tool.

1. Using the references from one article will help lead you to other works that might be significant.
2. If too many authors have written about your subject, you should pick another topic.
3. Databases make it difficult to find the articles that cite your article.
4. It is plagiarism to use the citations from articles. You have to do your own research.

Answer available at the end of this section.

Choose the best statement that describes an effective search strategy.

1. If you get your search terms right, you seldom need to go beyond the first couple of results.
2. You shouldn't search with more than one or two keywords.
3. Unlike Google, library resources such as databases, Summon, and the catalogue have limits or filters that allow for more focussed search results.
4. Pick one research tool and stick with that.

Answer available at the end of this section.

Key Takeaway:

Research is a *circular process* that involves asking questions whose answers will lead to revised questions or new lines of inquiry.

Answers

Choose the statement that best describes using the reference list of an article as a research tool.

1. Using the references from one article will help lead you to other works that might be significant.

Choose the best statement that describes an effective search strategy.

3. Unlike Google, library resources such as databases, Summon, and the catalogue have limits or filters that allow for more focussed search results.

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7.6.3: Checklists

There are many checklists available to help guide you through this critical process of evaluating your sources; you may have heard of the CRA(A)P test, RADAR, Rate my Source, or something similar. All of these lists are really just devices to help novice researchers remember the criteria by which they should evaluate the information they find.

Beyond checking that your source satisfies some of the criteria suggested below, your search should also involve digging a little deeper. What can you learn from a Google search about the site, author, or publisher?

The following list is meant to be a starting point for you to develop your own internalized set of questions.

Does the author have the appropriate expertise?

Can I verify who is responsible for the information? Do they have credentials in a relevant field? If it is not a personal author, what can I determine about the organization? Are there sponsors or partners?

Is this source current enough?

Whether something is current enough will be determined by the topic and the specifics of the assignment. Also consider the publishing format of the source: is it a blog? news story? book? scholarly article?

Why did the author publish this information?

Assessing the author's motivation to publish something, or the purpose of a publication, is critical to determining the usefulness of a source. Are they trying to sell something? Provide unbiased information? Contribute to knowledge about a topic? Persuade or spread misinformation?

Does this source contain accurate information?

Does the source seem to have reliable and correct information? Are references to other, external sources offered to support claims? Does the language seem unbiased and free from spelling mistakes and other errors? Are there graphs or other visual displays of information that might be verified? Can it be confirmed with other sources or personal knowledge?

Is it relevant to my research question?

Does this source add anything new to my understanding of the topic? Does it change my perspective? Is it written at a level I can understand, or is it too technical? too basic? Who is the intended audience? Does it fulfill my assignment requirements? How will I use it?

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7.6.4: Question Authority

In terms of evaluating a source of information, the expertise or credibility of its author is extremely important. This is the case not only for your university assignments, but also your personal information needs; in general, we want to know that our sources are reliable and our information sound.

But this idea of authority can be complicated. Within the academic publishing world, determining someone's expertise is somewhat straightforward in that advanced degrees, a publishing record, and an affiliation with an institution of higher learning or research are the conventional indicators of authority.

Outside of the scholarly community, there are other indicators of an author's credibility; other communities may recognize authority or expertise by means of specific credentials or practical experience. For example, we generally rely on articles in the mainstream press because professional journalists are supposed to abide by a code of ethics and have a lengthy publishing record.

When it comes to verifying an author's credibility within the scholarly literature, library research tools can help us to make a quick determination of authority. Recall that in the last module we looked at using the scholarly or peer reviewed limits in Summon and library databases to find results that are published in academic journals.

But looking a little more closely at the author and the journal, and perhaps doing some quick Google searching, can help us to make a better decision about the author's expertise in a particular area. Having an advanced degree in theoretical physics does not necessarily make someone an expert in evolutionary biology.

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7.6.5: Who is the author?

ACTIVITY: Check the Authors

Take a look at the following record for an article from the library's Academic Search Complete database. Click on the purple question marks to see how an article record can provide you with clues as to the authors' credibility.

(Use Fullscreen to expand and your keyboard's Esc button when finished.)



Figure 7.6.5.1

Tip: Go one step further

Going a step further to search for your author on **Google Scholar** will lead to their publication record. What else have they written?

You might also do a quick Google search for the journal's homepage. Look for author submission guidelines where a peer review process should be described, as well as the scope and aim of the journal.

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7.6.6: Consider Currency

To evaluate the currency of your information source, you will first need to know the requirements of your assignment. You may be able to use older sources, or you may need to look for current information. Currency is also somewhat discipline or topic dependent; research in history or literature may involve using sources older than 10 years but in the sciences and technology, up-to-date information can be extremely important.

And sometimes, our research may involve examining a change in thinking or perspective over time, in which case you may need a variety of sources spanning a certain period.

Learn to ask the following kinds of questions:

- What is the publication or copyright date?
- Is it a reprint of a previous work? a new edition or revision?
- Is there newer information available on the topic?
- How might ideas and perspectives have changed since the work was published?

ACTIVITY: Decide Whether the Following Sources are Current Enough for the Topic

Chose the correct answer. Click the arrow to answer all 3 questions.

Does hydraulic fracturing harm groundwater?

Authors: Pelley, Janet

Source: Environmental Science & Technology. 1/1/2003, Vol. 37 Issue 1, p11A. 2p. 1 Color Photograph.

Document Type: Article

Subject Terms:
*HYDRAULIC fracturing
*INDUSTRIAL pollution
*COALBED methane
*CONTAMINATION of drinking water
*GROUNDWATER pollution
ENVIRONMENTAL aspects

Company/Entity: UNITED States. Environmental Protection Agency

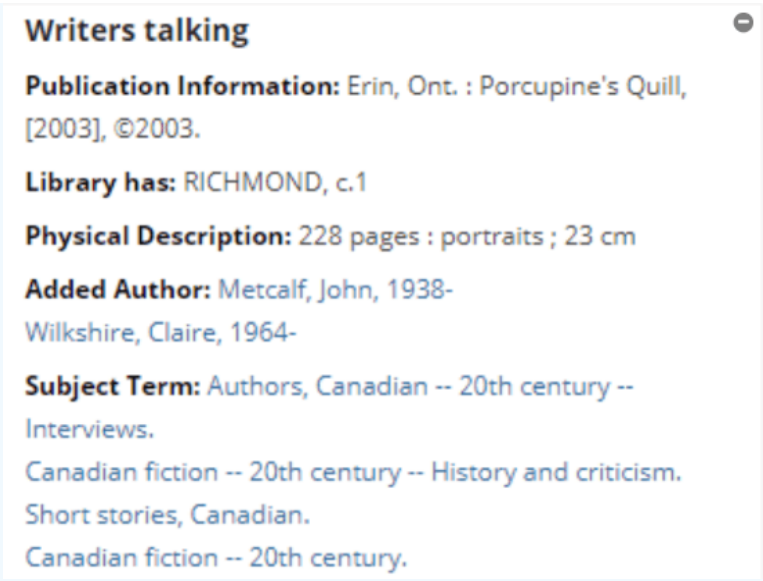
NAICS/Industry Codes: 924110 Administration of Air and Water Resource and Solid Waste Management Programs

Abstract: Focuses on a draft report from the U.S. Environmental Protection Agency claiming that injection of hydraulic fracturing fluids into coal bed methane formations does not threaten drinking water. Overview of hydraulic fracturing technology; Potential for contaminating groundwater; Critics' allegation that the agency misrepresented the study's results and altered or ignored data.

For a research assignment on the effects of fracking on groundwater contamination, is the above article current enough?

- Yes, it is within 20 years old so it should be fine.
- No, it is too old.

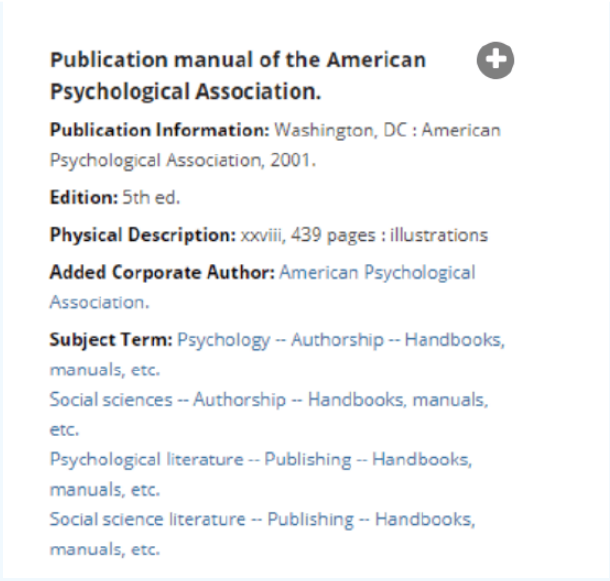
Answer available at the end of this section.



For a research paper on the early experiences of Canadian fiction writers, is the above book current enough?

- Yes.
- No, it's too dated.

Answer available at the end of this section.



Would the above edition of the APA Publication Manual be current enough for checking how to cite an eBook for your psychology paper?

- Yes.
- No.

Answer available at the end of this section.

Answers

No, it is too old. (The article is too dated for this topic.)

Yes. (This book contains interviews with Canadian writers and could be useful for a research assignment that might require some comments from or biographical information about authors. Currency, in this case, might not be as important as other criteria.)

No. (The most recent update to the APA Publication Manual was published in October 2019. This will be the 7th edition.)

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7.6.7: Check for Purpose and Accuracy

Making some judgment as to the purpose of your source will also help you determine whether the information it contains is accurate. Asking why something has been published, what overall purpose its author had in creating and sharing it, is part of the critical assessment you will need to do in order to decide whether you should use it for your research.

For peer reviewed journal articles, books published by scholarly or professional publishers, government reports, and stories from mainstream news outlets, you can be fairly confident that the purpose behind such publications is to provide unbiased information or to contribute to knowledge about a certain topic. A large part of a formal review process includes careful fact-checking by the reviewers.

But evaluating sources from your Google search requires close scrutiny. Ask why a website exists. Are the authors or creators likely to be using unbiased information? Might they be motivated to spread inaccuracies or misinformation? What evidence do they use to support their claims?

ACTIVITY: Watch, Think, and Learn

Take a few minutes to watch this short video from KPU Library on how to evaluate sources. Think about the techniques used to determine the underlying purpose and potential bias of a website.

Embedded Content

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this Embedded Content online

Source

Video: “Evaluating Sources” by KPU Library is licensed under CC0.

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7.6.8: Beyond Checklists- The SIFT Method

So far we've looked at ways to evaluate sources of information according to some fairly simple criteria. Now it's time to dig a little deeper and learn to ask questions about a source that can quickly help you decide whether to trust it or move on to find something better.

What follows is an adaptation of the SIFT (The Four Moves) method, a strategy for making a quick assessment as to whether or not a source of information is reliable and worthy of your attention. This method was developed to teach college students a shorter version of what experienced fact-checkers regularly do when confronted with news sources that are unfamiliar.

Move #1: STOP

The first thing to do when looking at a source of information is to **STOP**. Take a brief pause and ask yourself what you already know about the author, publication or website. Are they familiar to you? Do you already know them to be a reliable source?

Activity: Do you know these sites?

You are researching the topic of whether municipalities should add **fluoride** to public **drinking water**. The screenshot below shows a snip of some of the top results for this search. Most of the sites, or at least their domains, should be easily recognizable: Harvard School of Public Health (**.edu**) and the Centres for Disease Control (**.gov).**

Even if you do not recognize HealthLinkBC, a simple click on the link would indicate that it is part of the BC Ministry of Health (**.gov.bc.ca**).

(Click on the image to enlarge it. Use your browser's back button to return to this page.)

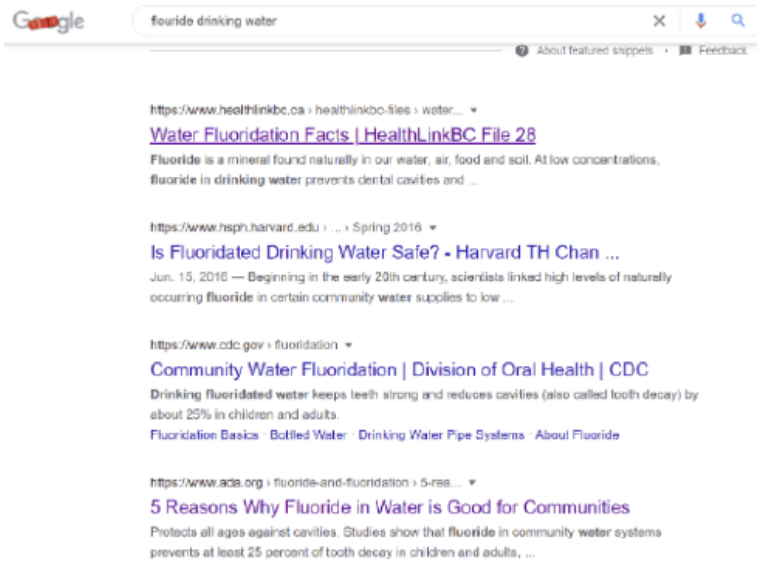


Figure 7.6.8.1: *Top search results for fluoride and drinking water*

If you are confident that your sources are known to be reliable, you don't need to go any further. But if you are not familiar with an author or site, consider using the next 3 moves.

Move #2: INVESTIGATE THE SOURCE

Exploring the source means finding out whatever you can about its author, publisher, sponsoring organizations and partners, and so on, **before** you spend much time on reading it. Knowing the context of a source will help you to be aware of any potential

biases, hidden agendas or purposes, and even misinformation.

A key part of this move is to use something that digital literacy experts call "lateral reading". Making a habit of reading through various external sources **about** your source will help you assess its credibility and appropriateness for your research. This involves getting off the page, opening up a new tab (or three!) and **investigating** the source itself. In their initial stages of information gathering, fact-checkers frequently use this strategy, investing more time in reading about the site up front before turning their attention to the content.

Activity: What can you determine about this site?

The previous search on **fluoride** and public **drinking water** also led to this result, a story on the website Natural News. (Link opens in a new tab. Keep it open to answer some questions about the site.)

Never heard of Natural News? Now is the time to investigate this source!

Open a new tab or window and do a quick Google search for the website or the owner's name. (You can find his name on the About page of the website.) Scan the first few results. How is the website or its owner regarded by other sources, namely the mainstream press and Wikipedia?

Open another tab and do a quick search for the topic fluoride and drinking water. Notice that the Water Fluoridation page on Wikipedia includes a link to controversy surrounding this topic. Go one step further and open the Talk page for this article. What do the comments from Wikipedia editors indicate?

Head back to the Natural News story. What might the heavy presence of advertisements for various alternative and natural health products suggest about the purpose of this site?

Move #3 FIND BETTER COVERAGE

Investing a bit of time up front in order to determine the quality of a site will pay off. Look around for better coverage of your topic, whether this means re-wording your initial search or following the references of other sites. What you are aiming for is an understanding of the context of a topic and who the credible authors and organizations are that can provide consensus and agreement.

Remember, you are not obligated to stay with any specific source. Keep looking, and you will find something better.

Activity: Can you find a better source?

It is beyond the scope of this section to provide all the tips for better searching in Google, but there is one strategy you might consider using for our water fluoridation topic: the site or domain limit in Advanced Google search. For this subject, it might be appropriate to consider searching educational sites or perhaps Canadian governmental sites, which would include information from scientists and public health professionals.

Going back to Google and trying a new search for water fluoridation, see what happens when you limit the search to the domain **.edu** or **.ca.**

Click the images below to see the results list. Where are the majority of sites coming from?



Figure 7.6.8.2: *Google searches using site limits*

Move #4 TRACE CLAIMS QUOTES AND MEDIA TO THE ORIGINAL CONTEXT

Much of what we find online comes to us out of context and sometimes could be a misrepresentation of original stories, reports or findings, either intentional or by mistake. If the source you are considering claims justification through citing research or referring to an earlier source, go one step further and trace back to the original. Did the source get it right? Have they distorted findings or only partially considered what was reported?

Activity: Find the original source

Our earlier Natural News story included a reference to an article published in the journal *Environmental Health*. However, rather than linking out to the scientific article, the author of the story instead points to other Natural News pieces on the topic, making it difficult for the reader to assess the accuracy of the claim and ultimately casting doubt about the trustworthiness of this site.

Checking for the original article using the library's Summon search, you can see for yourself that the authors conclude that any association between levels of fluoridation and ADHD *warrants further study*. A Google search of the article shows several leading scientific journals point out methodological flaws of the study and caution against making causal connections.

Sources

Text adapted from SIFT (The Four Moves) by Mike Caulfield is licensed under CC BY 4.0.

Text adapted from Teaching Lateral Reading by Stanford History Education Group is licensed under CC BY-NC-ND 4.0.

"Water Fluoridation Found to Increase Hypthyroidism Risk by 30%" (2018) from Natural News.

"Water Fluoridation" by Wikipedia is licensed under CC BY-SA 3.0.

Article: Malin, A. J., & Till, C. (2015). Exposure to fluoridated water and attention deficit hyperactivity disorder prevalence among children and adolescents in the United States: an ecological association. *Environmental Health : A Global Access Science Source*, *14*, 17 https://ehjournal.biomedcentral.com/...940-015-0003-1.

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7.6.9: Putting it all together

The following graphic illustrates the process of determining the credibility of sources you find on the internet. It is can also serve as a useful reminder of the critical questions you should be asking of all the sources you find in your research, including those you find in the library.



Figure 7.6.9.1: *How to spot fake news. Image from IFLA.*

Source

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8: BEGINNING STRATEGY FOR EXPLORING

8.1: Research as Inquiry

8.2: Getting Started on Your Research Sections

8.2.1: Narrowing a Topic

8.2.2: But Avoid Getting too Narrow

8.2.3: Background Reading

8.2.4: A Note about Wikipedia

8.2.5: Use a Library Encyclopedia or Dictionary

8.2.6: Developing Your Research Question

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8.1: Research as Inquiry

Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field.



Figure 8.1.1: *Thomas Haynie | Research | flickr | CC BY*

Experts see inquiry as a process that focuses on problems or questions in a discipline or between disciplines that are open or unresolved. Experts recognize the collaborative effort within a discipline to extend the knowledge in that field. Many times, this process includes points of disagreement where debate and dialogue work to deepen the conversations around knowledge. This process of inquiry extends beyond the academic world to the community at large, and the process of inquiry may focus upon personal, professional, or societal needs. The spectrum of inquiry ranges from asking simple questions that depend upon basic recapitulation of knowledge to increasingly sophisticated abilities to refine research questions, use more advanced research methods, and explore more diverse disciplinary perspectives. Novice learners acquire strategic perspectives on inquiry and a greater repertoire of investigative methods.

Knowledge Practices

Learners who are developing their information literate abilities

- formulate questions for research based on information gaps or on reexamination of existing, possibly conflicting, information;
- determine an appropriate scope of investigation;
- deal with complex research by breaking complex questions into simple ones, limiting the scope of investigations;
- use various research methods, based on need, circumstance, and type of inquiry;
- monitor gathered information and assess for gaps or weaknesses;
- organize information in meaningful ways;
- synthesize ideas gathered from multiple sources;
- draw reasonable conclusions based on the analysis and interpretation of information.

Dispositions

Learners who are developing their information literate abilities

- consider research as open-ended exploration and engagement with information;
- appreciate that a question may appear to be simple but still disruptive and important to research;

- value intellectual curiosity in developing questions and learning new investigative methods;
- maintain an open mind and a critical stance;
- value persistence, adaptability, and flexibility and recognize that ambiguity can benefit the research process;
- seek multiple perspectives during information gathering and assessment;
- seek appropriate help when needed;
- follow ethical and legal guidelines in gathering and using information;
- demonstrate intellectual humility (i.e., recognize their own intellectual or experiential limitations).

Source Information:

Research Primer: Mohawk Library (French, Peggy)

- Pressbooks
- https://ecampusontario.pressbooks.pub/mohawkresearchprimer/
- Creative Commons Attribution-NonCommercial 4.0 International

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8.2: GETTING STARTED ON YOUR RESEARCH SECTIONS

Key Takeaway

Research is a process of *strategic exploration*, one that begins with learning how to ask the right question.

Learning Objectives

By the end of this module, you should be able to:

- Understand the difference between a search topic and a research question
- Identify the features of a reference article that can aid in further research

Navigation: How to move around this tutorial

This module should take roughly 15 minutes to complete.

Use the arrows at the bottom of each page to move forward and backward through the modules. Or, use the Contents menu in the top left hand corner to go to a particular section.

It's useful to think about this early stage of your research project as a process of exploration, one that will help you develop a research question that is going to be searchable. If a topic is completely new to you, you will likely want to find some background information in order to understand the context of your topic and how it relates to a larger picture. This exploratory process will also help you with any specialized terms associated with your topic that you might use in developing a search strategy. And sometimes, this initial exploration will also lead you to realize that your question might not be searchable, or that you are going to have to modify it a little. That's ok. A little work up front will save you time later.

Even if you already have some familiarity with a topic, some additional background work can help to bring a fresh perspective to your understanding of it.

Source Information:

Doing Research A Student's Guide to Finding and Using the Best Sources (Brinkerhoff, Celia)

- Pressbooks
- https://kpu.pressbooks.pub/doingresearch/
- Non-commercial-ShareAlike 4.0 International

8.2.1: Narrowing a Topic

8.2.2: But Avoid Getting too Narrow

8.2.3: Background Reading

8.2.4: A Note about Wikipedia

8.2.5: Use a Library Encyclopedia or Dictionary

8.2.6: Developing Your Research Question

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8.2.1: Narrowing a Topic

Defining your research question is a process of working from the outside in: you start with the world of all possible topics (or your assigned topic) and narrow down until you have focused your interest enough to be able to state precisely what you want to find out, instead of only what you want to "write about."

Going through this process can be the hardest part of doing research, but once you have a question that is realistically scoped (not too broad, not too narrow) it will guide the rest of your work.

The Process of Narrowing a Topic

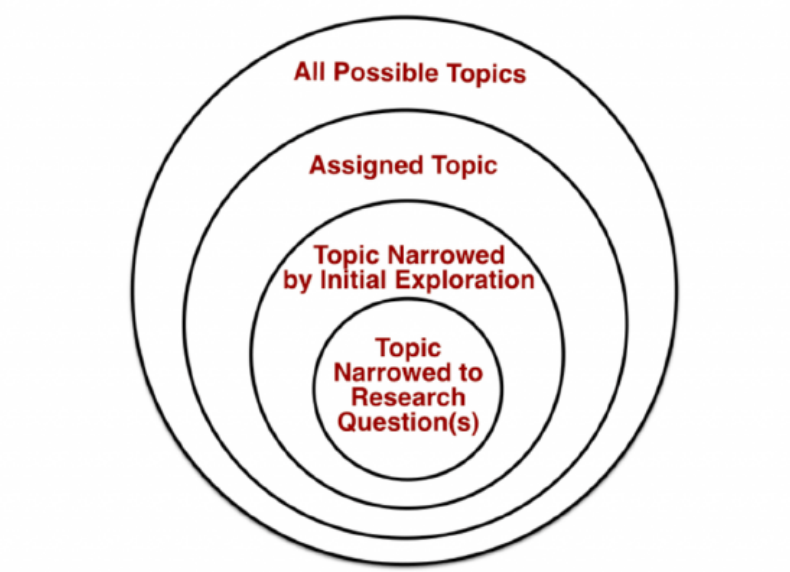


Figure 8.2.1.1: *Moving from broad topic to specific research question. Image by Ohio State University Libraries.*

ACTIVITY: Which Topic is Narrower?

Now it's your turn. Practice thinking about narrower topics with these 3 examples. Click the arrow to show the next question.

For the general topic "Harry Potter," which is a narrower topic?

Check all that apply.

- The supernatural.
- Death.
- Friendship and Harry Potter.
- Harry Potter and the power of choice.

Answer available at the end of this section.

For the general topic "forest fires," which is a narrower topic?

Check all that apply.

- Forests.
- Forest management practices and fire risk.
- Fires.

- Forest fires and climate change.

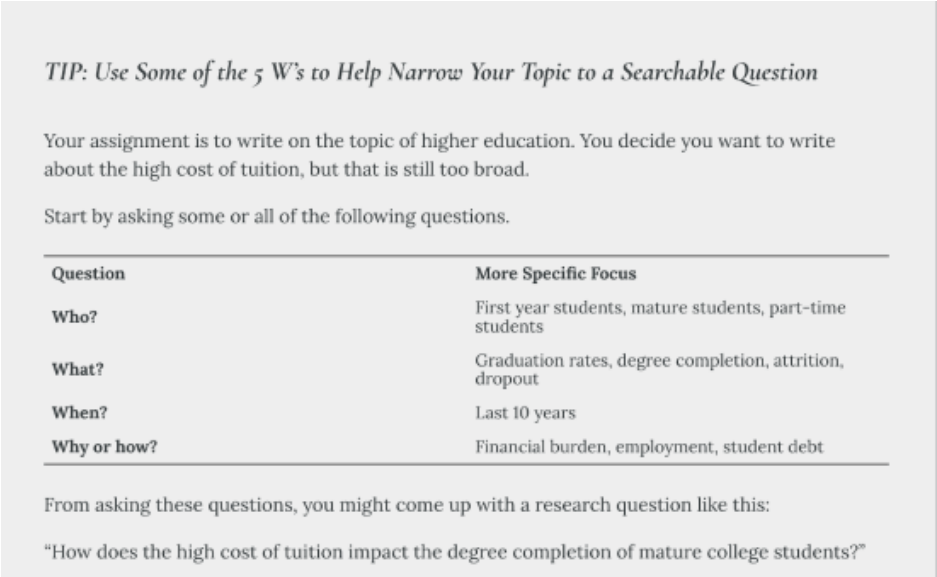
Answer available at the end of this section.

For the general topic of "policing," which is a narrower topic?

Check all that apply.

- Criminal justice system in Canada.
- Policing and artificial intelligence.
- The Canadian Criminal Code.
- Police misconduct and ethnic representation.

Answer available at the end of this section.



TIP: Use Some of the 5 W's to Help Narrow Your Topic to a Searchable Question

Your assignment is to write on the topic of higher education. You decide you want to write about the high cost of tuition, but that is still too broad.

Start by asking some or all of the following questions.

Question	More Specific Focus
Who?	First year students, mature students, part-time students
What?	Graduation rates, degree completion, attrition, dropout
When?	Last 10 years
Why or how?	Financial burden, employment, student debt

From asking these questions, you might come up with a research question like this:

"How does the high cost of tuition impact the degree completion of mature college students?"

Figure 8.2.1.2

Source

Image: "Rq-narrow" by Teaching and Learning, University Libraries is licensed under CC BY-4.0.

Answers

- Friendship and Harry Potter.
- Harry Potter and the power of choice.
- Forest management practices and fire risk.
- Forest fires and climate change.
- Policing and artificial intelligence.
- Police misconduct and ethnic representation.

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8.2.2: But Avoid Getting too Narrow

Be careful about getting too specific with your research question. Not every question that you come up with will be searchable.

For the above question about college tuition, the important questions to ask would be who? and what? Trying to find information on the impact of rising tuition in a particular city or province will be too restrictive, and the location may, in fact, be irrelevant to the search. A large-scale study across Canada or North America would likely yield relevant information that could be useful to your question.

The bottom line is, you will be working toward a **balanced research question** that is specific enough to guide you in your research, but not too restrictive.

ACTIVITY: Find the balanced topic

Now it's your turn. Practice thinking about balanced topics with these 3 examples. Click the arrow to show the next question.

Which question is too broad? too narrow? just right?

Drag the correct answer to the box.

Marine pollution is _____.
Plastic debris and hormone disruption in Pacific salmon is _____.
Ingestion of microplastics in marine mammals is _____.

- too broad
- just right
- too narrow

Answer available at the end of this section.

Which question is too narrow? too broad? just right?

Drag the correct answer to the box.

Anxiety is _____.
Anxiety and undergraduate Psychology students in B.C. is _____.
Anxiety and first-year student success is _____.

- just right
- too narrow
- too broad

Answer available at the end of this section.

Which question is too broad? too narrow? just right?

Drag the correct answer to the box.

Technology is _____.
Technology and student engagement in the classroom is _____.
Smart phones and plagiarism and test-taking is _____.

- too broad

- too narrow
- just right

Answer available at the end of this section.

Answers

- too broad
- too narrow
- just right

- too broad
- too narrow
- just right

- too broad
- just right
- too narrow

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8.2.3: Background Reading

As you are exploring your topic and figuring out ways to narrow it down to a searchable question, it is a good idea to do some initial reading. For one thing, you might not know much about your topic yet. For another, such reading will help you learn the terms used by professionals and scholars who have studied your narrower topic. Those terms might become your keywords or search terms later on, so keep them in mind.

Getting Your Words Right

It's important to understand that the search terms you use will have a direct correlation with the kinds of sources you find. And spending some time early on in your research learning relevant terms will save you time later on.

For instance, if you were going to do research about the risk of bird flu to humans, initial background reading would teach you that professionals and scholars usually use the term **avian influenza** instead of **bird flu** when they write about it. (Often, they also use H1N1 or H1N9 to identify the strain.) If you didn't learn that, you would miss the kinds of sources you will eventually need for your assignment.

Take a look at the Google search results using the terms "bird flu" and human risk vs. "avian influenza" and human risk. Compare the kinds of sources listed.

(Click on the thumbnail image for a larger view. Use your browser's back-button to return to the page.)



Figure 8.2.3.1: *Comparing Google search terms*

If you were to follow the linked results, you would see that the sources on the right come from government agencies and scientific journals, whereas the sources on the left come from news outlets or consumer health websites.

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8.2.4: A Note about Wikipedia



Figure 8.2.4.1

Wikipedia is a popular place to start your research and will likely be one of the top results in a Google search of your topic. A well-developed Wikipedia article, with its content boxes and overviews, will provide a “road-map” of your subject and help you to focus on related and narrower sub-topics. Most introductory paragraphs will offer definitions, related terms, and key historical dates where relevant. Every article provides links to external references and further reading that can be useful sources for you to follow up with. In fact, no Wikipedia article can be published unless it is backed with a list of credible sources. See Wikipedia’s own policy on Verifiability and its discussion of what can be considered a reliable source.

However, while it is not quite true that anyone can edit a Wikipedia article, there are concerns about the potential for inaccuracies and misinformation. This is especially true for controversial topics; a quick look at the “Talk” page of any article will reveal how editors are actively involved to ensure that information presented is free from bias and maintains neutrality. Unlike more traditional scholarly sources of information, content on Wikipedia is continually changing. For these reasons, your instructors may caution you against using it in your research, and will probably discourage you from citing it.

What you can do with a Wikipedia article is look at the external links, the supporting references, and the suggestions for further reading. As someone new to a topic, these sources can be a goldmine; try locating them in the library’s collection or on the internet.

Activity: Watch, think and learn

The following short video from Civic Online Reasoning at Stanford University demonstrates how Wikipedia can be used effectively in early stages of your research.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Source

Image: “Old version of Wikipedia logo” by Wikimedia Commons is licensed under a CC BY-SA 3.0.

Verifiability from Wikipedia the Free Encyclopedia is licensed under CC BY-SA.

Video: “How to Use Wikipedia Wisely” by Civic Online Reasoning is licensed under CC BY-NC-NC 4.0.

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8.2.5: Use a Library Encyclopedia or Dictionary

Although you will likely start your background reading with a quick Google search, you should visit the library and its collection of reference materials early in your research. The library has access to many encyclopedias, dictionaries, and handbooks, both in print and online.



Figure 8.2.5.1: *The reference collection. Image by geralt.*

Encyclopedias and **handbooks** will provide:

- A broad overview of your topic
- Sub-topics and related issues
- Controversies and criticism
- Key thinkers or researchers in the area
- References, recommended articles, and links to further reading

Dictionaries will offer a definition of your term and related terms that will be important as you develop your search strategy.

From the Research Help guide linked on the library's homepage, you can find several of the library's reference collections listed on the Find Background Information page. Many subject-specific reference books can also be found on the various subject guides.

You can also access all of the library's reference books from your Summon search by focussing your results using the "reference" filter. Recall that Summon is the default search box on the library's homepage.

ACTIVITY: Watch, think and learn

The following short video from KPU Library demonstrates how to locate a source for background information using the library's Summon search.

Embedded Content

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this Embedded Content online

ACTIVITY: Use an encyclopedia article

The article below is from the Encyclopaedic Dictionary of Psychology and was found using the library's Summon search tool.

Click on the purple question marks to explore how an encylopedia can be useful at this stage of your research.

(Use Fullscreen to maximize the image, and your Esc button when finished.)

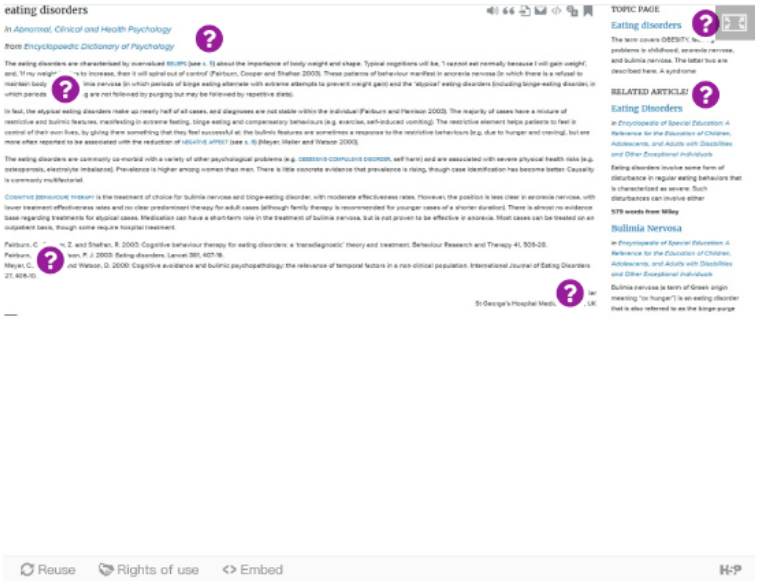


Figure 8.2.5.2

After this background work, you are now ready to start developing the research question you will try to answer for your assignment.

Sources

Image: "Library" by geralt.

Video: "Finding Background Information" by KPU Library is licensed under CC0.

Waller, G. (2006). Eating disorders. In G. Davey (Ed.), *Encyclopaedic Dictionary of Psychology*. Routledge. https://search-credoreference-com.ezproxy.kpu.ca:2443/content/entry/hodderdpsyc/eating_disorders/0

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8.2.6: Developing Your Research Question

By now, it should be clear that finding a research question is a process of exploration and refining: exploring a topic will lead to developing a question, and further refinement will help you to focus that question to something that is not too broad and not too narrow.

ACTIVITY: Watch, Think, and Learn

Take a minute to watch this short video on how to develop a research topic. Think about the steps the student takes starting from a wide open topic, to something too narrow, and finally, to finding a balanced topic that is searchable.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Steps for Developing a Research Question

The steps for developing a research question, listed below, can help you organize your thoughts.

Step 1: Pick a topic (or consider the one assigned to you).

Step 2: Write a narrower topic that is related to the first.

Step 4: Do some background reading, using the Library's reference books. Do some initial research in a library database.

Step 5: Readjust your topic if you get too few, or too many, search results.

Step 6: List some potential questions that could logically be asked in relation to the narrow topic.

ACTIVITY: Summing up Module 1

Choose the best research question.

- Video games and society.
- Students and gaming.
- The effect of violent video games on children's behaviour.
- The effect of video games on Kwantlen students' time management.

Answer available at the end of this section.

Choose the correct statement.

- Encyclopedia articles provide an overview of a topic written by an expert, with links to other related sources.
- A quick Google search is all you need to get started on your research.
- Wikipedia articles are written by authors whose expertise can be verified.
- Doing background research is a waste of time when I already know lots about my topic.

Answer available at the end of this section.

Key Takeaway

Research is a process of *strategic exploration*, one that begins with learning how to ask the right question.

Source

Video: “Picking your Topic is Research” by North Carolina State University Libraries is licensed under CC BY-SA 3.0.

Answers

The effect of violent video games on children's behaviour.

Encyclopedia articles provide an overview of a topic written by an expert, with links to other related sources.

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9: ADVANCED STRATEGY FOR EXPLORING

9.1: Search Resources and Techniques

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9.1: SEARCH RESOURCES AND TECHNIQUES

9.1.1: Identifying a Variety of Words to Use and Creating Search Strategies

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9.1.1: IDENTIFYING A VARIETY OF WORDS TO USE AND CREATING SEARCH STRATEGIES

In this section you will find out about the three ways to control your searches (or to create your searches) that work in every database. Later, when we discuss different kinds of databases, you will see that the library catalog, library article databases and Google are all databases that can be controlled with these steps as well. The three ways or steps are 1) choosing the words you type in. 2) how you combine those words and 3) where in a database (which field) you should look for those combined words. Notice that in this section we are not dealing with which database to use, rather, once you are in a database, where should you look. Do not skip a step or you won't be able to create a correct strategy.

9.1.1.1: Identifying key concepts and alternative terms to type in

9.1.1.2: Combining terms effectively- Boolean, phrase searching and proximity searching

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9.1.1.1: Identifying key concepts and alternative terms to type in

Let's say that, after doing the work of choosing a topic as described in section 5 above, you have come up with the topic sentence:

> How and to what degree is the drought effecting the redwoods in California?

Type your topic sentence or research question. Identify the key words or concepts in your topic sentence by bolding or underlining them. In the example above, the following words would be underlined: drought, redwoods, California. If you identify words such as *impact*, *compared to, related to, benefits of*, be sure and come up with good alternative words for them because words like *impact*, *compared*... are rarely good choices to use in a computer search. Identifying alternative terms for such words is discussed later. It is often best just to avoid using such words as your key words altogether. Write alternative words for all your key concepts.

In addition to synonyms, you are looking for related terms: broader terms, narrower terms and antonyms (opposites). Your topic, no matter what it is, is on a continuum from narrow to broad in a continuum of topics. You want to create a continuum for your topic for two good reasons into which we will delve after this example.

Let's say you are going to do a paper/project on the environment. It seems obvious that is far too broad a topic. So, we narrow it down. How about the environment of animals (still too broad)? Let's whittle this all the way down: the environment of birds, the environment effecting the reproduction of birds, the environment effecting reproduction in birds of the Americas, the environmental pollution effecting reproduction in birds of the eastern Pacific, the environmental pollutions effecting the eggs of birds of the eastern Pacific, the effects of pesticides on the eggs of birds of the eastern Pacific in 1940-70, the effect of DDT on the eggs of birds of the eastern Pacific in 1940-70s, the effect of DDT use in the 1940-70 on the eggs of the pelicans on the Coronado Islands.



The example above is most certainly **not** the only way one could narrow down this topic, but you do want to take your topic and create your own continuum from broad to narrow. We started with the huge topic, *environment*. If you started with the topic of *the effect of pesticides on birds*, you would want to create a continuum that got gradually broader all the way up to *environment* and gradually got more detailed all the way to effect of *DDT use in the 1940-70 on the eggs of the pelicans on the Coronado Islands* as an example. Again, there is not just one way to create a continuum. The important thing is to create one. This makes it clear to you what exactly you are interested in learning about. If, for example, the continuum above is what you developed and you found a great article you really found interesting about pesticides and dolphin reproduction in the eastern pacific, you would know you have strayed off your topic and need to refocus on the search results that fall on your continuum and answer your research question.

There are two more important reasons to think through a continuum. Let's suppose you are interested on the *impact of pesticides*

on birds as your paper/project topic.

a. Rarely do you find books or articles exactly on your topic. Most often, the information resources you use will be broader and narrower than your topic. A subject specific encyclopedia on how pesticides harm wild life is an example of a source broader than your topic. In it you may find a chapter on birds. Additionally, you might discover in your reading that pelicans were put at extreme risk because of the heavy use of DDT (a pesticide heavily used in the 1940s and 50s). That is much narrower than your topic, but you certainly could use an article or two about this to make a point.
b. Because the resources you use will be broader and narrower than your topic, the words you use in your searches to find those resources will also need to be broader and narrower than your topic to find them. To find that encyclopedia on how pesticides harm wildlife, for example, you would use broader terms than you find in your topic sentence. For example, you might use the words animals and pesticides and not use the word birds to find it. To find a supporting article, you may try some narrower terms than those in your topic sentence. For example, DDT and pelicans.

Now that you have several questions about your topic and you know where your topic falls on a continuum of topics (you have done that, right! Don't skip a step!) You want to make a grid. This grid will consist of key words and concepts for your topic and alternative terms for those. Include broader and narrower terms as well as synonyms and antonyms because the authors will often use different words for your topic than you have used. You will miss good information if you only use words from your topic sentence. This is one of many reasons you will be doing several searches to get the best information. Some words will work well in one database while different words will work well in another. You will find it useful to do multiple searches in the same database using different words. In our example, we might type in pesticide and birds, words right out of the topic sentence, and get some good results. We would, however, miss articles in which the author used the terms insecticides and birds. It is important, therefore, to try many combinations of terms to find all the relevant information resources (e.g. books and articles).

Pay close attention to making an accurate grid because, when done right, you will be able to use it to create a search strategy. Doing this now will save you time later. You will have far less off-topic resources to sift through. Make a grid with the key concepts down the left hand side of your page. They should be the exact words from your topic. List to their right the broader terms, narrower terms, synonyms and antonyms.

Be sure that you only use concepts that reflect key concepts. If you have a word you really want to use that is not in your topic, perhaps your topic sentence or research question need to be rewritten to include this word(s) or the concepts it represents. If that word or concept is of interest to you and the due date for your paper/project still allows you time to begin again, a change of topic may be in order.

Notice the grid asks for **key concepts** and **not key words**. Sometimes your concepts will be expressed in more than one word, for example, Sierra Nevada Mountains. You want to preserve the concept, not the individual words. Another example would be if your paper/project had something to do with storm drains, you would want to keep those two words together since you do not want information on winter storms or the drains in your house. Why this is important will become very clear in a bit. (You will add more and more alternative words to the grid as your research progresses. See 6E for details.)

Here is an example of the grid.

Topic:
How and to what degree is the drought effecting the redwoods in California?

Key Words / Key CONCEPTS	Alternative /Broader/Narrower CONCEPTS
Drought	Water, water supply, water level, water shortage, aquifer, precipitation
Redwoods	Tree, Sequoias, coast redwoods, conifers, forest
California	Southwest, west coast, Sierra Nevada Mountains

Notice the word *effecting* was not used as a key concept. That is because it is best not to use words *effecting*, *influence*, *impact* and so on in your first searches. Try to use only solid nouns. As with most things in this text, there are exceptions. If you already have a little knowledge about your topic and you have a few effects, influences or impacts you want to explore, add a grid line for the terms. For example:

- Key Words / Key Concept*: Alternative/Broader /Narrower Concepts
- Effecting: Sap, sap depletion, pests, beetles

Go ahead and use words like effecting, influence and impact if you have exhausted your other terms and other search strategies soon to be explained or if you are getting far too many hits. *Do not confuse the terms “key words” or “key concepts” in the grid with “keywords” you sometimes see in a database. “Key words/key concepts” heremeans the main ideas within your topic. “Keywords” as used in databases will be discussed later (See 6E).



Figure 9.1.1.1.1: (left) Devil’s Postpile National Monument and (right) https://www.fs.usda.gov/ detail/eldorado/ home/?cid=FSEPRD519104

Truncation and Wildcards

Truncation and wildcards come in handy when the words you want to search have slight variations. Perhaps just one letter could broaden your search. For example: perhaps you want to find both the singular and the plural of a word: turtle and turtles, woman and women. Or perhaps you want to find both the American English word *color* and the British English word *colour*. This can be done using truncation and wildcards which saves you an additional search and ensures you capture all relevant results. Some help screens for some databases will call truncation a type of wildcard. Check the database help screens to determine what symbols to use for truncation and wildcards and what happens when you use them. Each database is different. While truncation, as described below is generally standard, wildcard searching varies greatly from database to database. A common usage follows the truncation description below.

Truncation

To truncate means to cut off. In most databases, by adding a symbol to a word that you cut off will garner results that have all the permutations of that word the database knows that begin with the letters you typed in. For example, pira* will find *pirate*, *pirates*, *piracy*. But this is a bad example, because it will also find the word *piranha* and *piranhas* and so on. So it is very important that you cut off your words where it makes sense or you could end up with piranhas or worse. It is **an easy way to search the singular and plural of a word at the same time**. If all you are interested in is a pirate or two, search the term pirate*.

The asterisk (* shift 8 on your keyboard *) is the most often used symbol, but you might find the rare database that uses other symbols for truncation such as a dollar sign or a question mark. Even rarer databases allow for left hand truncation meaning you can ask the database to find variant beginnings of words instead of endings.

Wildcards

Using wildcards is a way of replacing one letter within a word or at the end of a word. When wanting to get both the singular and the plural of a words such as women and woman, the last vowel can be replaced with a wildcard symbol: wom?n. Both words would then be searched. Using a wildcard is also useful when searching for words that are spelled differently in British English. For example, *color* is spelled *colour*. Not all databases allow this and the symbol for this may also vary. The most commonly used symbols are a number sign (#) or a question mark (?). So if you want to include resources that may have been written by our cousins across the pond, you may choose to type *colo#r*. That would retrieve items with both *color* and *colour* in them because the # replaces one letter or is ignored by the search. What would you expect *wom?n* to find?

The bottom line to know about truncation and wildcards is that they exist, that they are defined and used differently from database to database and that they can expand your results. Check the databases' help screens and experiment to see just what results you get.

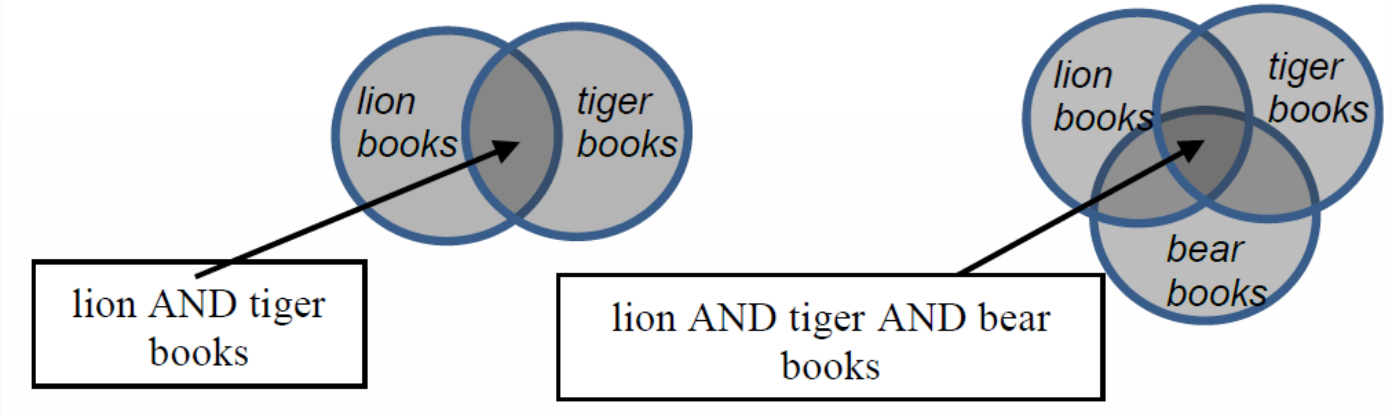
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9.1.1.2: Combining terms effectively- Boolean, phrase searching and proximity searching

Boolean: AND / OR / NOT

You walk into a library or book store and ask to see all the books about lions and tigers. You want the books with information about both lions and tigers because you are doing a study about how lions and tigers interact in the wilds of India. Some of the books are only about lions and some are only about tigers. Some, however, are about both lions and tigers. In the illustration below, the whole left circle is filled with books about lions and the whole right circle has books about tigers. The books that fall in the darkest area have information about both lions AND tigers. This is the Boolean AND. Let's say we asked for books about lions AND tigers AND bears (Oh my!). Notice that when we add another animal to our book needs, the darkest area is smaller meaning we get fewer books.



This process is **not** like addition in that you get more when you say 1 and 1 equals 2 (more than 1). Every time you add another word by combining it with an AND, you will get fewer results: you will find fewer books or articles. The other thing to note is that most databases default to an AND combination. In other words, if you do not tell the database how you want the words combined and you have typed in more than one word, the database will most likely (but not always) combine them for you using AND. A common mistake is to keep adding words to a search in anticipation that the results will grow. Now you know why that does not work. Having said that, most of the time you are going to want to use the AND search because it captures the multiple concepts of your topic.

Relating this to the grid you made, the Boolean AND is used between terms in different rows.

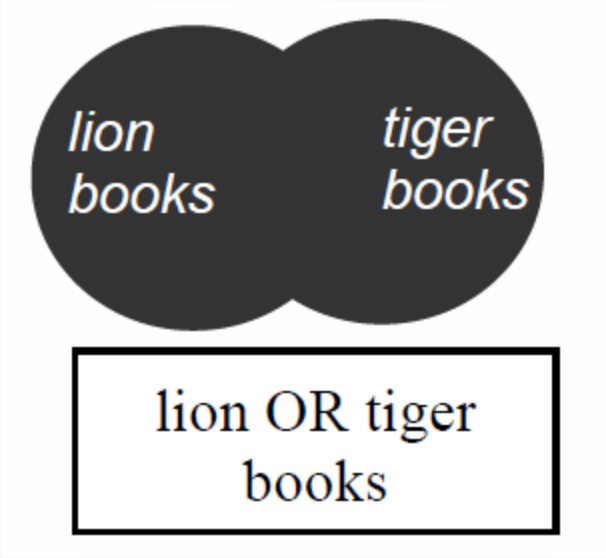
The Boolean OR and Boolean NOT are trickier than they look. The results they give you can include many resources off topic in the case of the OR and miss many in the case of the NOT. When used correctly, they can be powerful tools.

Boolean OR gets you anything and everything that has either and all the words you type in. It is often used with synonyms:

teens OR *youth* OR *adolescents*.

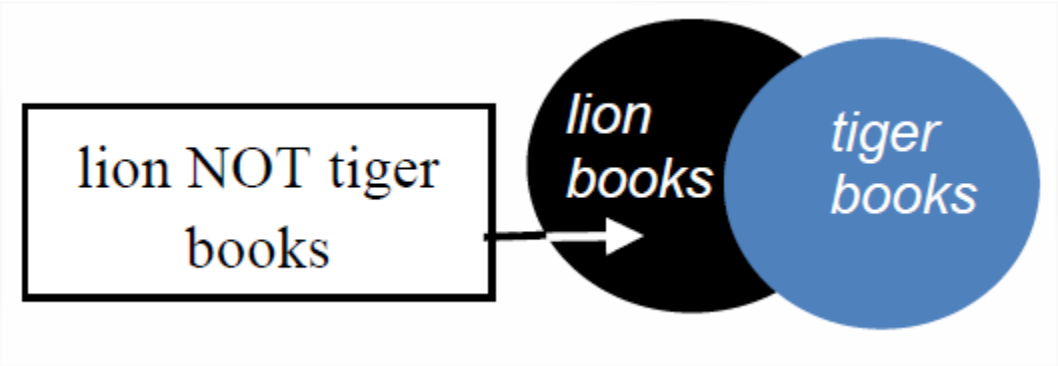
If, for example, your topic was the big cats of India, you would want books about lions, books about tigers and books that are about both lions and tigers. This is when you would use the Boolean OR.

Relating this to the grid you made, the Boolean OR is used between terms in the same row.



The Boolean NOT omits terms from your search. An example of a good use of the Boolean NOT would be if you are interested in the Dolphin habitat off the coast of Miami and you were retrieving a lot of information about the Miami Dolphins football team. Since it is completely off topic, you could try NOT football.

Caution is necessary, however, because the Boolean NOT can end up omitting resources you might want unless you are careful how you use it. Let's say you are only interested in information about lions, but your results keep coming up with a bunch of tiger books as well. To eliminate the books about tigers, you use a Boolean NOT and type in NOT tigers. What you have eliminated are any books with the word tiger even if it has some very good information about lions and that would be bad.



We have covered the Boolean AND, OR and NOT. You will find that most database help screens call them operators and require that you type them with capital letters if typing them is required. The suggestion here is that you depend on multiple AND searches and do not make using OR and NOT your "go-to" operators. If you choose to try more than one operator in a search (an AND and an OR, for example) check with your librarians. It is a bit more complex than it looks and requires a bit more finesse than we will cover in this text.

We will talk more about searching the web later, but let's take a detour for just a moment to discuss what Google's advanced search calls the Boolean operators.

- AND: All of these words (that you have typed in)
- OR: Any of these words (that you have typed in)
- NOT: None of the words (that you have typed in)

Searching Google is merely searching another database so most, if not all, of the database tips apply.

Another important and often used way to combine words in a search is called phrase searching.

Phrase Searching

If you have two or more words and you want to find them right next to each other and in the order that you have typed them in, put them in quotation marks. Think of a multiword phrase that captures one concept. For example *Sierra Nevada Mountains, storm drains, ice cream, Miami Dolphins, post office, jump rope* and so on. If we combine the words *Sierra Nevada Mountains* with an AND, we could get resources (e.g. books or articles) that discuss the *Sierra* Trading Company's new boots they call Nevada that are great in the *mountains*. If we combine *ice cream* with an AND we would get resources that talk about an *ice* hockey team that says they will *cream* their opponent on the *ice* next week. If we combine *post office* with an AND, we would get search results with both words in it such as an article about a medical office set up in a research post in Antarctica. If we want those words found together so that they capture one concept in our search, we combine them by putting them in quotation marks e.g. "*Sierra Nevada Mountains*", "*ice cream*", "*post office*". What might we get if we did not use quotes around jump rope.

Proximity Searching

It can come in handy although not all databases are set up to handle this kind of search. Check the database help screens for specifics on how to use this kind of search if you want to try it. Proximity searches will return results with two words or phrases that appear in the resource within so many words of each other. Some databases allow searching for the words within the same paragraph.

This is how it works in some databases: Perhaps an author speaks of the "mountains of the Sierra Nevada" and does not use the phrase "Sierra Nevada Mountains". To catch information using that turn of phrase, you might type "Sierra Nevada" n/3 mountains. Between the terms or phrases use n/# for terms to be found within # of each other and w/# to find the first word # or less words before the second word or phrase. If you want football and Denver to appear within say, 3 words of each other, you would type football n/3 Denver. If you want them to be within 5 words of each other and in the same order that you type them, you would type football w/5 Denver. You can change the number to suit your search. (Where ever there is a # in this paragraph, substitute a number.) This is tricky especially since this too varies from database to database.

To recap, the three ways we discussed to combine your terms are 1) the Boolean operators, AND, OR and NOT 2) phrase searching by using quotation marks around more than one word or 3) proximity searching. To combine words to make a good search, we go back to the grid of alternative terms above: the grid about the drought in California and how it affects redwoods. You can combine any word on one line with a word on a different line with a Boolean AND. If you want to try using the Boolean OR you will combine words on the same line with an OR. Words that you want to find together you will type in quotation marks such as "Sierra Nevada Mountains" and "water shortage." This is how the way you choose to combine your words relates to the grid above: the grid about the drought in California. It is why you need to be very careful on making an accurate grid as you add alternative words to it. Here are two examples of what you could type into a database. Truncation is added for a more complete search.

"water shortage*" AND redwood*

Or something like this

drought AND Sequoia*

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9.1.1.3: Choosing a database

Now you can go to a computer and start the research you will use for your paper/project. You have thought through your topic, identified questions to explore, terms to use and how best they will be combined. Now it is time to pick a database (or two or three or...). For good research, you will find that you will often use multiple databases. Most of the information you will use for your academic papers and projects will come from books and articles that you will find via library databases. When first using a database, be sure and move the scroll bar all the way up and down to see what searching and limiting options you have. Click on the advanced search and scroll up and down again. In some databases you will see the options change a bit once you have done a search or when you are further along in the process. Read the pages that appear so you can take advantage of all your search options.

Every Database is Different

Some have books, others have articles and some have both or other kinds of information. Some specialize in one subject field and have information only on nursing or psychology, or botany and so on. Some have information on just about everything. Some have scholarly information, some have popular information and some have both. Some allow you to limit your search to scholarly information. Some allow you to limit your search to only items that are available in full-text. Some give you access to information on the internet, others only provide information they have purchased. Be aware of these possibilities and look for them.

Every Database is the Same

Every database is searchable. Every database uses Boolean logic. Every database has fields so always check the advanced search to see what fields you can search. (This is a different kind of field from a field of study to which we referred when we talked about experts in a field. For now, just know that all databases have fields.) Most databases will allow you to print and/or email what you find. Some will put your citations in a particular style such as APA or MLA as an option when you send via email. (Always check these automated citations for errors and see 3D for more on citation styles such as MLA or APA.) Most allow truncation and phrase searching. Be aware of these possibilities and look for them.

Databases offer Books, Article, Media and More

Choose a database that will have the kind of information you will need by reading the database descriptions provided or by asking a librarian. Library databases may contain lists of articles, full text articles, a list of books, periodicals, DVDs owned by the library, the full text of books or streaming video. A library's catalog (which is a database) will list what the library owns: e-books, print books, periodicals (magazines, newspapers and journals) and DVDs. Notice, that this list does not include articles. Library catalogs lists the periodicals the articles are in but not the authors, titles or full text of articles. A community college might have 50 databases while a large research institution will have hundreds. Talk with the librarian about which to use for your topic so you can use your time efficiently.

Free Databases and Access from Home

Most vendors of scholarly databases charge for articles, but your institution and the public library pay for the ones they provide and offer them to you free of charge. It is important to go through your institution's website to reach the database so you can get to them freely. If you are enrolled in a college, chances are you can access many of the databases from home or any off campus spot with web access. If you go directly to the database provider's website, such as EBSCO or ProQuest, you will not have access, unless you pay. Most often your library will have a page of databases from which you may choose. Choose the one that offers both the topic and type of resource (books, articles, etc.) you need.

Article Databases

Article databases work like an index found in the back of many books. In a book's index, you do not find the information, but rather the page number on which you will find the information. In article databases, you will find lists of articles on your topic

and the volume and issue of the periodical (magazine, newspaper, journal) in which you will find each article. Many databases will have the full text of the article right there.

Searching more than one library database at a time

Some institutions offer multiple-database searches that allow you to search most if not all of their databases at once. That means your results will include articles, books, encyclopedia entries, films and more in the same list. These resources may be electronic or in print. These are federated searches and are often called by other names such as a *discovery search, search all, search works or onesearch*.

It is common for books and articles to be labeled as such in federated searches. If not, it is up to you to determine the kind of information retrieved by your search. Books will have only a year in their citation, while article citations will have the year, as well as season, month, issue number and so forth. If in doubt, ask a librarian what you have in your results. It is important to know what you have found so you can decide if it is the type of source you want to use, so you can cite it correctly and so you know how to evaluate it properly.

Some libraries will show the results of these federated searches in categories such as books and articles. After you search your topic, you can then choose if you want books or articles. The advanced search options sometimes appear after your initial search in the federated searches. Remember to look for the search options so you can optimize your research.

It is important to notice that the fields available to search in the federated searches are different and often more limited than the fields available via a search in an individual database. Field searching is a powerful way to control searching.

Notice also the date of the information you want in the citation for that information. Occasionally, the date that is most prominent is not the date of the information, but rather the date the database was created.

Libraries that offer multiple-database searching (federated searching) most often also allow searching individual databases. If you want to take advantage of searching specific fields or a subject specific database that fits your topic, it might be best to choose an individual database. Another reason to use an individual database rather than the multiple database search offered by a federated search is for known-item searching (i.e. if you know the title of a book or article) or if you know what you want is a book. For the latter, you can just look in the library's catalog and avoid looking through articles and films for the book you want.

Google is a Database

Most of us have used the search engine Google. Google is another database so the same searching tips we have discussed also apply. Used in conjunction with library databases and applying solid evaluation criteria, Google can be a very useful tool to access information but does not replace the high quality information found in most academic library databases. Before using Google, ask yourself the evaluation questions and other such things as, "How am I going to use the information?" and "What kind of information do I need?" Is Google the best place to look for the information you need? As with other databases, look for Google's advanced search which will provide more search options. Google can link us to a wealth of information on the web. Like any information, information found through Google needs to be evaluated. Google is great at finding organizations and associations that might have information on your topic.

Wise fool

Nasrudin Sufi stories have been used to learn about both the sacred and profane since the 13th century. Here is how Shah (1964) tells one of the most well-known stories about Nasrudin:

> On one occasion a neighbor found him down on his knees looking for something.
>
> "What have you lost, Mullah?"
>
> "My key," said Nasrudin. After a few minutes of searching, the other man said,
>
> "Where did you drop it?"
>
> "At home."

"Then why, for heaven's sake, are you looking here?"

"There is more light here."



Figure 9.1.1.3.1: Los Angeles County Museum of Art Source: cdn.loc.gov/service/pnp/highsm/21800/21894v.jpg

For our purposes, we can learn from the wise old fool that we should not look for the answers to our questions in the place that seems easiest, but rather where the information we need will be found. The goal is to answer your questions, not simply take the first few things that pop up on your screen and use only them. Choose a database that has the kind of information you want (book, articles...), covers the topics you need (general or subject specific information) and has information meeting any other criteria you need (peer reviewed, primary source...).

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9.1.1.4: Choosing fields

What is a field? A database is made up of records and the records are made up of fields. To visualize a database, think of a blank form, for example, a form for an academic record. It has blank lines for the student's name, school ID number, the classes taken, the semesters in which they were taken and grades. Those are fields. Your institution's student database is made up of thousands of these records: one for each student. Each of those records has all of the fields. When your institutions knows your name and wants your record, they will ask the database to look at every single record, but only at the names of the students until it finds your name in the name field. Then your whole record can be pulled up from just your name. If, on the other hand, they only have your ID number, they will ask the database to look at every record of every student, but only look at the ID numbers. They do this by typing your ID number into the search field called ID number. Then your whole record can be pulled up from just typing in your number.

Think of contacts in a cell phone. Every time you add a new person to your contact list, you create a record for that person. To create the record, you fill in the fields: name, phone number, address and so on. You create a record for each of your contacts in your phone by filling out the fields. So Mom has a record, best friend has a record and your boss has a record in the database you created on your phone. And fields hold the information that we are after. When you get an incoming call, the phone searches the number field and tells you your friend is calling. When you place a call by typing in your friend's name, the database searches all of the names for your friend's and then moves to the number field and dials it for you. Also notice that the database **does not have** Mom, best friend and your boss in it. Rather, the database **has records for/about**, Mom, friend and boss. This distinction will come in handy later.

The same principle applies to library databases. Notice in databases there is often a way to search author, title, keyword and other options. These (author, title, keyword ...) are called fields and you are doing field searching when you choose one of them. Most of the time, this is not part of the basic search, but is available in the advanced search. You can see now how databases are made up of records. Records are made up of fields. And fields hold the information we search and are seeking. (See the search screen examples at the end of 6E.)

The field(s) you choose to use is dependent upon what information you have. If you know the author and title, you would choose the author and title fields (See 6I for known item searching). If you are looking for information on a topic, you use a variety of fields as discussed in 6E below.

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9.1.1.5: Topic Searching

So far we have covered two of the three parts to creating a search: the words you want to use (See 6A) and how to combine them (See 6B). The third step or third way to create a search is to decide on what field to search. These three components of a search apply to both known item searches and topic searches.

When you are searching for information on a topic, (when you don't have a title, author, or complete citation), the best initial strategy is to search in many fields at the same time, such as the title, subject, contents, abstract and other fields. That is called multi-field searching. Each database searches different fields in their multi-field searches. The help screens often will tell you which fields are being searched. Additionally, each database may label this broad multi-field search differently. It may be called *keyword, keyword anywhere*, any field or all fields. As of the writing of this, in EBSCO's *Academic Search Complete*, for example, the multi-field search occurs when you use the default search which is *labeled select a field*. Remember that these broad searches rarely search every field, but do search several fields at once.

When you are searching for a topic **do not start** by using subject field searching. The words in your topic are not necessarily the subject terms used in a database. Subject words are unique to each database. For example one database may use the subject capital punishment for all resources on that topic, while another database might use death penalty. While you might get a few results if you choose the wrong one, you will miss the bulk of the information on your topic. Instead, start with broad searches that search multiple fields.

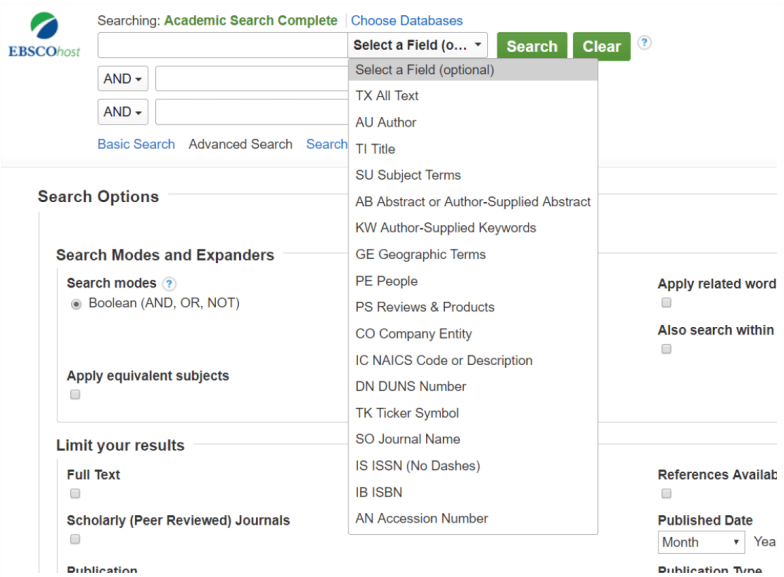
In the cropped screen shots at the end of section 6E are examples from two databases: Irvine Valley College Library's catalog and EBSCO's Academic Search Complete. There are thousands of databases out there so these two are as good as any for our discussion. Notice the different ways these databases present the capability of choosing which fields to search. The catalog presents you with boxes to type in, while EBSCO offers a drop down menu so you can change the names of the boxes.

Don't assume by the name of the field what a specific field search searches. In EBSCO's *Academic Search Complete*, for example, there is a field in the drop down menu labeled *people*. If you choose that field and put in the word *adult**, you may get some hits, but not a lot. This may make you think that there is not much on your topic regarding adult(s). If you type in *British* or *Canadian*, you do get some results, but, again, not everything about the British on your topic. A *people* field search seems to work best if you put in the name of a well-known person. Try *Gates*. Notice that you will get both Bill and Henry Louis Gates so you would need to further narrow your search to get the Gates in which you are interested. If your results do not make sense (e.g. there are only a few articles about adults), there is probably something off in your search. The point is that these databases are not perfect pieces of technology, therefore, you want to try several different searches to be sure you are getting the best information.

When there are too many results by using a multi-field search, change the fields you are searching and try your terms in the title or abstract field if the database allows you to search those fields. ("Abstract" is an academic word for summary.) On the other hand, if there are not enough results, put one of your terms in the full text field which searches the full text of the resources. Think it through. If a word shows up in the title, there is a very good chance the article will be primarily on that word. Alternatively, if you are having a difficult time finding information (and you have already checked your spelling and tried truncation), try your word in the full-text field to see what you find. Mix them up. Experiment. Persist until you find the answers to your questions.Once you retrieve some good books, articles or whatever from broad searches, read the titles, abstracts (summaries) and "controlled vocabulary" looking for more terms to use in your searches. Enter them into your grid.

Controlled vocabulary (subjects, descriptors, subject headings...) is a librarian term to describe the words a database uses as the topics of articles and books on the same topic: not unlike tagging in social media. Using controlled vocabulary terms to search in the controlled vocabulary field will produce fewer results than broad searches in other fields, but they will usually be more relevant.

Remember that you will use more than one database to do research. **Controlled vocabulary fields are called different things** in different databases such as descriptors, subjects, subject headings or controlled vocabulary. **Controlled vocabulary terms can be different in different databases**. For example, articles on the same topic in one database might be "tagged" with the term pesticide and in another database tagged with the term insecticide. These terms would be found in their respective controlled vocabulary fields which could be called subjects, subject headings, descriptors and so on. Controlled vocabulary terms are good sources for more terms to use to create more searches.



Read through the record to determine the database's controlled vocabulary terms for your topic. Once you have identified them, a controlled vocabulary search can be very useful. Add these new terms to your grid. Use them initially in broad searches in new databases since they may not be the terms used in the controlled vocabulary of that newly searched database.

Remember what you are learning here will transfer to most any database in most any institution. What you want to take from this is that most databases will allow you to choose the fields to search so look for that capability in the database. Use the terms you find in records to create more searches.

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9.1.1.6: Limits

Always look for an advanced search option so you can see other ways the database allows you to search. Look for limits such as peer reviewed, scholarly, date ranges, format and so forth. Most often, date ranges are the date of publication, not the date of your topic. This is not always true though. Notice that the limits are more controlled than the field searching. Field searching lets you type in anything, while the limits present more controlled options.

Not getting enough

- Reconsider your truncations.
- Do you need to narrow your topic?
- Try selecting title or abstract instead of multi-fields or full-text field.
- Can you narrow your topic by adding a word from another of your grid?
- Don't use the Boolean OR.
- Look for and try controlled vocabulary field searches
- Try a subject specific database.

Not getting enough

Get rid of some of your Boolean AND combinations.

- Try synonyms.
- Find more terms from encyclopedias and text-books to use in Boolean AND searches.
- Use a Boolean OR search. Refer to your grid or check with a librarian to be sure you are using it correctly.
- Try selecting a different field such as full text instead of the default.
- Are there words you can truncate?
- Check the spelling. Are there alternative spellings?
- Try a different database.

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9.1.1.7: Known Item Searching

Often a professor, friend or colleague will recommend a book or article to read or you may find a citation in a textbook or at the end of an article that peaks your interest. Finding that book or article is referred to as a “known item search” (as opposed to a topic searching). If you know the author and, therefore, have selected the author field, the search will look at all the authors of everything in the database for a match to what you typed. If you type in the box next to where it says title it will look at everything in the database, but only at the title fields. If you are looking for a book and are, therefore, in a book database (e.g. a library's catalog), this is straight forward. You search for the author or the title and read the online copy or note the call number and location (explained below) and find it on the shelf, take it home put on your slippers and settle in for a read.

If you are looking for a specific article and have the title of the article, title of the periodical it is in, in other words, the citation, finding the article is a bit more involved. Basically, you will look in the catalog for the title of the **periodical**, then, if the library has the periodical title, you will check to see if the library also has the issue or date that you need. And then go from there.

In known item searching it is necessary to determine if you are looking for a book or an article because the process of finding them is a bit different. This is one reason to learn how to read a citation. Below are examples of a book citation and a periodical (article) citation. Note the differences. Books will have only a year for a date, while articles will sometimes have a month or season as well as the year. Articles can also have a series of numbers designating the volume (often correlated to a year), issue (the number within the volume) and often the page numbers. The first citation below is a book and the second is an article citation.

Book citation

Brake, M. (2013). Alien life imagined: Communicating the science and culture of astrobiology. New York: Cambridge University Press.

Article citation

DA SILVA, L. L. (2013). Unidentified Aerial Phenomena: The VASP-169 Flight Brazilian Episode Revisited. Journal of Scientific Exploration, 27(4), 637-654.

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9.1.1.8: Brief Review of Creating Searches

A basic practical search strategy will include all three parts for both topic and known item searching:

1. The words you type in (and trucation when appropriate)
2. How you combine the words (Boolean operators and phrase searching)
3. In what field(s) (title, abstract, author, full text and so on) you tell the database to look for the words Use your results to find new words on your topic to search.

These are generic database strategies that work in most every database. Give choosing your database some attention since each one varies in formats (books, articles...) and topics that they offer.

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10: IDENTIFYING AND CHOOSING SOURCE TYPES FOR INFORMATION NEED

10.1: Sources and Information Needs
10.2: Sources to Meet Needs
10.3: Planning Your Sources

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10.1: Sources and Information Needs



Figure 10.1.1

This section and the section on Types of Sources work together. That's because knowing the kinds of information in each category of sources will help you choose the right kind of information to meet each of your information needs. **And some of those needs are very particular.**

Information needs are why you need sources. Meeting those needs is what you're going to do with sources as you complete your research project.

Here are those needs:

- To learn more background information.
- To answer your research question(s).
- To convince your audience that your answer is correct or, at least, the most reasonable answer.
- To describe the situation surrounding your research question for your audience and explain why it's important.
- To report what others have said about your question, including any different answers to your research question.

Tip:

For another way to think about the work your sources do, see Roles of Research Sources.

The verbs in the list of information needs above tell you exactly how you'll use sources to carry out your research and create your final product: to learn, answer, convince, describe, and report. But you won't be doing any of that alone.

Your sources will give you information with which to reason. They'll also give you direct quotes and information to summarize and paraphrase as you create your final product. In other words, your sources will support you every step of the way during your research project.

Needs and Final Products

Background information may seldom appear directly in any final product. But meeting each of the other information needs will result in written sections of a term paper. For final products other than term papers, you'll have the same needs and will use

sources to meet them. But not all needs will result in a section of your final product.

Posters & Information Needs

On a poster about your own original research, you aren't likely to have room to describe the situation surrounding your research question and why the question is important. That same lack of space may mean you do not report what others have said about your question. But that doesn't mean you didn't meet those needs and others as you carried out your research—unlike a term paper or journal article, the poster format in which you reported it just had more limited space.

For instance, in order to justify doing the research to yourself and your professor, you probably started by meeting the information need to describe the situation and why it is important. Your instructor may have you turn in that justification. And in order to do research based on what has already been found out, you will have studied what others have already reported. You also had to do that in order to make your answer to your research question more believable. But that doesn't mean you had room on your poster to say you met those needs.

Activity: Sources and Information Needs

Open activity in a web browser.

Source Information:

Choosing & Using Sources: A Guide to Academic Research, 1st Canadian Edition (MacCallum, Lindsey)

- Pressbooks
- https://opentextbooks.uregina.ca/choosingsources/
- Non-commercial-ShareAlike 4.0 International

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10.2: Sources to Meet Needs

Because there are several categories of sources (see Types of Sources), the options you have to meet your information needs can seem complex.

Our best advice is to pay attention to when only primary and secondary sources are required to meet a need and to when only professional and scholarly sources will work. If your research project is in the arts, also pay attention to when you must use popular sources, because popular sources are often primary sources in the arts.

These descriptions and summaries of when to use what kind of source should help.

To Learn Background Information



Figure 10.2.1: *Get a good look at your topic through background reading.*

When you first get a research assignment and perhaps for a considerable time afterward, you will almost always have to learn some background information as you develop your research question and explore how to answer it.

Sources from any category and from any subgroup within a category – except journal articles – can meet students' need to learn background information and understand a variety of perspectives. Journal articles, are usually too specific to be background. From easy-to-understand to more complex sources, read and/or view those that advance your knowledge and understanding.

For instance, especially while you are getting started, secondary sources that synthesize an event or work of art and tertiary sources such as guidebooks can be a big help. Wikipedia is a good tertiary source of background information.

Sources you use for background information don't have to be sources that you cite in your final report, although some may be.

Sources to Learn Background Information

- **Quantitative or Qualitative:** Either—whatever advances your knowledge.
- **Fact or Opinion:** Any—whatever advances your knowledge.
- **Scholarly, Professional, or Popular:** Any—whatever advances your knowledge.
- **Primary, Secondary, or Tertiary:** Any—whatever advances your knowledge.
- **Publication Format:** Any—whatever advances your knowledge.

One important reason for finding background information is to learn the language that professionals and scholars have used when writing about your research question. That language will help you later, particularly when you're searching for sources to answer

your research question.

To identify that language, you can always type the word glossary and then the discipline for which you're doing your assignment in the search engine search box.

Here are two examples to try:

- Glossary neuroscience
- Glossary "social media marketing"

(Putting a phrase in quotes in most search boxes insures that the phrase will be searched rather than individual words.)

To Answer Your Research Question



Figure 10.2.2: *Your research question may call for qualitative or quantitative sources.*

You have to be much pickier with sources to meet this need because only certain choices can do the job. Whether you can use quantitative or qualitative data depends on what your research question itself calls for.

Only primary and secondary sources (from the category called publication mode) can be used to answer your research question and, in addition, those need to be professional and/or scholarly sources for most disciplines (humanities, social sciences, and sciences). But the arts often require popular sources as primary or secondary sources to answer research questions. Also, the author's purpose for most disciplines should be to educate and inform or, for the arts, to entertain and perhaps even to sell. (As you may remember, primary sources are those created at the same time as an event you are researching or that offer something original, such as an original performance or a journal article reporting original research. Secondary sources analyze or otherwise react to secondary sources. Because of the information lifecycle, the latest secondary sources are often the best because their creators have had time for better analysis and more information to incorporate.)

Example: Quantitative or Qualitative Data

Suppose your research question is "How did a a particular king of Saudi Arabia, King Abdullah, work to modernize his country?"

That question may lend itself to qualitative descriptive judgments—about what are considered the components of modernization, including, for instance, what were his thoughts about the place of women in society.

But it may also be helped by some quantitative data, such as those that would let you compare the numbers of women attending higher education when Abdullah became king and those attending at the time of his death or, for instance, whether manufacturing increased while he reigned.

So looking for sources that provide both quantitative and qualitative information (not necessarily in the same resource) is usually a good idea.

If it is not clear to you from the formats of sources you are assigned to read for your course, ask your professor which formats are acceptable to your discipline for answering your research question.

Sources to Answer Your Research Question

- **Quantitative or Qualitative:** Will be determined by the question itself.
- **Fact or Opinion:** Professional and scholarly for most disciplines; the arts often use popular, as well.
- **Scholarly, Professional, or Popular:** Professional and scholarly for most disciplines; the arts often use popular, as well.
- **Primary, Secondary, or Tertiary:** Primary and secondary.
- **Publication Format:** Those acceptable to your discipline.

To Convince Your Audience

Convincing your audience is similar to convincing yourself and takes the same kinds of sources—as long as your audience is made up of people like you and your professor, which is often true in academic writing. That means using many of those sources you used to answer your research question.

When your audience isn't very much like you and your professor, you can adjust your choice of sources to meet this need. Perhaps you will include more that are secondary sources rather than primary, some that are popular or professional rather than scholarly, and some whose author intent may not be to educate and inform.



Figure 10.2.3: *Sources that meet the approval of your audience will be more convincing.*

Sources to Convince Your Audience

- **Quantitative or Qualitative Data:** Same as what you used to answer your research question if your audience is like you and your professor. (If you have a different audience, use what is convincing to them.)
- **Fact or Opinion:** Those with the purpose(s) you used to answer your research question if your audience is like you and your professor. (If you have a different audience, you may be better off including some sources intended to entertain or sell.)
- **Scholarly, Professional or Popular:** Those with the same expertise level as you used to answer the question if your audience is like you and your professor. (If you have a different audience, you may be better off including some popular.)
- **Publication Mode:** Primary and secondary sources if your audience is like you and your professor. If you have a different audience, you may be better off including more secondary sources than primary.
- **Publication Format:** Those acceptable to your discipline, if your audience is like you and your professor.

To Describe the Situation

Choosing what kinds of sources you'll need to meet this need is pretty simple—you should almost always use what's going to be clear and compelling to your audience. Nonetheless, sources intended to educate and inform may play an out-sized role here.

But even then, they don't always have to educate and inform *formally*, which opens the door to using sources such as fiction or the other arts and formats that you might not use with some other information needs.



Figure 10.2.4: *Use sources to frame the situation.*

Sources to Describe the Situation

- **Quantitative or Qualitative:** Whatever you think will make the description most clear and compelling and your question important to your audience.
- **Fact or Opinion:** Often to educate and inform, but sources don't have to do that *formally* here, so they can also be to entertain or sell.
- **Scholarly, Professional, or Popular:** Whatever you think will make the description most clear and compelling and your question important to your audience.
- **Primary, Secondary or Tertiary:** Whatever you think will make the description most clear and compelling and your question important to your audience. Some disciplines will not accept tertiary for this need.
- **Publication Format:** Whatever you think will make the description most clear and compelling and your question important to your audience. Some discipline will accept only particular formats, so check for your discipline.

To Report What Others Have Said

The choices here about kinds of sources are easy: just use the same or similar sources that you used to answer your research question that you also think will be the most convincing to your audience.



Figure 10.2.5: *Look for sources about how others have treated your research question.*

Sources to Report What Others Have Said

- **Quantitative or Qualitative:** Those sources that you used to answer your research question that you think will be most convincing to your audience.
- **Fact or Opinion:** Those sources that you used to answer your research question that you think will be most convincing to your audience.
- **Scholarly, Professional, or Popular:** Those sources that you used to answer your research question that you think will be most convincing to your audience.
- **Primary, Secondary, or Tertiary:** Those sources that you used to answer your research question that you think will be most convincing to your audience.
- **Publication Format:** Those sources that you used to answer your research question that you think will be most convincing to your audience.

Activity: Meeting Your Information Needs

Open activity in a web browser.

Source Information:

Choosing & Using Sources: A Guide to Academic Research, 1st Canadian Edition (MacCallum, Lindsey)

- Pressbooks
- https://opentextbooks.uregina.ca/choosingsources/
- Non-commercial-ShareAlike 4.0 International

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10.3: Planning Your Sources

Okay, so once you know what kinds of sources you need to meet your information needs, where should you look for them? Once more, thinking about categories can help.

Where sources are located is generally organized by audience expertise level—by whether they are popular, professional, or scholarly sources. Popular and professional are often grouped together. But scholarly sources tend to hang out by themselves. (That's why searching Google Scholar locates more of them than just plain old Google, and an academic library has more scholarly sources than a public library.) Source Locator can help you see where sources of every audience expertise level (popular, professional, and scholarly) are located. Check it out.

Even if you are not using our planning table, Bbefore you start looking, try the Plan for Sources table below along with the suggestions made in this section to think through what sources you'll need for your own research project. (There's also an example plan for sources filled in for a term paper.) Having your Plan for Sources always at your side while you search for sources will guide where you look and what you're willing to accept. It will help you keep track of whether you have found the right resources.

Also take a look at our Source Locator, whose link is below.

PLAN FOR SOURCES			
Course:	Due Date:	Type of Final Product:	
Research Question:			
Information Needs	Kinds of Sources (Popular, Professional, or Scholarly) That Should Meet Each Need	Publication Formats Likely to be Helpful in Meeting Each Need	Where to Look
To learn more background information			
To answer your research question and convince your audience			
To report what others have said			
To describe the situation and why it's important			

Figure 10.3.1: *Thinking through the types of sources you need to meet your information needs helps you target your search. You can download the Plan for Sources table at http://go.osu.edu/planforsources.*

You can download the table at http://go.osu.edu/planforsources, then fill it out with the help of our Source Locator. Using this table doesn't mean you can't change your mind if you later find another kind of source that looks too good to pass up. But making a plan first will insure that you don't just grab any source you come across. The few minutes you take to complete the table will save you time later. And it's nice to have a plan all in one place that you can put into action!

Example: Sample "Plan for Sources" Table

A table listing the information needs in rows, with columns sources. In this example, popular, professional, and scholarly sources from magazines, journals, conference presentations, and books can help answer the research question about how the checklist movement has affected surgery outcomes in hospitals.

Figure 10.3.2: *Completing the table puts all your planning in one place.*

Source Information:

Choosing & Using Sources: A Guide to Academic Research, 1st Canadian Edition (MacCallum, Lindsey)

- Pressbooks
- https://opentextbooks.uregina.ca/choosingsources/
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11: CREATE A RESEARCH QUESTION

11.1: Information Creation as a Process

11.2: Research is a Process

11.2.1: Research Has Many Types

11.2.2: Discussion Questions- Research Process

11.2.3: Select a Topic

11.2.4: Preliminary Research- The Investigation

11.2.5: Discussion Questions- Preliminary Research

11.2.6: Build a Search Strategy

11.2.7: Discussion Questions- Build a Search Statement

11.2.8: 1. Planning Your Keyword Search- Who, What, When, Where, Why

11.2.9: Locate Resources

11.2.10: 2. Assembling the Material

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11.1: Information Creation as a Process

Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences.

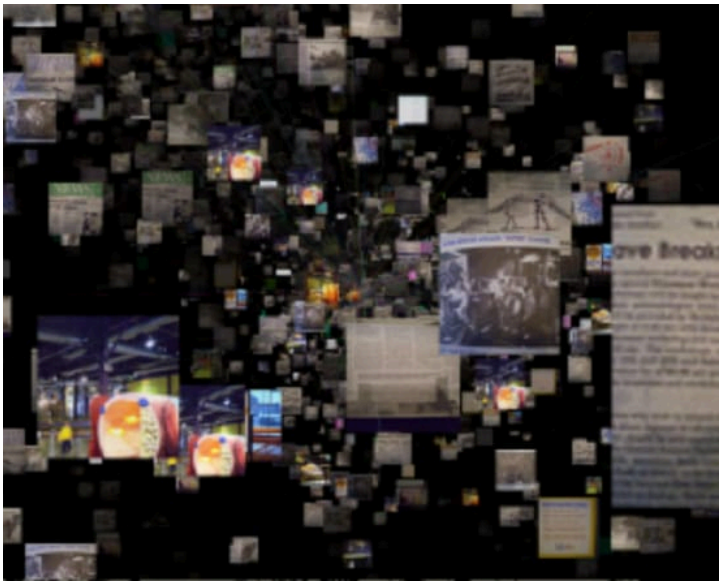


Figure 11.1.1: *Brett Renfer | Process | flickr | CC BY NC ND*

The information creation process could result in a range of information formats and modes of delivery, so experts look beyond format when selecting resources to use. The unique capabilities and constraints of each creation process as well as the specific information need determine how the product is used. Experts recognize that information creations are valued differently in different contexts, such as academia or the workplace. Elements that affect or reflect on the creation, such as a pre- or post-publication editing or reviewing process, may be indicators of quality. The dynamic nature of information creation and dissemination requires ongoing attention to understand evolving creation processes. Recognizing the nature of information creation, experts look to the underlying processes of creation as well as the final product to critically evaluate the usefulness of the information. Novice learners begin to recognize the significance of the creation process, leading them to increasingly sophisticated choices when matching information products with their information needs.

Knowledge Practices

Learners who are developing their information literate abilities

- articulate the capabilities and constraints of information developed through various creation processes;
- assess the fit between an information product's creation process and a particular information need;
- articulate the traditional and emerging processes of information creation and dissemination in a particular discipline;
- recognize that information may be perceived differently based on the format in which it is packaged;
- recognize the implications of information formats that contain static or dynamic information;
- monitor the value that is placed upon different types of information products in varying contexts;
- transfer knowledge of capabilities and constraints to new types of information products;
- develop, in their own creation processes, an understanding that their choices impact the purposes for which the information product will be used and the message it conveys.

Dispositions

Learners who are developing their information literate abilities

- are inclined to seek out characteristics of information products that indicate the underlying creation process;
- value the process of matching an information need with an appropriate product;
- accept that the creation of information may begin initially through communicating in a range of formats or modes;
- accept the ambiguity surrounding the potential value of information creation expressed in emerging formats or modes;
- resist the tendency to equate format with the underlying creation process;
- understand that different methods of information dissemination with different purposes are available for their use.

Source Information:

Research Primer: Mohawk Library (French, Peggy)

- Pressbooks
- https://ecampusontario.pressbooks.pub/mohawkresearchprimer/
- Creative Commons Attribution-NonCommercial 4.0 International

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11.2: RESEARCH IS A PROCESS

Exploring anything takes time, and the amount of time necessary is dependent on the depth of exploration. Consider a kindergarten student learning about trees. Several elements about trees are noticed by simple observation, such as bark, the branches and leaves. Closer inspection may reveal knobby roots at the base, sap dripping from a slight cut, and other less obvious phenomena. That may be the extent of that young child's understanding of trees, but that is only the foundation for the future study of trees. More advanced students would recognize that there are many different types of trees, and understand the features of each. As the level of depth increases, the exploration becomes more focused, and specific details are analyzed. The research doesn't stop with understanding *what* each part of the tree does, but also *how* and *why* it grows, responds to environmental changes, and other issues important to healthy tree development.

Figure 11.2.1

When researching any topic for a college-level class, instructors expect that students will probe a topic with enough depth that recognizes research was necessary to learn the material. A topic chosen for a research project should be familiar to the point of piquing the student interest to pursue the topic with more depth, addressing probing questions. Understanding the surface-level elements is important, but college-level research is to understand *why* and *how*. Research questions that can be answered with brief definitive answers are rarely the focus of in-depth research, however those questions should lead to more probing questions which are addressed by the student in a manner that challenges the student peers to understand the issue.

Many times students want to research a political or societal issue they already have an opinion on, often based on personal values. It is important for research to lead the learner to explore *all aspects* of an issue. Preconceived ideas lead to biased research with skewed or inaccurate conclusions. While exposing the researcher to evidence and ideas, any ideas conflicting with their personal values need to be put aside, allowing the researcher to share their research objectively.

The research process begins with topic selection and refinement, progresses to development of search statement and search strategy, then location of resources, compilation of information and conclusion. Presenting the information and conclusion follows, when the researcher writes the essay, develops the speech or visual representation of the material. However, the research process is not complete until the researcher shares the material with others.

Source Information:

Bridging the Gap: A guide to College-Level Research (Gray, Catherine J.)

- Pressbooks
- https://isu.pressbooks.pub/bridgingthegap/
- Creative Commons Attribution-NonCommercial 4.0 International

11.2.1: Research Has Many Types

11.2.2: Discussion Questions- Research Process

11.2.3: Select a Topic

11.2.4: Preliminary Research- The Investigation

11.2.5: Discussion Questions- Preliminary Research

11.2.6: Build a Search Strategy

11.2.7: Discussion Questions- Build a Search Statement

11.2.8: 1. Planning Your Keyword Search- Who, What, When, Where, Why

11.2.9: Locate Resources

11.2.10: 2. Assembling the Material

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11.2.1: Research Has Many Types

Most students have performed **research,** which is gathering information from a variety of sources and compiling the data into one document or presentation. Each report begins with an introduction to the topic, and the body of the report builds a position or develops an explanation on a topic, often with real world applications, and the conclusion, and usually has a list of references at the end. However, this merely lays the foundation for more in-depth primary research performed at the graduate and professional level. **Primary research** involves a study and analysis of resulting data. There are many different types of primary research studies, which are listed below:

Archival: historic documents are used to understand an event

Case study: a particular client is involved in a situation that is monitored in all stages of development

Experiment: an element of change is imposed on something and the impact is monitored

Explication: an creative work is interpreted

Interview: a conversation with someone that has made a major impact in a particular discipline is record

Observation: a group of people, animals, plants, etc. are watched closely for specific natural tendencies or phenomena

Survey: people are questioned about their opinions on various issues and circumstances

Theoretical: an idea is developed only in theory, often with practical applications proposed

Many studies are described with these elements:

Longitudinal: the subject(s) are tracked over a time period for long-term impacts.

Empirical: based on observed and measured phenomena, deriving knowledge from actual experience rather than from theory or belief. The results are verified by outside researchers.

Qualitative: assessments of quality are made based on specific factors

Quantitative: assessments are made based on numeric change

Each of these types of studies can be done with a different focus and time frame. Primary research in the sciences and humanities is often performed in each of these levels of research study, and published in the professional literature of the discipline. Research for college-level courses often requires **primary research studies** for the main sources used. Written for professional peers, these sources are often challenging for students to read and comprehend. Researchers need to recognize the additional time required to understand the in-depth material presented, and develop the skills and stamina to deal with the challenge. Most undergraduate college-level research is **secondary research,** building on the concepts and information developed through primary research. Most researchers are familiar with **tertiary research,** which uses secondary, tertiary and other sources of common knowledge to develop an idea.

Figure 11.2.1.1: *Examples of Primary, Secondary & Tertiary Sources*

In the figure above, in the arts and humanities, primary sources are the creative works, such as literature, musical or visual works. Secondary sources are often the result of intense study of creative works, attempting to analyze or critique a creative work. Tertiary sources attempt to explain, interpret or summarize the original work, assuming that the original creation is difficult to understand or appreciate.

In the sciences, primary sources are research products resulting from a research study, or the raw data from the research study. Secondary sources include critiques or analyses of published studies, and compilation of material from primary studies on the same ideas. Tertiary sources interpret, explain and summarize material from secondary sources, often to make the material more accessible and understood for the general public.

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11.2.2: Discussion Questions- Research Process

1. Describe a research project you have recently done, whether for a class, job or personal interest. What sources did you use? How did you find them? What standards did you use to choose your sources? Did you disagree with any of your sources? How did that conflict affect your understanding of the issue?
2. Describe events in your personal life when it was (or would have been) helpful to be able to locate information to help making decisions, make repairs or resolve an issue. Did you find the information you needed? Were you successful?
3. Describe a research study that you learned about in the news. What type of study was performed to gather the data?

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11.2.3: Select a Topic

Sometimes researchers are assigned a topic or problem to research, other times the researcher has freedom of choice. The same process should be pursued when exploring an issue or idea for personal interest or career-related. The challenge begins with choosing on a topic. Overwhelmed with the vast amount of intriguing issues and concerns, many researchers choose a topic that is difficult to manage. Begin by brainstorming ideas, let your imagination go wildly free. Open your mind to any issue that intrigues you, including several that are magical or supernatural. What if straw could be changed into gold, how would that happen? How does telepathy work? When considering ideas that are “impossible”, they become “possible” and often actually develop!

First, consider your **degree program or career interest** and ponder an issue in that field. Talk to a practitioner in the field, browse a magazine or trade publication for an article of interest, or peruse a text for a topic you discussed in a class found fascinating that warrants further probing. After choosing a general topic, brainstorm at least **three verifiable elements** to focus your research on, then decide which of those elements is the most intriguing and appropriate for the assignment. Most researchers are interested in their topics if they choose something that they consider important to their future, especially if there is a professional benefit.

Next, make sure the research will address an issue or topic, not a product or brand. If a compare/contrast research project is assigned, comparing brands often provides free advertising through the research, if the focus is on the product. However, comparing/contrasting the features, process of manufacturing, or quality of material, without reference to brand or product can be fascinating!

A topic for college-level research should be focused and of interest to peers. Many times researchers are concerned that the topic is too specific and there is not enough information on the topic. However, this is rarely the case, there are vast amounts of in-depth resources, and the difficulty is in locating and understanding them. Researchers need to be able to probe the topic extensively and prepare for the depth of information available from the research.

In addition to those basic guidelines, consider a few other factors that may impact topic selection. There are several different types of research presentations, such as *oral, dramatic, visual or written work* to present the resulting project. Researchers should consider the format of the resulting project, and be able to present in the format required for the project.

The information learned in the research process is compiled with a purpose, which is often defined by the instructor in the structure of the assignment. Many times, the purpose of the research project is to *inform or explain* an issue. Other assignments may require the student to *persuade or convince* the reader to agree with an idea or purchase a product or service. Other assignments require the researcher to present the material learned with the purpose of *entertaining* the reader. If the assignment is to *compare and contrast* two similar ideas, products or services, make sure you research and have equivalent depth of information on both. Then, you will more easily share the similarities and differences with balance and objectively. The bottom line is to make sure the topic “fits the purpose” of the research.

Unless otherwise specified, consider your peers (especially those in the same class) the intended *audience*. When choosing the topic and presentation format, consider the interests and current level of understanding of your classmates. Introducing a topic familiar to the audience requires a more in-depth approach than a topic that is comparatively new to all.

Additional factors in choosing a topic are dependent on the assignment requirements, such as level of depth, resource requirements, time allowed for the assignment, etc. Make sure to choose a topic that fulfills the requirements, is manageable and has enough depth for a college-level research project.

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11.2.4: Preliminary Research- The Investigation

After selecting the general topic, read one or two articles from current encyclopedia and determine three or four elements that additional research will pique your interest. Then, reflect on your personal interests related to the topic, and choose the area of focus that is most interesting and thought-provoking. If the topic is interesting, you will easily stimulate your peers to learn from your research.

This step is called **preliminary research**, and is important to develop a focus on the topic. In addition to refining your topic, this step is important to gain some background or foundational information, in preparation for the in-depth conversations with experts on the topic. For example, if you were to attend a conference on your topic about post-traumatic stress syndrome for veterans that served in Afghanistan, most attendees would be familiar with the major issues, and the presenters would share the material assuming the audience has that level of understanding. It is a comparable situation for anyone researching a topic on an advanced level. The professional publications recommended for college-level research assume the audience has a foundation of information on the topic, and presents the content with that foundation.

As researchers, students need to have an adequate level of understanding of those common knowledge elements. Most *encyclopedia articles* contain the “common knowledge” material on the topic at hand, and professional literature is written assuming the audience has acquired that foundation. With this preparation, students can converse with experts on the topic, reading and responding to the information. Also, many times a student discovers an interesting topic presented in class, and college texts may be used for preliminary research as well.

Let the Research Begin: Preliminary Research

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11.2.5: Discussion Questions- Preliminary Research

1. Describe how your preliminary research has helped refine your topic. List several new terms and concepts that will help you understand the professional literature on your topic.
2. Talk with 2-3 students about your topic. Do they have additional questions to suggest you probe on this topic?

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11.2.6: Build a Search Strategy

Once you decide what information you need, the next step is to figure out where and how to find it. As we have discussed, there are many sources, but locating information can be a random, hit or miss effort, that relies on luck and serendipity for success. While many successful research projects have developed as a result of serendipitous efforts, a more strategic approach usually is less frustrating.

When looking at print sources, such as books and magazines, the *table of contents* lists the chapters and section headings, and is a great tool to help determine the organization of information. In addition, looking up terms and concepts in the *index* is often useful to find specific material included. Many sources of information include references and recommended reading lists for additional material on a topic, and these can help someone that wants to pursue an idea with more depth. Print sources may have other tools to help readers locate specific information within the bound material.

Online sources became the standard format for information when computers became commonplace, and the Internet exploded in the 1990's. Websites and other online sources have similar tools to help locate and access information. Sometimes the online sources are *indexed*, but the terms locate the information can be in two types: *controlled and uncontrolled* search terms. Controlled language means that only a specific list of terms is used to describe something. For example, information about automobiles may be indexed using the general term "automobiles" or can be divided into various types, such as cars, trucks, tractors, vans, but using "controlled language," the indexer would have to decide which terms to use, and exclude the use of others. The controlled language indexing terms are usually called *subject headings* or *descriptors*, depending on the resource. *Uncontrolled language* is used to locate material when the index does not include subject headings or descriptors, the terms are simply found in the source.

To search online sources, there are three major search languages: *keyword, subject headings* and *natural language*. *Keyword* searching is the most common, and requires the researcher to consider each term entered as a major component of the topic. *Subject headings* are the terms used in controlled system, where the indexing has specific rules and standards that apply for using the subject headings. Academic libraries that use the *Library of Congress Subject Headings*. In the previous example of automobiles, indexers using subject headings may use "automobiles" but not "cars" or "motorcars" for terms to describe information in books, articles or websites. Small public and school libraries often use the *Sears List of Subject Headings*, which generally uses more general terms in comparison to the *Library of Congress Subject Headings*. Both subject heading lists always have the main term at the beginning, and have subdivisions for different aspects of the topic, such as "safety" in the example below. It is also important for the researcher to enter the correct form of the subject headings, with the correct subheading. *Natural language* is used in many search engines to locate material, by phrasing the query in a standard question format. Consider the topic of the history of automobile design in the search phrases in the examples below.

Search Language	
Keyword	*(automobiles OR cars) AND history*
Subject Headings	*Automobiles—Safety*
Natural Language	*What are the major developments in the history of automobile design?*

When doing a keyword search, it is also important to link the keywords with Boolean operators for efficient use of the search engine. Boolean operators were developed for use in algebra by George Boole and published in *The Mathematical Analysis of Logic* which was published in 1847, and later developed as a segment of algebra called "Boolean algebra" and "set theory."

Figure 11.2.6.1

In the example to the left, the researcher has determined **automobiles** and **history** as the keywords to search. However, for the computer to understand how to combine the search terms and require both terms in the results, the **Boolean operator "AND"** needs to be between each of the keywords:

Figure 11.2.6.2

When researchers find that a term has many synonyms or terms used in a similar context, such as automobiles and cars, and **either** term may be found in the results, the **Boolean operator "" ** needs to be between each of the keywords: **Boolean operator "OR"** needs to be between each of the keywords:

Figure 11.2.6.2

When something should be excluded from the search results, use the **Boolean operator "NOT"** between the keywords. However, use **"AND NOT"** with a great deal of caution, you may exclude many results that would be useful.

The keywords can be combined in any order, however make sure the Boolean operator applies to the terms you intend. To alleviate confusion, put each section of the search statement in parentheses (). Similar to a complex algebraic equation, parentheses denote how the search should be processed with the search engine, and the grouping is important. For example

cars OR automobiles and NOT trucks AND history

could be interpreted by the search engine as

(cars OR automobiles) AND (NOT trucks) AND history

or

cars OR (automobiles AND NOT trucks) AND history

or

(cars OR automobiles) AND NOT (trucks AND history)

Quite possibly, the most efficient search statement for this topic is

(cars OR automobiles) and history

because eliminating the term "trucks" from the search results may exclude many useful sources. Researchers need to know about the search capabilities, while maintaining control of the search results.

The first step of developing a search strategy is to select a topic. Many times an instructor will assign a topic, but most instructors anticipate that each student will approach the topic from a different perspective. Other instructors assign a research project to developing writing skills for a specific purpose, and the topic is chosen by the student. Meanwhile, many people enjoy exploring new ideas and information independent of a research assignment. Regardless of the reason for the research, the choice of topic is important.

After the selecting the focal point of your research, develop a question that you will probe in your research. For most disciplines, use the "Build a Keyword," form on p. 23 and write out your research question. Circle or highlight the keywords and put them on the lines below, with the Boolean operator "AND" between each concept. Below each main keyword, put the synonyms or words used in the same context, linked with the Boolean operator "OR".

Students in health science programs usually use the "PICO" research format on p. 24, and the research keywords need to be in each of the categories of Population, Intervention, Control and Outcome. Again, put synonyms or similar terms below each PICO element.

After listing the synonyms and keywords, review the terms and determine which are the main keywords to be used in the databases. Make a note of more specific, technical or scientific terminology that may be used in the more advanced databases. In addition, review the terms and note those that could be truncated. *Truncation* is useful for searching a keyword that has many suffixes. For example, searching "educat* " in a database will retrieve records with any form of that word: **education, educate,**

educating, educated, educator. Most databases use the asterisk (*) for the truncation symbol, but some use a question mark (?), exclamation mark (!), or other symbol as a wildcard in place of the ending. In most databases, truncation works best when using at least four (4) letters, although more letters will help retrieve more relevant results.

The most important guideline when developing a search statement is to be flexible. Using the original search statement developed with this exercise will be efficient in the general databases, but as your research progresses to more advanced sources, the search statement will need to be revised with more advanced terminology. In addition, as the research progresses, it may be important to adjust your topic and search statement.

Research Question & Search Statement

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11.2.7: Discussion Questions- Build a Search Statement

1. Complete the **Planning the Keyword Search** form for your topic. Use the form on p. 23 for most disciplines. If you are considering a research topic in the health sciences, make sure you use the PICO format on p. 24.
2. Share your **Planning Your Keyword Search** form with 2-3 other students. Is this helpful? You may incorporate their suggestions.

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11.2.8: 1. Planning Your Keyword Search- Who, What, When, Where, Why

Planning Your Keyword Search Worksheet

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11.2.9: Locate Resources

Finally! After taking the time to select an appropriate topic, do preliminary research, develop a search strategy, let's locate some resources. In recent years, the amount of information has exploded exponentially and the complexity of locating resources has multiplied as well. There are more media types and many electronic media have hardware compatibility issues,

As you search for sources of information, make sure you locate sources that are relevant to your topic, and are written in a variety of formats, from a variety of authors. Together your sources should build a strong web of information on your topic. The evidence presented should enhance and support your understanding of the issue.

Meanwhile, many of your sources may present some ideas that challenge your preconceptions. As you select sources, remember to focus on the credibility issues, and not whether you "like" or "agree" with the information. Remember, the research sources are intended to provide information on you topic, keep an open mind to learn from them. Researchers often become aware of new aspects that reveal new avenues of thought, so welcome the new perspectives.

Use the library catalog, databases and Internet to locate credible and relevant information. If you are overwhelmed with the amount of resources available, focus your topic. Remember the depth of information you will present should be challenging to your peers and to you, but manageable for the project at hand. More information about using various resources to locate your sources is presented in Part IV.

How many sources will you need? Many times college-level instructors will provide guidelines about the project requirements, including the number of sources and the type of sources allowed. Other times, instructors expect the students to know when they have enough. Generally, when the information tends to repeat itself from, researchers at the undergraduate level can do a sufficient research project. However, this is a problematic answer, because there will always be more information about any topic. Often the researcher needs to refine the topic and/or revise the search strategy.

For undergraduate studies, you need sources that will provide credible information to present and develop evidence for a conclusion. Often the source that piqued the researcher's interest was from a magazine or television program. While these are often tertiary sources, they often present the information in a manner that the researcher can understand, and will help the researcher explain the foundation of the issue to the readers. More in-depth sources, such as journal articles will provide the primary research about the topic, and many of the issues related to the application of the idea. Trade publications are intended for a profession or trade, but they are written from experience and are rarely based on research. These may apply to the topic as well, from a practical point of view. All the sources should network together to build a conclusion.

After locating your sources, you will need to gather information, compile the evidence and develop a conclusion. More about that in Part V.

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11.2.10: 2. Assembling the Material

After locating sources, it is time to read and take notes, using the skills addressed in Part II. Organize the information and develop an outline or plan of progression for the ideas. It is usually more efficient to wait until you have the information organized before composing the material for the presentation format appropriate for the topic and setting. There is more about this process in Part V.

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12: WEB SEARCH STRATEGY

12.1: Searching as Strategic Exploration

12.2: Searching the Web- Strategies and Considerations

12.2.1: Search Engines and Tools

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12.2.3: Searching and Privacy

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12.3: Search Tools

12.3.1: Google Scholar

12.3.2: Web Search Engines

12.3.3: Tips for Common Search Tools

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12.1: Searching as Strategic Exploration

Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops.

Figure 12.1.1*: Kevin Dooley | Exploring | flickr | CC*

The act of searching often begins with a question that directs the act of finding needed information. Encompassing inquiry, discovery, and serendipity, searching identifies both possible relevant sources as well as the means to access those sources. Experts realize that information searching is a contextualized, complex experience that affects, and is affected by, the cognitive, affective, and social dimensions of the searcher. Novice learners may search a limited set of resources, while experts may search more broadly and deeply to determine the most appropriate information within the project scope. Likewise, novice learners tend to use few search strategies, while experts select from various search strategies, depending on the sources, scope, and context of the information need.

Knowledge Practices

Learners who are developing their information literate abilities

- determine the initial scope of the task required to meet their information needs;
- identify interested parties, such as scholars, organizations, governments, and industries, who might produce information about a topic and then determine how to access that information;
- utilize divergent (e.g., brainstorming) and convergent (e.g., selecting the best source) thinking when searching;
- match information needs and search strategies to appropriate search tools;
- design and refine needs and search strategies as necessary, based on search results;
- understand how information systems (i.e., collections of recorded information) are organized in order to access relevant information;
- use different types of searching language (e.g., controlled vocabulary, keywords, natural language) appropriately;
- manage searching processes and results effectively.

Dispositions

Learners who are developing their information literate abilities

- exhibit mental flexibility and creativity
- understand that first attempts at searching do not always produce adequate results
- realize that information sources vary greatly in content and format and have varying relevance and value, depending on the needs and nature of the search
- seek guidance from experts, such as librarians, researchers, and professionals
- recognize the value of browsing and other serendipitous methods of information gathering
- persist in the face of search challenges, and know when they have enough information to complete the information task.

Source Information:

Research Primer: Mohawk Library (French, Peggy)

- Pressbooks
- https://ecampusontario.pressbooks.pub/mohawkresearchprimer/
- Creative Commons Attribution-NonCommercial 4.0 International

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12.2: SEARCHING THE WEB- STRATEGIES AND CONSIDERATIONS

Learning Objectives

By the end of this chapter, you will be able to:

- Describe advantages and disadvantages of doing research on the Web
- Identify tools that support online research
- Use search strategies to find resources that are relevant and credible

Source Information:

Introduction to College Research (Butler, Sargent, Smith)

- Pressbooks
- https://introtocollegeresearch.pressbooks.com/
- Creative Commons Attribution-NonCommercial 4.0 International

12.2.1: Search Engines and Tools

12.2.2: Comparing Search Tools

12.2.3: Searching and Privacy

12.2.4: Controlling Your Search

12.2.5: Citing- Websites, Web pages, Files, Articles

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12.2.1: Search Engines and Tools

As you probably already know, there are many different search engines and tools available for you to use, and many of them are now easily accessible and embedded in the devices we use every day. Long gone are the days when you go to a search engine's website to begin searching online. As an example, if you need to find the nearest pizza restaurant, you can simply type in your browser's address bar or ask your phone: "Where's the nearest pizza restaurant?" and you will be supplied with an answer. Search technology continues to advance as it becomes further integrated into our daily routines.

This can be very convenient, but can also lead to more questions. What search tools are the best to use? Are there disadvantages or risks associated with how search tools are used? Let's start by discussing the different search tools available.

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12.2.2: Comparing Search Tools

Common Search Tools & Search Engines

There are many different search tools, and you probably use quite a few without thinking about them, such as artificial intelligence (AI) assistants. Examples include Siri, Alexa, Google Assistant, Cortana, and Bixby. AI assistants are usually voice activated and will search the internet for answers to your questions, suggest resources for you to look at for information related to your question, and perform tasks such as turning on lights or creating a shopping list.

Another type of search tool that you probably use is a search engine. Search engines are online tools that search for web pages based on keywords. Many of these are now embedded in your browsers to make searching online easier, but each have their own websites as well that you can search from. The big names in this area are Google, Yahoo!, and Bing. Though they may bring back different search results, they function overall using the same main principle: to bring back as many relevant results as possible. How each one defines and determines what is "relevant" may differ, and their criteria and methods are typically not transparent to the user.

Other Tools

Besides search engines, there are other online search tools that you might be familiar with but didn't know what to call them, such as Yelp. There, you can search for businesses and learn information about those businesses, often including links to their websites. Yelp doesn't search the Web; rather, it maintains its own records and links for those businesses. Because Yelp controls what it searches and what it lists, it is called a directory. Web directories are search tools that link out to hand-selected websites usually organized by categories or topics.

Determining which search tool is the best to use depends on what you are trying to accomplish. If you're trying to find the nearest pizza restaurant, using an AI assistant is probably really great; using a directory like Yelp might also be helpful. But what about for our scenario? What type of search tool would be the best to use, do you think?

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12.2.3: Searching and Privacy

A wall of security cameras pointed down

Figure 12.2.3.1

Accept?

Have you ever visited a website and seen a pop-up that says “Accept Cookies” or “Accept Privacy Terms”? These pop-up messages are everywhere! Because we want to see the information on the website, we often click “yes” and move on without giving it another thought. But what information are you giving up? Does it really matter? There are arguments on both sides of the fence here. Some people feel that websites and companies are tracking individuals too much, to the point where targeted ads are infiltrating what people see and experience. Others claim these ads are not as targeted as they seem, and that people aren’t really being tracked—rather, activity is being tracked.

Impact

We do know, however, that your online activity can impact your search results. This phenomenon is called a filter bubble and this occurs most often and strongly within social media, but also within search engines. On social media, you are fed stories based on people or organizations you follow and posts that you liked. This means that, before long, you see only those things that you “liked” or similar items that you have followed. This greatly limits what you see, and a filter bubble is created. Same with search results. Basically, the search tool you use learns about your preferences. It knows your location, for example, therefore, it will provide results relevant to your geography. Search tools can also track the things you click on and will provide similar results in the future. If you start clicking on New York Times articles frequently, you might see more results coming back from the New York Times in your searches. For more on the problematic “personalization” of information we see online, please read the section on Filter Bubbles.

Protecting Privacy

There are steps you can take to combat these behaviors of online tools. One thing you can do is use a search tool that does not track your browsing history. DuckDuckGo is a popular search engine that protects your privacy as you search online. Another step you can take is to use your browser’s “incognito” or “inPrivate” mode. This will also limit what is saved on your computer and prevent or limit tracking behavior as you search.

You should always be vigilant about what you agree to online. Don’t dismiss those pop-ups that you “agree” to so quickly. If you’re on a website that you are unfamiliar with, take the time to read through to what you are agreeing to. You might be surprised, and you will have to decide for yourself if what you agree to is worth what you want to access. Some of these agreements may be harmless; but in the end, it’s your information and your privacy that might be at risk. Only you can determine if and when those values should be waived.

Sources

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12.2.4: Controlling Your Search

Now that you have learned about tools and some of the issues surrounding searching online, you need to be able to control your search. Just like with library databases, there are strategies you can employ with online searches. Recall that in our chapter scenario, you needed to find information about antiracism efforts of government and private organizations. When forming your search for this scenario, you might use the following keywords: antiracism, government, organizations, policies, and efforts. But you might want to take advantage of some more **advanced search** commands.

Limiting by Domain

One search command to make note of is site:. This command allows you to search for, or within, specific websites based on domain name. For our scenario, we need government and organizations, so it would be helpful to limit our search to those types of websites. You can set up your search to look something like this:

antiracism policies site:gov

This search example will look for the keywords antiracism and policies within government websites only. The site: command will limit results to those with gov in the website address (also known as the URL). The domain gov is reserved for U.S. government websites.

Other common domains that you could use include .com, .org, and .edu. The domain .org stands for "organization," however, **anyone** can use the .org domain, not just non-profit organizations. It is **very important** to use these domain reservations as guidelines rather than definitive markers of credibility. For example, an .edu website (reserved for educational institutions) could host papers written by students, which might not be appropriate sources for a college-level research paper. Likewise, an .org website could be hosted by a commercial enterprise or even a hate group.

Limiting by File Type

The scenario also asks for online documents. The meaning of this word, "documents," can be vague and unclear, but its use in the scenario indicates that we're looking for something you can download, such as a PDF or maybe a Word document. You can also limit your results to file types when searching by using the filetype command. Your search would look something like this:

antiracism policies site:gov filetype:pdf

With the search example above, you will be limiting your search results to government websites that have PDFs related to antiracism policies.

Other Filters

In addition to those commands, there are easy-to-find tools built into search engines. You can search for images, news, maps and more when you search online. You can limit your results to the past year, the past hour, or other time periods. All of these additional limiters can be very powerful and helpful when conducting research, depending on your topic. Explore your search engine to see how much control you can have over your online searching.

- Google Search Help
- Bing Help

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12.2.5: Citing- Websites, Web pages, Files, Articles

Considerations

The final part of our chapter scenario asks you to create a bibliography of the websites and online documents that you have found. Citing (including the meaning of "annotated bibliography") is covered more fully in a later chapter, but for the purposes of this scenario, there are some things to consider:

1. Some online academic search tools (such as PubMed) will provide you with citation guidance for resources.
2. Websites and web pages are different. Unsure what you are citing? Ask a librarian, or a writing tutor!
3. Always check with your professor to confirm what they expect. Some may have customized requirements, and you will need to make sure you create citations that meet those expectations.
4. Use online citation generators (such as EasyBib or Citation Machine) cautiously. They can be great timesavers, but they can also create headaches! Make sure you have an authoritative resource to double-check any citation that is created for you, such as Excelsior Owl or your library's own resources.

Example

Let's try to cite the following web page together: https://ceo.lacounty.gov/antiracism/

The format for a web page in MLA:

Author's Last name, First name. "Name of Web Page." *Name of Website*, date of publication, website address.

MLA citation for our web page:

"Anti-Racism, Diversity, and Inclusion Initiative." *Chief Executive Office of Los Angeles County*, 2020, ceo.lacounty.gov/antiracism/.

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12.3: SEARCH TOOLS

Source Information:

Choosing & Using Sources: A Guide to Academic Research **(Lowry)**

- PB-Pressbooks
- https://ohiostate.pressbooks.pub/choosingsources/front-matter/introduction/
- CC BY

12.3.1: Google Scholar

12.3.2: Web Search Engines

12.3.3: Tips for Common Search Tools

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12.3.1: Google Scholar

Google Scholar is a tool for finding books and journal articles that you might normally get from a library. Where possible, it provides links to online versions and to library copies to help you locate an item.

When to Use It

Use Google Scholar to find scholarly articles and books, verify citations, and explore related resources. When books are available through Google Books, some of their content may be available online.

How to Use It

Go to Google Scholar (http://scholar.google.com).

MOVIE: Using Google Scholar

Watch this tutorial on the basics of Google Scholar use.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Note: Setting your school in Scholar Preferences will help you make direct connections to online sources provided by your library. If you want to locate sources in many different libraries, add WorldCat in addition to your library. (Remember to save your preferences.)

In your search results, you can connect to an online version if there is a linked option following the item's title. (If you've added Ohio State under preferences, a Find It link is shown to provide a link to full-text or to help you request the item if it's not available online. If you've added WorldCat to you preferences, the Library Search link displays the WorldCat record, which shows all of the libraries that own the item. If there are multiple references to the same item, Google Scholar groups them. You can click the versions link following a title to see a list of all versions.)

Additional Tips

- The Any Time link in the left column of results allows you to limit your search results by date.
- Find Advanced Scholar Search by clicking on the three horizontal lines icon. Advance Scholar search provides additional search fields such as author, publication, and date, as well as phrase matching and word exclusion.

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12.3.2: Web Search Engines

Web search engines use special software programs (called robots, spiders, or crawlers) to find Web pages and list (or index) all words within each one to make searching large quantities of pages faster. Indexes capture the largest amount of information on the Web, but no index lists everything on the Internet.

Commonly used search engines include Google (https://www.google.com) and Bing (http://www.bing.com).

In addition to search engines, there are also:

- Specialized web search engines – A tool that has a specialty, usually either a subject or format focus. It ignores the rest of the information on the web. Examples include science.gov (http://www.science.gov/) and TinEye Reverse Image Search (https://www.tineye.com).
- Metasearch engines – Tools that search multiple web search engines and gives you results from all of them. Some of these return the best results from the search engines they search. Examples include Dogpile (http://www.dogpile.com) and WebCrawler (https://www.webcrawler.com).
- Web directories – Tools created by editors or trained researchers who categorize or classify web sites by subject. Directories are more selective than search engines. An example is the Directory of Open Access Journals (https://doaj.org/).

When to Use Them

Web Search Engines and related web search tools are helpful for locating background information, news (especially if it's recent), and public opinion.

However, scholarly information is often not available through a regular web search. If you do find scholarly information through a web search engine, especially if you are off campus, you may be asked for payment to access it. Ohio State Libraries can usually get you what you need without additional payment.

Remember to follow the advice in Evaluating Sources to determine whether information you locate online is suitable for your information needs.

How to Use Them

See links above. Use of each tool varies. If a search engine has an advanced search, it may include options such as specifying format, language, domain, or date range.

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12.3.3: Tips for Common Search Tools

Academic Search Complete

- **AND:** default (alternatively: term AND term)
- **OR:** term OR term
- **NOT:** term NOT term
- **Exact Phrase:** “exact phrase search”
- **Grouping:** term AND (term OR term)

Bing

- **AND:** default
- **OR:** term OR term
- **NOT:** term NOT term
- **Exact Phrase:** “exact phrase search”
- **Grouping:** Not available

Google

- **AND:** default
- **OR:** term OR term
- **NOT:** term -term (example: animal -cat)
- **Exact Phrase:** “exact phrase search”
- **Grouping:** term AND (term OR term)

WorldCat

- **AND:** term AND term
- **OR:** term OR term
- **NOT:** term NOT term
- **Exact Phrase:** “exact phrase search”
- **Grouping:** term AND (term OR term)

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13: UNIQUE VALUE OF LIBRARIES IN THE INFORMATION LANDSCAPE

13.1: Resources

13.1.1: Library as the Center of Information

13.1.2: Using A Library Catalog and Integrated Library Systems

13.2: Finding Sources

13.2.1: Library and Internet Research

13.2.2: Understanding Library Resources

13.3: Information Value and Privilege

13.3.1: Information Value and Privilege Documents

13.4: Finding Materials in the Library

13.4.1: Using OneSearch- Your California Community College Library's Search Tool

13.4.2: Finding Your Books

13.4.3: Filters and Advanced Search Options in OneSearch

13.4.4: How Libraries Organize Materials

13.4.5: Dewey Decimal Classification (DDC)

13.4.6: Library of Congress Classification (LCC)

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13.1: RESOURCES

Source Information:

Bridging the Gap: A guide to College-Level Research (Gray, Catherine J.)

- Pressbooks
- https://isu.pressbooks.pub/bridgingthegap/
- Creative Commons Attribution-NonCommercial 4.0 International

13.1.1: Library as the Center of Information

13.1.2: Using A Library Catalog and Integrated Library Systems

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13.1.1: Library as the Center of Information

In today's world, it is common for people of all ages to be familiar with books, magazines, newspapers, movies, and other media, they are available in libraries and stores everywhere. Many people purchase them, and become well-versed in the issues presented. However, there are many times that materials have been published that are not available in the local stores or libraries. Does this mean a researcher ignores those resources? What about resources that are no longer available for sale, does the researcher ignore those as well? College-level research demands that students expand their boundaries of information to include resources of all types and formats, and many instructors require students to use library resources.

Libraries were developed for communities of learners that shared their resources. As these groups of patrons emerged, they discovered they needed different types of materials, and libraries have four main categories, named by the type of patrons they serve. **Public** libraries serve members of the general public in their community, including all age groups. Materials are purchased to support their interests, and to empower them to be involved in their community. Public libraries are operated through **city**, **county**, or **district** governing systems, usually with tax funds.

School libraries develop programming and materials to support the curriculum at each level served by the school. An elementary school library rarely purchases materials on advanced physics, because the curriculum would probably include basic physics concepts appropriate for an elementary class. Students are encouraged to use the materials for their reading level, and teachers work with the school librarian on research projects appropriate for their classes. Many schools have teacher-librarians, that teach students about library organization, information literacy, and library tools. Many other schools have aides that focus on clerical duties, such as checking materials in/out and arranging the materials in a library. Some school libraries have been able to justify both positions for their schools, and the students are more literate as a result.

Academic libraries are similar to school libraries, developing collections and services for their patrons, but for students, staff and faculty of the college or university of which they are a part. Academic libraries often have more specialized collections, in support of the programs offered at the college/university. For example, a university with a medical program in nursing would have extensive medical materials, but a university with a full medical school for physicians would have an even more extensive medical collection. Another university that does not have any medical programs, but has an architecture program would have an extensive architectural collection in lieu of medical materials. However, any college or university that offers liberal arts, would offer a general collection to support most programs included in the "general education" courses considered important to lay the foundation for all degree programs.

Special libraries are developed for a specialized patron, such as for a business or research group. Many law firms have libraries with staff to research issues related to their cases, corporations have libraries to provide their staff with resources related to their products and services. Also, many hospitals and medical centers have libraries to provide medical information for their patients and medical staff. Many museums have libraries to provide resources to their staff for developing exhibits. Each state in the United States has a library that provides resources for their government officials, and many of these state libraries have other responsibilities as well. Each special library is unique in the type of services they provide to their patrons, and many are open only to their researchers.

a. Library Organization

While each of these types of libraries has a different focus of collection and services, they have many common organizational and administrative elements. All libraries have a system of organizing their materials, and they choose the appropriate system for their patrons and collection. The materials are labeled with a **call number** for the classification system, so the materials are grouped by subject area on the shelves.

Most school and public libraries classify their materials using the **Dewey Decimal System**, which has ten major subject divisions, and each division has ten subdivisions. An example of how the Dewey Decimal System works is below:

000	Generals works, Computer Science, Information Science
100	Philosophy & Psychology
200	Religion

300	Social Sciences				
400	Languages				
500	Pure Sciences				
	510	Mathematics			
	520	Astronomy			
		521	Celestial Mechanics		
		522	Techniques, Procedures, Apparatus, Equipment, Materials		
		523	Specific Celestial Bodies & Phenomena		
			523.1	Universe, Galaxies, Quasars	
			523.2	Planetary Systems	
			523.3	Moon	
			523.4	Planets, Asteroids, etc.	
				523.41	Mercury
				523.42	Venus
				523.43	Mars
				523.44	Asteroids (Planetoids)
				523.45	Jupiter
				523.46	Saturn
				523.47	Uranus
				523.48	Neptune
				523.49	Trans-Neptunian Objects
			523.5	Meteors, Solar Wind, Zodiacal Light	
			523.6	Comets	
			523.7	Sun	
			523.8	Stars	
			523.9	Satellites & Rings, Eclipses, Transits, Occultations	
		524			
		525	Earth (Astronomical Geography)		
		526	Mathematical Geography		
		527	Celestial Navigation		
		528	Ephemerides		

		529	Chronology
	530	Physics	
	540	Chemistry	
	550	Earth Sciences & Geology	
	560	Fossils & Prehistoric Life	
	570	Biology	
	580	Plants (Botany)	
	590	Animals (Zoology)	
600	Applied Sciences		
700	Arts & Recreation		
800	Literature		
900	History & Geography		

(Dewey Decimal System, DDC23 Summaries, https://www.oclc.org/content/dam/oclc/dewey/ddc23-summ

Many research and university libraries have extensive collections in specific disciplines, and found the Dewey Decimal System limiting the specificity that materials could be classified. As a result, most academic libraries classify their materials with the **Library of Congress System** which uses both letters and numbers in the call number. There are 24 main divisions, that begin with letters and most of those divisions have subdivisions with a second letter, and then numbers divide each subdivision. There are letters and number sequences that are not in use, anticipating the development of new areas of knowledge. An example of the Library of Congress system organization framework is below.

A General Works

B-BJ Philosophy, Psychology

BL-BQ Religion (General). Hinduism, Judaism, Islam, Buddhism

BR-BX Christianity, Bible

C Auxiliary Sciences of History

D-DR History (General) and History of Europe

DS-DX History of Asia, Africa, Australia, New Zealand, etc.

E-F History: America

G Geography. Maps. Anthropology. Recreation

H Social Sciences

J Political Science

K Law in General. Comparative and Uniform Law. Jurisprudence

L Education

- **M** Music and Books on Music
- **N** Fine Arts
- **P** Language and Literature
- **Q** Science
  - **QA** Mathematics
  - **QB** Astronomy
    - **QB 1-139** General
    - **QB 140-237** Practical & Spherical Astronomy
    - **QB 275-343** Geodesy
    - **QB 349-421** Theoretical Astronomy & Celestial Mechanics
    - **QB 455-456** Astrogeology
    - **QB 460-466** Astrophysics
    - **QB 468-480** Non-optical Methods of Astronomy
    - **QB 495-903** Descriptive Astronomy
      - **QB 500.5-785** Solar System
        - **QB 631** Earth
        - **QB 639** Mars
        - **QB 651** Asteroids
        - **QB 661** Jupiter
        - **QB 671** Saturn
        - **QB 681** Uranus
        - **QB 691** Neptune
        - **QB 701** Pluto
      - **QB 799-903** Stars
    - **QB 980-991** Cosmogony & Cosmology
  - **QC** Physics
  - **QD** Chemistry
  - **QE** Geology
  - **QH** Natural History & Biology
  - **QK** Botany
  - **QL** Zoology

QM Human Anatomy

QP Physiology

QR Microbiology

R Medicine

S Agriculture

T Technology

U-V Military Science. Naval Science

Z Bibliography. Library Science. Information Resources

Federal Depository Library Program

Beginning in 1814 Congress began designating various universities, historical societies, and state libraries as repositories for copies of government records and documents. By the end of the 19th century, the number of depository libraries rose to more than 400. As a result, many public and academic libraries have government document collections, which use the **Superintendent of Documents (SuDoc)** classification system. The SuDoc system assigns call numbers based on the government agency that sponsored the project the publication is about. However, since government agencies often change names and responsibilities, the system is frequently changing divisions.

In addition, there are specialized classification systems for most subject specialties, for example hospital and medical libraries use a system developed by the **National Library of Medicine.** These classification systems are important tools to organize library materials by subject. However, most libraries also prefer to sort materials by format, shelving the books in one area by call number, government documents in call number order in another area, periodicals in another area by call number, etc. There are often separate sections for audio-visual media, maps, pamphlets, and other media formats.

Materials acquired for specific purposes, such as reference, archives and reserves may be kept separate from the circulating collection, but all have call numbers within their sections.

Library Organization Video

b. Library Services

Most libraries have several common services for their patrons. **Reference** services help library patrons use library tools and materials to locate information upon request. **Circulation** staff check materials in/out for patrons, and keep the collection accessible for the patrons. **Cataloging** staff assign call numbers and other classification information for library materials in the library catalog, and prepare them for use by the patrons. **Interlibrary Loan** makes arrangements with other libraries to borrow materials for their library patrons. **Computer Systems** maintain the library computer systems, such as the library catalog, periodical databases, and public access computers. Many academic and school libraries also provide **distance library** services for patrons at remote locations, such as off-campus instruction centers. Some libraries have **Preservation, Restoration and Archival Storage** services, to restore and care for rare and archival materials.

InterLibrary Loan

c. Library Tools

Libraries use several tools to maintain the organization of materials, and proper use is important to successful research. A **database** is an organizational resource for items that have common elements. For example, the *Internet Movie Database (IMDb)* has production information on most movies produced by major studios. For each movie, the producer, director, cast of characters with actors/actresses, plot summary, camera crew are included in separate **fields**, and the information for each movie is one **record.**

A **library catalog** is a database of the materials in the library collection, with the call number, title, author/editor, publisher name, publication date, subject headings, and other descriptive information about each item. For many decades, libraries used **card catalogs,** with index cards arranged alphabetically for each title, author and subject heading. With the development of computers, most libraries have an **online catalog or OPAC**, that also allows **keyword searching**. Some online library catalogs have more fields for each title, such as book reviews, author biographies, etc.

For many years, the library catalog was the only library tool for patrons to use when searching for information in a library. Originally, the library catalog was printed in large books, which were difficult to update with new titles. For each title, the author(s) names, subject headings and call numbers were printed, with six books per page in alphabetical order, and each book that was added had to be inserted in the title, author and subject sections of the printed library catalog. Libraries could not reprint the library catalog each time a new book was added, it was reprinted annually at best. Meanwhile, library patrons became dependent on librarians to locate material.

In the 1880's, the newly founded American Library Association urged libraries to print citation, subject headings and call number for all titles on cards in cabinet drawers. The Library of Congress led the way in developing a uniform format for the catalog cards, and most libraries found this consistency helpful for patrons and library staff in locating information and maintaining the collection. Most libraries had at least three cards for each title, although all cards were the same except for the heading. One card would have the author's name at the top, another would have the title at the top, and each title would have at least one card with a subject heading at the top. In many libraries, the *author cards* with the author's name at the top were filed separately from the *title cards* and *subject cards*, and kept in separate cabinets. In these library catalogs, it was important to maintain the library catalog with staff filers that added cards as new books were added to the library. While these library catalogs were usually kept where patrons could access them easily, maintaining the card catalog was an arduous task.

Figure 13.1.1.1: *Library Catalog Card Image from Wisconsin Magpie*

Figure 13.1.1.2: *Library Catalog Drawers*

In the 1980's computers became prominent in libraries. Rather than typing each card for each title, the information could be entered in a system that formatted all cards for a title, and all cards were printed via computer. While the cards were still printed and filed, the development of this computer system laid the foundation for the *OPAC*, or *Online Public Access Catalog*. After the standard computer system was fully developed, the citation, subject headings and call number for each title were entered using *MARC records*. MARC was an acronym for *Machine Readable Catalog* records, which were compiled into the *OPAC*, or the *Online Public Access Catalog* and could be searched electronically. No longer were patrons limited to searching alphabetically for a title, subject or author, they could enter their search for any keyword, anywhere in the record and the location of that information would be provided in the call number. In addition, when a title was acquired by a library the citation, subject headings and call number were entered electronically, so less filing and other physical manipulation of data for each title was necessary.

Today, most libraries use a computerized system, and many libraries merge their collections by electronically networking their catalogs. Many libraries share cataloging information, and make their collections available between libraries. While all of this was encouraged before OPAC's, it became much easier for libraries to collaborate using computers and Internet capabilities. ***Library catalogs*** include information on materials they have in the collection, whether in print or electronic formats. For each of the titles, the catalog includes the title, author(s)/editor(s), subject headings, and publication information. All library catalogs include the *call number* which denotes the location of the material in the library.

Recently, library software companies have developed **Integrated Library Systems** (**ILS**) which focus on keyword searching rather than subject searching to locate library materials. Many patrons seem to prefer this type of library catalog, although the relevance of results often declines with the vast number of results. Materials are **tagged** with commonly used keywords, rather than the approved and controlled list of subject headings. A list of results usually has a list of **facets** to limit the results by date of publication, type of publication, major concepts, geographical area, etc., and this method is often considered more use-friendly.

Periodical databases have records for articles from **periodicals,** which are magazines, newspapers, journals, yearbooks, and other publications that are published in regular intervals. For most articles, each record includes the author's name, the title of the article, publication name, date, volume, issue, page numbers, subject headings and abstract. Periodical databases compile the article information with the publishers' approval, and libraries purchase the databases. The decision about what periodicals to include in the database is made by the database developers, regardless of what any library subscribes to. A **full-text** electronic version of the article is often available with online databases. There are some **indexes** of publications that only provide citation information of publications on specific subjects, such as *Web of Science*. For many years, periodical indexes were published in print, with updates sent to each library that subscribed, such as the *Reader's Guide to Periodical Literature*. Many researchers locating information about historical events before the 1980's need to use print indexes to select citations, then locate the

publications.

In addition, **Discovery** systems merge library catalogs with periodical databases, and the results can be limited to the one the library patrons have access to. However, the frustration for many is that the results include many sources that are not accessible to the library patrons. Still, patrons are able to learn of many sources they would not be aware of otherwise, but that does add to their frustrations sometimes.

ISU Library Catalog & OneSearch

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13.1.2: Using A Library Catalog and Integrated Library Systems

A library catalog is a database of materials available through a specific library. Each title in the library collection is searchable by author, title, subject headings, and the whole record is searchable via Boolean keyword searching (refer to p. 21-23 if you need a review). If a patron knows a specific title or author's name, using a title search or author search is the most efficient method to determine if a library has that work, and where it is located. However, most students looking for information do not know a specific title or author, and need to locate information about a topic. For most circumstances, a Boolean keyword search is the most efficient search method to locate relevant materials. In most library catalogs, the results are listed in alphabetical order of the title or author, but most catalogs can modify the list to a relevance ranking or by date of publication. In most OPAC's, the date of publication and the summary or table of contents are included in the record, and are the helpful to assess the sources.

Subject headings are helpful when determining if a record is relevant to a topic, and in most OPAC's the subject headings are hotlinked in a record, which means that clicking on a subject heading can link to a list of titles that have that subject heading. However, searching by subject heading can be frustrating, as the subject heading has to be in the correct terminology or simply retrieves "no results". Most catalogs have a system of "see" and "see also" references that direct patrons to the correct term, but this is limited to the computer having similar thought-processes as the patron. The "see" and "see also" references are remnants of the print card catalog, and also have their purpose in OPAC's. However, patrons might want to consult the subject headings that are used by the library to avoid frustration that often occurs as a result of guessing at the appropriate subject headings.

Subject headings are essential to locating materials on specific types of research when using a library catalog. For example, historical events may have several names, but will have the same subject heading (search for **Civil War** or **World War II**). In addition, literary criticism and commentary are often classified and given call numbers near the original work. However, often a library has large literary collections and the call number is needed to locate the title on the shelf, and the subject headings are essential to locating the call number for the correct book. Search for the author's name as a subject, and look for the subdivision that is appropriate, such as **Hemingway, Ernest—Criticism and Interpretation**.

If your library has an Integrated Library System (ILS), you may find it easiest to do a keyword search, then use the **facets** to limit your results to those with a more limited focus. These facets may include the publication date, subject tags, publication types and other factors to help limit the results to the appropriate materials. However, be careful to use the facets one step at a time, if too many options are used in one step, the results may be devastating. It is usually better to limit the results in small steps, rather than large leaps!

Book & Book Chapter Citations 2020

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13.2: FINDING SOURCES

Students and faculty alike often identify finding sources as a barrier to the research process. The challenge is not that sources don't exist. On the contrary, there are so many sources that crafting a search strategy may feel overwhelming.

Source Information:

Using Research to Support Scholarly Writing- A Critical Thinking and Research Methodology Sandbox for First year Composition (Bloom, et. al.)

- Pressbooks
- https://open.maricopa.edu/researchsandbox/
- Creative Commons Attribution Noncommercial ShareAlike

13.2.1: Library and Internet Research

13.2.2: Understanding Library Resources

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13.2.1: Library and Internet Research

As repositories of our collective knowledge, libraries and the Internet host our cultural heritage, the memory of our present and past civilizations. Admittedly, though, the cornucopia of information accessible via the Internet and archived in libraries can be overwhelming, particularly if you are just becoming accustomed to the research process.

Conducting library and Internet research helps you quickly find the information you need. This page provides useful suggestions about how to conduct Boolean searches, for instance, and offers advice about how to identify whether you should begin your research using the Open Web, the Gated Web, or the Hidden Web.

Research Libraries vs. the Web

Many people are confused about what constitutes library research versus what constitutes Internet research. Some people argue that effective research is never conducted on the Internet, that one needs access to the resources of a library to conduct thorough investigations. People in this camp argue that institutional libraries pay significant sums to provide access to proprietary databases to their customers — that is, databases that offer abstracts, bibliographical information, and, oftentimes, full texts of articles published in scholarly journals. Also, research purists may argue that documents published on the Internet lack the authority of research that is peer-reviewed and published by major publishers. Something important to consider is the difference between an Internet resource and an academic resource accessed via the Internet. For example, if I simply Google "research method," one of my first search results is from about.com – a good resource, but not necessarily an academic resource. Although I can glean about.com for useful information about the generics of a topic like "research methods," for the purposes of an academic research assignment, it may be wise to use the Internet to access my library's databases (like Academic Search Premier, JSTOR, etc.) for online access to a plethora of information pertaining to my search term. The Internet hosts a variety of resources, some of which are useful for casual, everyday references (like about.com) and others which are more appropriate for an academic research assignment (like my library's databases: Academic Search Premier, JSTOR, etc.)

Because of a misunderstanding about the way in which the Internet serves both purposes (casual, everyday research and formal, academic research) some students report they never use their library's resources. Studies of the research processes of students have found that many students limit their investigations to search engines such as Google, paying especially close attention to the first eight or so hits on any search. Unfortunately, students who conduct research in this way often end up with sources that they later realize aren't useful in crafting informed, thorough, formal academic research and/or arguments.

To conduct effective research, you may need to use both the library and the Internet. Limiting yourself to the library cuts off some very innovative work that may not yet be accessible for your library's periodical indexes and abstracts. In turn, relying solely on the Internet is like trying to dig a hole with your tongue rather than a shovel: extremely counterproductive and a waste of time.

Information junkies know arguments for using either the library or the Internet are out of touch with reality. As research libraries increase the number of electronic resources they subscribe to, many traditional resources are now accessible via the Internet–although passwords may be required. In other words, distinctions between the library and the Web are blurring.

The Open Web, the Gated Web, and The Hidden Web

To conduct thorough research, you need to access information in three places: the Open Web, the Gated Web, and the Deep Web.

1. The Open Web refers to the free information on the Internet that is readily searchable with an Internet search engine and accessible with an Internet browser, such as Internet Explorer or Netscape Navigator.
2. The Gated Web refers to information that requires a log-in and password for access. Information archived at the gated web tends to be copyrighted and accessible for a fee. To pay their expenses–including payments for authors, editors, and for salespeople who represent and market the work–publishers need to see a return on their investment so they do not simply post their publications to the Internet. Libraries pay publishers and database index companies significant sums of money so their users can access information via the Gated Web. When you use your computer to log in to your college or university's library, you may be prompted to provide your name, social security number, or student identification number. After authenticating your information, the library's computer server allows you to access the journals and databases to which your library subscribes.

3. The Hidden Web, the Deep Web, the Invisible Web are terms that are used interchangeably to refer to Web sites and databases that contain information that can't be found using top-level search engines like Yahoo or Google. The Deep Web includes non-html files, such as PDFs; gated sites that require log-ins; interactive tools like map directions or mortgage calculators; and dynamically created Web pages–that is, pages created by databases. The Deep Web is 500 to 700 times larger than the Open Web. According to Bright Planet, the Deep Web "contains billions of high-quality documents in about 350,000 specialty databases.

Licenses and Attribution

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13.2.2: Understanding Library Resources

Conducting research for papers, reports, and other assignments involves more than just typing a word or phrase into a search box. Understanding both the systems and the sources sets a foundation for retrieving relevant research. Before you jump into a search, take the time to think about where you should start and what types of sources you seek.

Evaluating Search Systems

Search systems contain the information, data, and search interfaces used to locate sources. Some examples of search systems include search engines, databases, wikis, institutional repositories, and other information collections. Search interfaces are the entry points for databases, search engines, and other systems. They can be simple (such as most databases' basic searches or Google's standard search, or more detailed (such as most databases' advanced searches or Google's advanced search.)

Think about which search systems will give you the best sources. For example, some search interfaces provide more detailed searching methods than others. Some systems contain sources across a broad spectrum of subjects, while others contain subject-specific sources. Before you choose a database or other system, ask yourself these questions:

- Am I researching an interdisciplinary topic? Does my topic fall under one specific subject?
- Am I researching a controversial issue? Do I need historical information? Do I need international information? Does my assignment focus on pro/con comparisons that require subjective points of view?
- Has my professor required specific types of sources, such as books, scholarly journals, or newspapers?

Once you've determined the answers to those questions, review the systems available in your library.

- Locate systems based on the subjects they contain.
- Look for descriptions that include coverage of historical sources, international research, controversial issues, etc.
- Confirm which types of sources are included in the systems. Check the "Advanced Search" pages to find options to limit to scholarly journals, newspapers, etc.

Choose a database or other system (or two or three) and perform some searches. When you locate a source that fits your topic, review the subject terms and abstract. Adjust your search terms to incorporate this information. Remember to take advantage of limiters, such as source type (scholarly, full-text, etc.), publication date range, geographic location, language, etc.

EVALUATING SOURCES

Evaluate the sources themselves to determine their usefulness for your research. A source's abstract will usually give you everything you need to evaluate the source. (It's also much less time-consuming to check a one-paragraph abstract than to read an entire article before finding out that it doesn't fit your research needs.)

Decide whether you need popular or scholarly sources. Popular articles generally haven't been as fully researched and reviewed as scholarly articles. Verify whether a source is popular or scholarly by considering:

Type	Popular	Scholarly
Purpose	current events, entertainment, summaries	research
Audience	general readers	scholars, researchers, students
Author	not experts, often unnamed	experts, researchers, always named
Characteristics	shorter in length, informal langauge, few citations	longer in length, formal language, more citations, peer-reviewed*

* Peer-reviewed articles have been reviewed and accepted for publication by a selected panel of recognized experts in the field of study covered by the journal.

Beyond a source's popular or scholarly nature, consider the importance of these characteristics: authority, currency, objectivity, coverage, accuracy, and relevance.

- Authority—Authority focuses on the author's background in the topic. Determine if the author is an expert or has conducted sufficient research.
- Currency—Check to see if the information provided in the source is current. For some research, older information is okay. Sometimes we even want to find historical documents. Other times, it's best to have current research. Think about how the age of the information affects the research and conclusions.
- Objectivity—As you read the article, establish the author's objectivity about the topic. Are you finding that the author has a particular point of view, or is he or she objective? For argumentative papers and controversial issues, subjective research can be useful to develop arguments and supportive evidence. However, other research requires objectivity. Keep in mind how these views could affect your own research.
- Coverage—Review the source to see if it covers the entirety of your topic. If it only covers a portion of the topic, is that enough for your research needs? If not, discard the source. If the source covers a broader range than your topic, does it provide enough information for your needs? If it only summarizes your specific topic, it may not be the right source for you.
- Accuracy—Your sources should also be accurate. One way to determine accuracy is to check a source's reference list to see if it has a good number of sources. (Ten or more is usually good.) Another way to determine accuracy is to verify the source's information from other sources.
- Relevance—Finally, confirm that the source is relevant to your topic. Sometimes when we perform research, we locate interesting sources only to find that they're tangential to our topic. Be careful not to veer off-track.

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13.3: INFORMATION VALUE AND PRIVILEGE

13.3.1: Information Value and Privilege Documents

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13.3.1: Information Value and Privilege Documents

Why Are We Reading This?

This week's readings take up where last week's readings left off. We know from last week that not all voices are being heard in academia. This leads directly to the value and privilege of information. There is a value placed on academic information (both monetary and societal value). And in academia especially, only a privileged few have access to certain types of scholarly writings.

What is Information Privilege?

The idea that status impacts your access to information is nothing new. What is relatively new is that librarians and others are critically talking about it as it relates to higher education. There is an excellent 2018 academic paper on this topic that I will link to at the bottom, but honestly it's more information than you really need to be able to understand this concept.

Instead, I'm going to ask you to read the Wikipedia entry on Information Privilege, which is well-written and researched and actually includes information from the paper I referenced above.

Reading One: From Wikipedia: Information Privilege

Digital Divide

We are active users of technology - I am teaching and you are learning online. When we're submerged in this kind of environment, it's sometimes easy to forget that what's known as the digital divide still exists. Our access to technology gives us advantages in accessing information that many around the world do not have. This information graphic from the International Monetary Fund illustrates that:

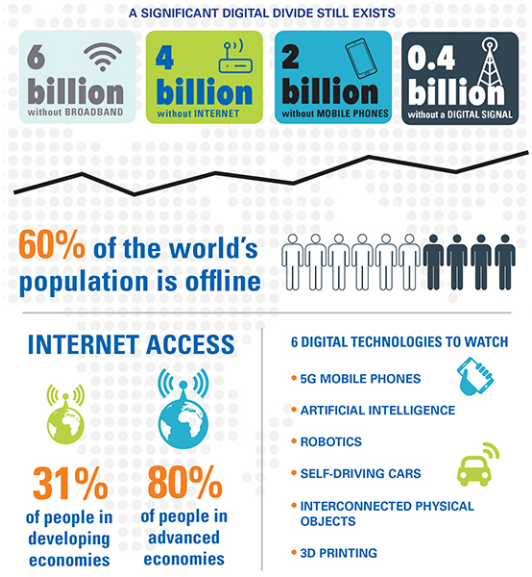
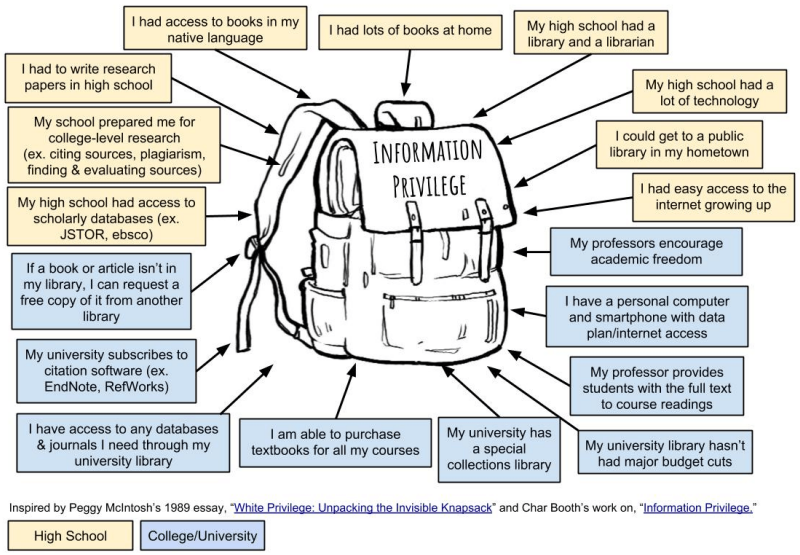


Image prepared by Natalie Ramírez-Djumena. Text and charts are based on World Development Report 2016: Digital Dividend, published by The World Bank in January 2016.

Machine readable text description of preceding graphic

Information Privilege in High School & College

Students, even those in high school, enjoy information privileges that aren't afforded to the general public. This graphic created by Duke University Library helps you understand this privilege more fully:



Machine readable text description of preceding graphic

The Monetary Value of Academic Publishing

Academic publishing is big business. These companies are making billions of dollars. You've undoubtedly been directly impacted by this; you've likely faced decisions on whether to buy a $100+ textbook that is required for a course. When you learn more about how the system is working, it can make you very angry with the publishers. The good news is that academics, librarians, and even the government are pushing for more open access to academic material.

This first reading is designed to introduce you to the system in which academic journals and other original research content is published.

Reading one: From Footnote website: The Exploitative Economics of Academic Publishing by Samuel Gershman

Profits by Industry

This graphic is meant to illustrate the incredible profits experienced by academic publishers. You can see that scholarly publishing is far more profitable than being one of the biggest retailers in the world (Amazon).

Profit	Company	Industry
3% Of $232.9 million	amazon	Retail
7% Of $97.5 million	BMW	Automobile
22% Of $265.6 million		Computing
23% Of $136.8 million	Google	Technology
37% Of €2538 million	ELSEVIER	Academic Publishing
37% Of €533.2 million		Academic Publishing

Figures came from company websites. For more information, read an explanation of how these profits were calculated and from what sources the information came.

Machine readable text description of preceding graphic

University of California Cuts Ties with Elsevier

I mentioned that academics have been pushing for more open access. This fight came to a head recently with the University of California system and one of the largest academic publishers, Elsivier. This article outlines UC's unprecedented decision

Reading two: UC terminates subscriptions with world's largest scientific publisher in push for open access to publicly funded research from the UC Office of the President

Your Academic Privilege

After reading all of this information, I thought you might be interested in how much the Los Rios Community College District pays for students to have access to the library's research databases and other library resources.

For database content alone, including access to things such as Academic Search Premiere, The EBSCO Ebook Collection, Films on Demand, and other specialized databases, the district pays about $285,000/year. On top of this, each college is afforded a local budget to purchase additional books and resources that are housed locally at the campus. Cosumnes River College has received about $75,000/year to acquire these additional resources, though our budget was cut this year because of the COVID-19 crisis and the financial impact it has had across the state.

This is why librarians and your instructors are constantly asking you to take advantage of your academic privilege by using the library databases.

My hope is that someday more academic information will be freely available. Until then - we should all be part of this fight.

Further Reading

Hare, S. & Evanson, C. (2018). Information privilege outreach for undergraduate students. *College & Research Libraries, 79*(6), 726-736. https://doi.org/10.5860/crl.79.6.726

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Profits by Industry table [Image file]. (Updated to 2018), but inspired by Duke University Libraries, “Profit Margin Table" and Alex Holcombe’s profit margin tables, https://alexholcombe.wordpress.com/2015/05/21/scholarly-publisher-profit-update/

References

Ramerez-Djumena, N. (September 2016). *A significant digital divide still exists* [Image file]. https://www.imf.org/external/pubs/ft/fandd/2016/09/picture.htm

Rozear, A. (n.d.) Invisible knapsack: Information privilege [Image file]. *Duke University Libraries* https://sites.duke.edu/library101_instructors/2018/08/13/information-privilege/

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13.4: FINDING MATERIALS IN THE LIBRARY

Learning Objectives

By the end of this chapter, you will be able to:

- Search for physical materials using your online library catalog
- Describe how libraries organize physical materials on the shelves

Source Information:

Introduction to College Research (Butler, Sargent, Smith)

- Pressbooks
- https://introtocollegeresearch.pressbooks.com/
- Creative Commons Attribution-NonCommercial 4.0 International

13.4.1: Using OneSearch- Your California Community College Library's Search Tool

13.4.2: Finding Your Books

13.4.3: Filters and Advanced Search Options in OneSearch

13.4.4: How Libraries Organize Materials

13.4.5: Dewey Decimal Classification (DDC)

13.4.6: Library of Congress Classification (LCC)

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13.4.1: Using OneSearch- Your California Community College Library's Search Tool

Does your college use Onesearch?

Your California Community College library most likely uses what is known as OneSearch to help you find library resources. If your library does not use OneSearch, there will be a lot of commonalities between your library's search tool and OneSearch. Speak with your instructor or a college librarian for further clarification.

Example Search

Let's consider the scenario presented at the beginning of this chapter. You need to find resources related to the American Revolution—specifically you need to find two books and one documentary film. Let's look at how you can do this in OneSearch.

If you search for American Revolution, you will see a search result that looks very similar to the one below:

Figure 13.4.1.1: This sample search result list from OneSearch displays what you should typically see when you conduct a search.

Filtering Results: Availability & Resource Type

In your search results, you should notice some key details. Pay attention to the area to the left of your search results, where you can use filters that control your search results. The first set of filters is labeled as "Availability." This will indicate how the resources are available. Are they available online? As peer-reviewed journals? You should notice there is an option that says "Held by Library" or something similar to indicate that your library owns those materials. This is a great filter to use to limit your search results that you can access at your library.

Another area to look at is "Resource Type." Here, you'll find different formats that you can limit your search results to. For our scenario, what types of resources do you need? We need two books. When you look at the image above, you'll see that there are 6,693 books that are available in our search results. By clicking on "Books," you will then be able to browse a list of those items.

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13.4.2: Finding Your Books

Interpreting Your Search Results

After you identify two books that you think you could use, you will need to find those books in the library. Let's take a closer look at the search results:

OneSearch results showing two American Revolution books with their availability status.

Figure 13.4.2.1

In the above image, we have limited our search results to "Held by Library" and to "Books" as our resource type. These active filters are on the left side of the above image. The top two results in the example are books that are available in the library. We can confirm that these are books by the "Book" label next to the image of the item in the search result. Below the book's cover, there is another label indicating the book's availability. Both of these books are labeled as "Available," meaning they should be in the library. If the book is checked out, missing, or simply unavailable, OneSearch will update the status so that you will know whether or not the book is available for you.

Call Numbers

The first book is called *The American Revolution*. According to OneSearch, this book is available at this library on its Third Floor.

OneSearch record for the american revolution by Kirk Werner. Third floor location.

Figure 13.4.2.2

After the location (Third Floor), you should see a set of numbers. These numbers are known as call numbers. Call numbers allow libraries to organize their resources on their shelves in a logical manner; that is, they will be shelved either numerically or alphanumerically (using letters and numbers) according to these call numbers. In the example above, the book's call number is 973.3 A 11. This means the library has it shelved with other books that are in a 900 range. In the example below, the book's call number is E203.A5725 2004. This means that this book will be shelved in an area where the call numbers begin with the letter E.

OneSearch item record for a book titled The American Revolution by Charles Carey. Its call number begins with an "E".

Figure 13.4.2.3

But why do some call numbers begin with letters, while others start with numbers? It all depends on the system your library decides to use to organize their materials. For further explanation, see How Libraries Organize Materials.

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13.4.3: Filters and Advanced Search Options in OneSearch

Filters

OneSearch provides you with many options to filter your results. We have already discussed “Availability” and “Resource Type.” Other filters that you might see at your library include Publication Date, Subject, Author, and Language.

Advanced Search

You can also click on an option called “Advanced Search” next to the search box at the top of your results (you might have to do a search first to see this depending on how your library has it set up). This option will allow you to be much more specific with your search. For example, let’s say you wanted to find books that have “American Revolution” in the title because you feel that those books will be most relevant to your topic. You also want to find books that address *the causes* of the American Revolution. This is hard to do in a simple search box. But in the Advanced Search option, you have much more control.

Below is an image of the Advanced Search from OneSearch. You should be able to see that in the first line, the search is set up so that the Title contains “American Revolution.” Then in the second line, there is the option that any field should contain the word “causes.” The search is also limited to a Material Type of “Books.” This Advanced Search has additional menus with other options we could use, such as language and date. You can even add additional keywords by choosing “Add a New Line.”

Advanced search in OneSearch, described in preceding text

Figure 13.4.3.1

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13.4.4: How Libraries Organize Materials

Two Systems

There are two main systems that California community college libraries use to organize materials on the shelves: the Dewey Decimal Classification (DDC) and the Library of Congress Classification (LCC, sometimes also informally called LC or LOC). Both classification systems provide a systematic way for the libraries to keep their materials organized.

Which classification system a library uses depends on local preferences and practices, but in general: academic and research libraries typically use the Library of Congress Classification, while public libraries tend to use the Dewey Decimal Classification. While we will introduce you to both systems, please note that your community college library probably only uses one of these.

A student walking through the library stacks

Figure 13.4.4.1

Sources

Image: “Man, Backpack, Books” by bantersnaps is in the Public Domain, CC0

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13.4.5: Dewey Decimal Classification (DDC)

The **Dewey Decimal Classification (DDC)** was created by Melvil Dewey in 1873 and is still used by libraries today to organize their collections. The DDC strives to assign all the knowledge in the world to 10 different topical areas organized by number so that each range of numbers (starting with 000–099) is assigned a broad topic area. Below is an outline of these topics.Note

Dewey Decimal Classification System: Topics

000–099: Computer Science, Information and General Works

100–199: Philosophy and Psychology

200–299: Religion

300–399: Social Sciences

400–499: Languages

500–599: Science

600–699: Technology

700–799: Arts & Recreation

800–899: Literature

900–999: History & Geography

These 10 broad topics are then subdivided into 10 more specific topics. As an example, the 900s–History & Geography is divided below.

900s: History & Geography

900–909: History

910–919: Geography & Travel

920–929: Biography & Genealogy

930–939: History of the Ancient World (to ca. 499)

940–949: History of Europe

950–959: History of Asia

960–969: History of Africa

970–979: History of North America

980–989: History of South America

990–999: History of Other Areas

And then these get broken down even further! Let's look at the 970s.

970s: History of North America

970: History of North America

971: Canada

972: Mexico, Central America, West Indies

973: United States

974: Northeastern United States

975: Southeastern United States

976: South Central United States

977: North Central United States

978: Western United States

979: Great Basin & Pacific Slope region

When we look at this book that we found with OneSearch, we can see that its Dewey number is in the 900s. That means it is part of History & Geography. Specifically, it is a 973, which means it is about History of North America–United States. The .3 refers to the time period between 1775 – 1789.

OneSearch record for the American Revolution, showing call number 973.3 A 11

Figure 13.4.5.1

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13.4.6: Library of Congress Classification (LCC)

How It Works

In contrast to the DDC, the **Library of Congress Classification system (LCC)** strives to divide all the world's knowledge into 21 topical areas and groups them alphanumerically. That is, they first assign a topic area to a letter, and then divide that topic up by numbers. Created by the U.S. Library of Congress to meet the needs of its collection, the first outline of the LCC was released in 1904 ("Library of Congress Classification").

Library of Congress Classification

A: General Works

B: Philosophy, Psychology, Religion

C: Auxiliary Sciences of History

D: World History

E: History of the Americas

F: History of the Americas

G: Geography, Anthropology, Recreation

H: Social Sciences

J: Political Science

K: Law

L: Education

M: Music

N: Fine Arts

P: Language and Literature

Q: Science

R: Medicine

S: Agriculture

T: Technology

U: Military Science

V: Naval Science

Z: Bibliography, Library Science, Information Resources

The LCC then adds numbers after each letter to get more specific within each topic area. Our example from before has the call

number E203.A5725. This call number falls within the range E201–298, which is reserved for works about the American Revolution.

OneSearch item record for a book titled The American Revolution by Charles Carey, showing call number E203.A5725 2004

Figure 13.4.6.1

How to Find a Book on the Shelf

Please watch this video explanation [1:49], which demonstrates the different elements of LCC call numbers and how they are ordered on a library shelf:

Note: This video has open captions. You may also use the text transcript if you prefer to read.

Sources

"Library of Congress Classification." *Librarianship Studies & Information Technology*, 23 June 2020.

"Understanding Call Numbers (Research Minutes)." *YouTube*, uploaded by Ryerson University Library & Archives, 14 Jan. 2011.

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14: UNIQUE VALUE OF LIBRARIES IN THE INFORMATION LANDSCAPE

14.1: Using Library Databases

14.1.1: Library Databases- What's Inside Them?

14.1.2: Choosing a Library Database

14.1.3: Specialized Library Databases

14.1.4: Scholarly Articles, Magazine Articles, and Newspaper Articles

14.2: Specialized Databases

14.3: Locating Sources- Using Periodical Databases

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14.1: USING LIBRARY DATABASES

Learning Objectives

By the end of this chapter, you will be able to:

1. Differentiate between resources found in library databases and websites
2. Identify key differences between resources such as scholarly journals, magazines, and newspapers
3. Identify different types of library databases based on resource types
4. Use library databases and their embedded tools to support your research assignment

Source Information:

Introduction to College Research (Butler, Sargent, Smith)

- Pressbooks
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14.1.1: Library Databases- What's Inside Them?

Why Library Databases?

Although the internet houses great resources, some websites are not appropriate for college-level research, and sometimes professors have concerns over the information that students might encounter online. In a previous chapter we explored Fact-Checking, and in a later chapter, we will discuss Web Search Strategies to find relevant and reliable resources. Unfortunately, you can't find everything through a Google search, which is one reason why you'd want to use a library database.

Most library databases provide access to resources that you would normally subscribe to or pay for, such as a newspaper. You can access some newspaper articles for free online, but websites often limit the amount of articles you can view freely. For example, if you visit the *Los Angeles Times* online you might be able to view one or two articles. After that point, you will need to purchase a subscription to read more. But a library database will provide free access for students and professors at your college.

Another advantage of using a library database is that the resources are secured and safe to access. Some websites require you to accept additional considerations and agreements before accessing materials. But what are you agreeing to? Websites, by their nature, are dynamic resources; their content can change without warning. A resource in a database typically will not change and will often come with a permanent link (sometimes called a "permalink") so that you can find and share the resource in the future.

Please watch the following video [2:34] for a concise summary of the key differences between using library databases and the Web for your research:

Note: Turn on closed captions with the "CC" button or use the text transcript if you prefer to read.

Additional Database Features

Library databases tend to come with additional tools to support your research. These tools can include help with writing citations, easy-to-use filters to limit your search results, and options to save the article for later use. Whenever you use a library database, you will want to become acquainted with these additional features that will streamline and support your research process.

Takeaways: Library Databases vs. Websites

	Library Databases	**Websites**
Cost	Always free for students to access.	Varies. Sometimes you can access resources freely, other times you can't.
Privacy & Security	Exposure of students' information is limited through the databases.	You often must "agree to terms" before accessing content on a website.
Reliability	Information in a library database will not change unless the subscription changes.	Websites are dynamic, and content can change daily.
Features	Databases typically come with a range of tools to help you find relevant resources. You have more control over the results you want to see.	Search engines online have limited features to narrow down results. You have less control over the results you want to see.

Sources

"What Are Databases and Why You Need Them." *YouTube*, uploaded by Yavapai College Library, 29 Sept. 2011.

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14.1.2: Choosing a Library Database

Many Options

If you look at your library's database list, you might feel overwhelmed and confused. Why are there so many databases to choose from, and which one should you use? The first thing to realize is that library databases are each unique and specialized. Because of this, libraries tend to subscribe to multiple library databases to provide access to a range of materials that support the curriculum of the college. To choose a database, you need to know what each library database provides access to.

EBSCO, ProQuest, Gale

There are three big companies in the world of library databases: EBSCO, ProQuest, and Gale. Most likely, your library will have access to library databases that are owned by at least one of these, if not all three. Their library databases will generally provide you access to digital versions of resources: ebooks, newspaper articles, magazine articles, and scholarly journal articles. These companies also provide access to multimedia resources, such as streaming video and audio files. Some of the most common library databases from these companies are EBSCO's Academic Search Complete, ProQuest Central, and Gale's Academic OneFile. Any of these three library databases will connect you to the full range of resource types.

These three companies (EBSCO, ProQuest, and Gale) own so many library databases that they each also offer an aggregator search tool, which your library might or might not have access to depending on what they subscribe to. An aggregator search tool allows you to search across all of the library databases that your library subscribes to, owned by a single company. So, instead of searching in each of EBSCO's library databases individually, you can do a single search using EBSCOhost. Likewise, you can use the ProQuest Platform to search across most ProQuest resources, and Gale's PowerSearch to search across most Gale library databases. These aggregators also allow you to customize which library databases you want to search within. Note, however, that additional features are often available when library databases are searched one at a time.

Beyond these three companies are many others that your library might subscribe to that can be just as or maybe even more resourceful than the databases already discussed. Speaking to one of your librarians to understand which databases are the most appropriate for your research topic is always strongly recommended.

Scenario

Using the scenario for this chapter, and knowing that I need to find resources about artificial intelligence, I might want to focus on library databases that hold science articles (including general, multidisciplinary choices that cover science as well as many subjects). After looking at my library's database list, I determine that I will start with EBSCOhost and choose EBSCO's Science Full Text, Academic Search Complete, and MasterFILE. By using EBSCOhost, I'll be able to search all three of these library databases at the same time.

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14.1.3: Specialized Library Databases

Your go-to databases for finding scholarly journal articles, newspaper articles, and magazine articles will probably come from EBSCO, ProQuest, and Gale. But what about videos, ebooks, and other special resources? Finding these types of resources will require you to become familiar with specialized databases that your library might subscribe to. Below are charts categorized by resource type listing some of the more popular databases. Your library may subscribe to only a few of these databases or even other databases not listed here, so make sure to always check with a librarian about what resources are available to you.

Table 14.1.3.1

LIBRARY DATABASES WITH VIDEOS	TYPES OF VIDEOS
Films on Demand	Mostly documentary and instructional
Academic Video Online	Mostly documentary and instructional
Swank	Popular movies
Kanopy	Mostly documentary, with some popular arthouse films
Intelecom	Mostly instructional

Table 14.1.3.2

LIBRARY DATABASES WITH EBOOKS	TYPES OF EBOOKS
Gale Ebooks	Reference (such as subject-specific encyclopedias and dictionaries) and other non-fiction
EBSCO Ebooks	Non-fiction and fiction
Ebook Central (ProQuest)	Non-fiction and fiction
Salem Ebooks	Reference

Table 14.1.3.3

SPECIALIZED LIBRARY DATABASES	TYPES OF RESOURCES
Artstor	Images
JSTOR	Scholarly Journals and ebooks
Project Muse	Scholarly Journals and ebooks
Statistical Abstract of the United States	Statistics, Demographics
OverDrive	Audio books, ebooks, magazines
Mango Languages	Language instruction
CQ Researcher	Reports on social issues
Opposing Viewpoints	Articles and resources focused on social issues
SIRS	Articles and resources focused on social issues
Facts on File	Articles and resources focused on social issues

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14.1.4: Scholarly Articles, Magazine Articles, and Newspaper Articles

Identifying Different Types of Articles

In our scenario, you have to identify and find different types of articles. As pointed out already, the library databases often come with filters that allow you to separate out these different types of resources. There are even some library databases, such as JSTOR, that specialize in scholarly journal articles, or ProQuest's US Major Dailies, which specializes in newspapers. But what if you're using an aggregator, such as EBSCOhost, and you aren't using a filter to limit your search? How will you be able to differentiate a newspaper article from a magazine article or from a scholarly journal article? And why does it matter? There is a separate chapter that goes into the differences between information resources in more depth, but for quick reference consider the following characteristics of these resource types.

Scholarly Articles

Journal article icon shows many pages full of text

Figure 14.1.4.1

Scholarly journal articles are usually long. They are also written with academic language that can sometimes be very technical. Especially in the sciences and social sciences, you will notice predictable sections within them, with subheadings like introduction, literature review, methodology, results/findings, and discussion/conclusion. They'll have a list of references or works cited, and are often authored by more than one person (especially in the sciences and social sciences). Scholarly journal articles focus on research topics and questions, which means that they may not be reflecting on specific events happening at the moment of publication; rather, they tend to reflect on trends and larger issues.

Magazine Articles

Magazine icon shows short text and colorful images

Figure 14.1.4.2

Magazine articles will generally be shorter than scholarly journal articles, written so that they can be understood easily by non-experts, and may or may not have different sections within the article. If they do, the subheadings will not be as predictable as they are in a scholarly journal article from the sciences or social sciences, and the section headings will probably relate back to the topic of the article. A magazine article in PDF format will probably be colorful and have images. You probably won't find a list of references or works cited at the end of a magazine article. In contrast to scholarly journal articles, magazine articles tend to look at specific events occurring at or around the time of publication, and the authors try to analyze that event to explain why it's important.

Newspaper Articles

Newspaper icon

Figure 14.1.4.3

Newspaper articles are usually the shortest of all three article types. Like magazine articles, they are written in simple language to be understood easily by the general public, but because they are shorter, they don't usually have different subsections within the article. While a printed newspaper article may have some images, there will be fewer than in magazines; newspaper articles in library databases are typically only available as HTML (i.e., no images). They also tend to describe events that are occurring at the moment the article was published, with very little analysis of importance other than the fact that the event happened. First-hand accounts from people who experienced an event are often reported in newspaper articles. Exceptions to this would be editorials and "op-ed" pieces, which are opinion-based articles about an issue.

Sources

Image: “Articles” by Freepik, adapted by Aloha Sargent, from Flaticon.com

Image: “Magazine” by Freepik, adapted by Aloha Sargent, from Flaticon.com

Image: “Newspaper” by Freepik, adapted by Aloha Sargent, from Flaticon.com

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14.2: Specialized Databases

A specialized database—often called a research or library database—allows targeted searching on one or more specific subject areas (i.e., engineering, medicine, Latin American history, etc.), for a specific format (i.e., books, articles, conference proceedings, video, images), or for a specific date range during which the information was published. Most of what specialized databases contain can not be found by Google or Bing.

There are several types of specialized databases, including:

- Bibliographic – details about published works
- Full-text – details plus the complete text of the items
- Multimedia – various types of media, such as images, audio clips, or video excerpts
- Directory – brief, factual information
- Numeric – data sources
- Product – model numbers, descriptions, etc.
- Mixed – a combination of other types, such as multimedia and full-text

ACTIVITY: Database Types

Open activity in a web browser.

When to Use Specialized Databases

Search specialized databases to uncover scholarly information that is not available through a regular web search. Specialized databases are especially helpful if you require a specific format or up-to-date, scholarly information on a specific topic.

Many databases are available both in a free version and in a subscription version. Your affiliation with a subscribing library grants you access to member-based services at no cost to you. For example, using PubMed via OSU Libraries enables a Find It link to help you request an item.

TIP: Free vs. Subscription?

In some cases, the data available in free and subscription versions are the same, but the subscription version provides some sort of added value or enhancement for searching or viewing items.

Database Scope

Information about the specific subject range, format, or date range a particular specialized database covers is called its scope. A specialized database may be narrow or broad in scope, depending on whether it, for instance, contains materials on one or many subject areas.

If you are using a database licensed by OSU Libraries and have clicked the title in the list of databases, you will see scope information at the bottom of the same page that says “Click on the following to go to the resource.”

IEEE Xplore is a database with coverage from 1988 to the present for the subjects of computer science, engineering, standards (technical), and technology.

Figure 14.2.1: This example shows the scope page for an OSU-licensed database. View the live example.

Once you are aware of a database’s scope, you’ll be able to decide whether the database is likely to have what you want (for

instance, journal articles as opposed to conference proceedings). Reading about the scope can save you time you would have otherwise wasted searching in databases that do not contain what you need.

ACTIVITY: Determining Subject Scope

Open activity in a web browser.

ACTIVITY: Years Of Coverage

Instructions: In addition to subject scope, database descriptions should include years of coverage. Visit Ohio State's Research Databases List to search for the databases listed below. Which database contains the oldest information? Which covers the fewest years?

- Evidence Based Medicine Reviews
- MathSciNet
- GeoRef

ANSWER TO ACTIVITY: Years of Coverage

The answer to the "Years of Coverage" Activity above is:

- The database containing the oldest material is GeoRef, which goes back to 1785.
- The database covering the fewest years is Evidence Based Medicine Reviews, which goes back to 1991.

How to Use Them

Use of each database varies somewhat.

See Ohio State's research database list.

Example: Academic Search Complete

Academic Search Complete (OSU only) is a general article database available through most academic and large public libraries that is often recommended for undergraduate research projects.

MOVIE: Academic Search Complete Database in 3 Minutes

View video

Keyword Searching

Although keyword search principles apply (as described in Precision Searching), you may want to use fewer search terms since the optimal number of terms is related to database size. Google and Bing work best with several terms since they index billions of web pages and additional terms help narrow the results. Each scholarly database indexes a fraction of that number, so you are less likely to be overwhelmed by results even with one or two keywords than you would be with a search engine.

Phrase searching (putting multiple words in quotes so Google or Bing will know to search them as a phrase) is also less helpful in specialized databases because they are smaller and more focused. Databases are better searched by beginning with only a few general search terms, reviewing your results and, if necessary, limiting them in some logical way. (See Limiting Your Search below.)

ACTIVITY: Compare Them!

Instructions:
Compare a search for items containing both phrases “United States” and “female serial killers” in the article database Academic Search Complete (OSU only) and in the web search engine Bing. (Make sure you include the quotation marks so they will be searched as phrases.) Notice how searching too narrowly (searching for phrases) affects results in the specialized database. How could you revise the specialized database search to get more results?

Limiting Your Search

Many databases allow you to choose which areas (also called fields) of items to search for your search term(s), based on what you think will turn up documents that are most helpful.

For instance, you may think the items most likely help to you are those whose titles contain your search term(s). In that case, your search would not show you any records for items whose titles do not have your term(s). Or maybe you would want to see only records for items whose abstracts contain the term(s).

When this feature is available, directing your search to particular parts of items, you are said to be able to “limit” your search. You are limiting your search to only item parts that you think will have the biggest pay-off at distinguishing helpful items from unhelpful items.

Searching fields such as title, abstracts, and subject classification often gives helpful items.

TIP: Full-Text Searches

Some databases allow for full-text searching, but this option includes results where a search term appears only once in dozens or more pages. Searching fields such as title, abstracts, and subject classification will often give more relevant items than full-text searching

Subject Heading Searching

One precision searching technique may be helpful in databases that allow it, and that’s subject heading searching. Subject heading searching can be much more precise than keyword searching because you are sure to retrieve only your intended concept.

Subject searching is helpful in situations such as:

- There are multiple terms for the same topic you’re interested in (example: cats and felines).
- There are multiple meanings for the same word (example: cookie the food and cookie the computer term).
- There are terms used by professionals and terms used by the general public, including slang or shortened terms (example: flu and influenza).

Here’s how it works:

Database creators work with a defined list of subject headings, which is sometimes called a controlled vocabulary. That means the creators have defined which subject terms are acceptable and assigned only those words to the items it contains. The resulting list of terms is often referred to as a thesaurus. When done thoroughly, a thesaurus will not only list acceptable subject headings, but will also indicate related terms, broader terms and narrower terms for a concept.

TIP: Finding Useful Subject Headings

Try this strategy to find useful subject headings. Remember it by thinking of the letters KISS:

- **K**eyword-search your topic.
- **I**dentify a relevant item from the results.
- **S**elect subject terms relevant to your topic from that item's subject heading.
- **S**earch using these subject terms. (Some resources will allow you to simply click on those subject terms to perform a search. Others may require you to copy/paste a subject term[s] into a search box and choose a subject field.)

ACTIVITY: Searching Specialized Databases

Open activity in a web browser.

Records and Fields

The information researchers usually see first after searching a database is the "records" for items contained in the database that also match what was asked for by the search.

Each record describes an item that can be retrieved and gives you enough information so that, hopefully, you can decide whether it should meet your information need. The descriptions are in categories that provide different types of information about the item. These categories are called "fields." Some fields may be empty of information for some items, and the fields that are available depend on the type of database.

Example: Database Fields

A **bibliographic database** describes items such as articles, books, conference papers, etc. Common fields found in bibliographic database records are:

- Author.
- Title (of book, article, etc.).
- Source title (journal title, conference name, etc.).
- Date.
- Volume/issue.
- Pages.
- Abstract.
- Descriptive or subject terms.

In contrast, a **product database** record might contain the following fields:

- Product Name.
- Product Code number.
- Color.
- Price.
- Amount in Stock.

Source Information:

Choosing & Using Sources: A Guide to Academic Research **(Lowry)**

- PB-Pressbooks
- https://ohiostate.pressbooks.pub/choosingsources/front-matter/introduction/
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14.3: Locating Sources- Using Periodical Databases

Most college-level research depends on information found in journal and magazine articles, and finding these sources depends on the researcher's use of the periodical databases. Many of the databases are electronic versions of print periodical indexes, with the same information, but with many more searchable features, and often the complete article is available.

Facets are useful tools in most online databases, as found in the ILS systems described above. Do a search on a topic, then limit your results by subject, date of publication, publication type, or other descriptive element.

As with reference sources, there are general and subject specific databases, and there are some developed for the general public and high school level research, and others for advanced students and professional research. Many of the databases have similar names, and it is difficult to know which database is best for research on a given topic. For this reason, most libraries group databases by subject or discipline on their websites, and provide a brief description.

1. General Databases

There are several companies that have developed general databases, and many features are common among them. Each company selects the periodicals to index that their users need to access the most, similar to a publisher developing a magazine for target a audience. Of course, database companies also select periodicals based on the agreement negotiations with the publisher to have pre-publication access for indexing, provide full-text and other issues.

Most periodical databases are most effectively searched with a Boolean keyword search, but they also have subject headings, usually called **descriptors**. However, since many students have become familiar with Internet search engines, such as *Google*, database search engines work comparably. As a result, databases have added a few features that are more intuitive, such as the ability to limit results with facets, such as type of publication, subjects, geographic areas, authors, etc.

EbscoHOST has developed many databases, *Academic Search Complete* and *MasterFile Premier* are databases recommended for college-level research. In addition, *ProQuest* and *InfoTrac* are often available. Many general databases tend to have more materials in one discipline than others, so it is worthwhile to experiment with several. See which database is more user-friendly, has the high-quality results, and other issues that affect your use.

Article Citations MLA 8th ed

Article Citations APA 7th ed

II. Subject Specific Databases

Many professional organizations have databases that index sanctioned periodicals, and commercial database companies often develop comparable databases in competition with the professional standard. In addition, research laboratories maintain databases of their publications and supporting research that greatly multiply the resources available. As a result, most of the subject specific databases have much more complex resources with advanced indexing. These resources challenge advanced researchers, and students need the preliminary research to understand most of them. *EbscoHOST* and *OVID* have applied their software to many databases, you will find them easier to use. In addition, many professional organizations have developed databases for their members and academic libraries. Explore!

a. Government Databases

Government agencies have research facilities and networks to compile information from research studies about education, health, space, geology, companies, industries, wildlife, humanities and other professional interests. Government databases have developed to provide equal access to this information, promoting equality for professional in all disciplines.

***Agricola*:** agricultural research compiled by US Dept of Agriculture.

***ERIC* (Education Resource Information Clearinghouse)**: education issues at all levels of learning, teaching and institution administration. Includes journal articles, government documents, conference presentations, theses and dissertations. *ERIC* has been compiled by US Dept of Education since 1966.

***PubMed**:* health research compiled by the US National Library of Medicine and National Institutes of Health.

***Medline**:* medical practices compiled by US National Library of Medicine.

***NASA* (National Aeronautics & Space Aviation)**: astronomy & space travel research

Hein Online

Hein Online is a powerhouse among government information resources. Its judicial branch offerings make it widely subscribed to by libraries supporting law schools. With over 70 million pages of legal history, dating back over nine centuries, *Hein Online* provides a plethora of material needed for legal research. Among its many collections are a wide variety of law journals, case laws, legislative histories, American Indian law, international law, immigration law, and legal classics.

While many of the resources available via PDF in *Hein Online* may also be found using free resources such as *FDsys*, the coverage in *Hein Online* generally extends farther back in time. For example, *Hein Online* provides full-text of the *Code of Federal Regulations* back to 1938 while *FDsys's* coverage begins in 1996. And while each university library may subscribe to slightly different *Hein Online* collections, it is likely to be the best resource available for legal and many Congressional search topics.

***ProQuest Congressional** (Formerly Lexis-Nexis Congressional Universe)*

This database offers one of the most comprehensive sources for historical Congressional information in an electronic format. Academic libraries may subscribe to a basic collection or may opt for more historic coverage. Depending on the subscription researchers may have access to congressional hearings, prints, reports, and documents in full-text back to at least the 1990s with some collections including coverage back to the 1970s. Indexing and abstracting coverage extends back to 1789 for some collections. In addition, bill text and tracking, public laws, legislative histories, voting records, and campaign contributions and financial data make this an excellent option for researchers needing government information.

Legislative Information

Legislative information comes from the Congressional branch of government. Its specialized nature renders it worthy of separate discussion. Many researchers new to government information are unsure about the different types of legislative information available. Here is a quick break-down of what each means:

- *Bills* – proposed legislation considered by both the House of Representatives and Senate. If passed by both and signed by the president, the bill becomes a law.
- *Documents* – a variety of documents ordered printed by the House of Representatives and the Senate. Topics range widely and may include the reports of independent organizations or of special investigations, presidential communications to Congress, or treaty information. Gathered together for publication in the Serial Set since 1817. Prior to 1817, the American State Papers provides access to documents from 1789-1838.
- *Hearings* – during debate of a bill, it may be decided that expert testimony is needed. Hearings will be held so that members of Congress can ask questions.
- *Prints* – publications issued by congressional committees on a wide variety of topics related to their activities. Prints may include statistics information, investigative or historical reports, staff reports, situational studies, hearings, or legislative analyses.
- *Reports* – reports issued by committees that summarize the purpose and scope of a bill, reason's for the committee's support, estimations of cost or revenue, and changes to existing law that would result. These are often the best resources for tracing legislative history.
- *Congressional Record* – to a large degree, a verbatim record of proceedings of the House and Senate floors. Later floor activity and summaries of the day's activities are included. Its predecessors include the *Annals of Congress* (1789-1824), *Register of Debates* (1824-1837), and the *Congressional Globe* (1833-1873).

Locating

While the websites of both the House and Senate make it easy to keep up-to-date on current activities occurring in each chamber,

searching for specific pieces of legislation is generally easier to do using a specialized database. These resources make finding current federal legislative information fairly easy. Locating older resources may require additional effort or even assistance from a librarian. Here are some suggested resources for finding both current and older legislative information.

Current Legislation

- *FDsys* – Your first choice for finding official current legislative information should be FDsys. All types of information listed above can all be found in this database. Coverage varies depending on the type of document you are seeking but generally you'll find full-text of everything later than 1995, with selected documents dating back to the 1970s.
- *Congress.gov* (Formerly THOMAS) – If you do not need an authenticated version of a document (see above for details), Congress.gov's interface is extremely user friendly and is another good option for legislative information from 1973 to the present.

Older Legislation

Depending on the size and mission of your local library, you may have immediate access to older legislative materials or you may need to make use of Interlibrary loan to request items from larger libraries. In addition, as more libraries prioritize digitization of historic materials, you may find full-text available for the years you seek. The sources below are some of the more common options for finding older legislation.

- Bills – The Library of Congress has digitized House bills from 1799-1873 and Senate bills from 1819-1873. The Center for Research Libraries has most bills from 1789 through 1978 on microfiche or in print, and if your local library does not have them available, you can request them through Interlibrary Loan from your local library.
- Documents – If your library subscribes to a commercial government documents database, you will likely want to try one of them first: *Hein Online, ProQuest Congressional or Legislative Insight*, or *Public Documents Masterfile*. Many larger depository libraries will offer access to older documents via microfiche or print holdings of the *Serial Set*, in which nearly all House and Senate documents since 1817 may be found. In addition, the Library of Congress has digitized the *American State Papers* (1789-1838).
- Hearings – If available, first try: *Hein Online, ProQuest Congressional or Legislative Insight*, or *Public Documents Masterfile*. If not, see if your library has the CIS US Congressional Committee Hearings and Index. These items can also be ordered through ILL if needed.
- Prints – If available, first try: *Hein Online, ProQuest Congressional*, or *Public Documents Masterfile*. If not, see if it has the *CIS US Congressional Committee Prints Microfiche and Index*. These items can also be ordered through ILL if needed.
- Reports – You can find older reports in the *U.S. Congressional Serial Set*. Larger depository libraries may have the volumes in print or on microfiche. It is also available digitally from from commercial vendors *ProQuest Congressional* and *HathiTrust*.
- Congressional Record – *The Congressional Record* and its predecessors can be found in print in many larger depository libraries. They are also available digitally through 1873 from the Library of Congress's *American Memory*. Commercially you may find them via *Hein Online, HathiTrust, ProQuest Congressional*.

Judicial Information

Legal research often involves not only legislative information but also identifying and finding records of decision from cases already tried in a court of law. A number of free and commercial electronic resources exist to identify these cases. For researchers most familiar with *Google, a Google Scholar* radio button allows users to search case law by citation, case name, or keyword. Included are U.S. Supreme Court, U.S. Federal district, appellate, tax, and bankruptcy court cases. Additional free resources that researchers may wish to try include the following:

- Find Law
- Justia.com
- Open Jurist
- Public Library of Law
- The U.S. Supreme Court Website

In addition to free resources, students with access to commercial options should explore their coverage and make use of tutorials to find tips for searching. Among the most common commercial sources are:

- Lexis-Nexis Academic: This resources has a simple interface that will allow you to search for federal and state cases by citation, parties involved, or keyword. It also provides access to Shepherd's Citations, Supreme Court briefs, law reviews, and other legal reference sources.

- Hein Online: In addition to being a useful resource for legislative information, Hein Online also contains a number of legal collections. Users will find law journals, opinions, case law, and a Supreme Court library.
- WestlawNext: Suitable for advanced legal research, WestLaw also has a simple search interface which also lets new researchers find legal information. The database will let you search by citation, case name, or keyword. You can limit by jurisdiction with a simple search. The resources also lets you know if a case is still considered valid law or if it has been overturned.

Source Information:

Bridging the Gap: A guide to College-Level Research (Gray, Catherine J.)

- Pressbooks
- https://isu.pressbooks.pub/bridgingthegap/
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15: MISINFORMATION, DEEPFAKES AND FREE SPEECH

15.1: Scholarship as Conversation
15.2: The Miseducation of Dylann Roof
15.3: Content Moderation and Deplatforming
15.4: Critical Thinking
15.4.1: Do Facts Really Matter?
15.4.2: Conspiracies and Theories- Questions to Ask

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15.1: Scholarship as Conversation

Communities of scholars, researchers, or professionals engage in sustained discourse with new insights and discoveries occurring over time as a result of varied perspectives and interpretations.

Several groups of people sitting in a coffee shop conversing

Figure 15.1.1: *Steve McClanahan | Conversations | flickr | CC BY-NC*

Research in scholarly and professional fields is a discursive practice in which ideas are formulated, debated, and weighed against one another over extended periods of time. Instead of seeking discrete answers to complex problems, experts understand that a given issue may be characterized by several competing perspectives as part of an ongoing conversation in which information users and creators come together and negotiate meaning. Experts understand that, while some topics have established answers through this process, a query may not have a single uncontested answer. Experts are therefore inclined to seek out many perspectives, not merely the ones with which they are familiar. These perspectives might be in their own discipline or profession or may be in other fields. While novice learners and experts at all levels can take part in the conversation, established power and authority structures may influence their ability to participate and can privilege certain voices and information. Developing familiarity with the sources of evidence, methods, and modes of discourse in the field assists novice learners to enter the conversation. New forms of scholarly and research conversations provide more avenues in which a wide variety of individuals may have a voice in the conversation. Providing attribution to relevant previous research is also an obligation of participation in the conversation. It enables the conversation to move forward and strengthens one's voice in the conversation.

Knowledge Practices

Learners who are developing their information literate abilities

- cite the contributing work of others in their own information production;
- contribute to scholarly conversation at an appropriate level, such as local online community, guided discussion, undergraduate research journal, conference presentation/poster session;
- identify barriers to entering scholarly conversation via various venues;
- critically evaluate contributions made by others in participatory information environments;
- identify the contribution that particular articles, books, and other scholarly pieces make to disciplinary knowledge;
- summarize the changes in scholarly perspective over time on a particular topic within a specific discipline;
- recognize that a given scholarly work may not represent the only or even the majority perspective on the issue.

Dispositions

Learners who are developing their information literate abilities

- recognize they are often entering into an ongoing scholarly conversation and not a finished conversation;
- seek out conversations taking place in their research area;
- see themselves as contributors to scholarship rather than only consumers of it;
- recognize that scholarly conversations take place in various venues;
- suspend judgment on the value of a particular piece of scholarship until the larger context for the scholarly conversation is better understood;
- understand the responsibility that comes with entering the conversation through participatory channels;
- value user-generated content and evaluate contributions made by others;
- recognize that systems privilege authorities and that not having a fluency in the language and process of a discipline disempowers their ability to participate and engage.

Source Information

Research Primer: Mohawk Library (French, Peggy)

- Pressbooks
- https://ecampusontario.pressbooks.pub/mohawkresearchprimer/
- Creative Commons Attribution-NonCommercial 4.0 International

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15.2: The Miseducation of Dylann Roof

Throughout this course, we'll be using a mixture of both weighty and trivial examples. Sometimes it may seem there's not much downside to being misinformed: who really cares if the "Alexa Voice-Activated Toilet" is real or Monster Brand Caffeinated Ham is fake?

But there are serious social implications to people not paying attention to where their information is coming from.

The video below primarily makes a point about Google. But given the facts presented here, is there a way that a lack of web literacy also played a role?

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

One of the patterns we see in online radicalization — from Nazism to ISIS — is that people often begin their journey by discovering information on the web from extremists that shocks them. Usually they are unaware — initially — of the source of the information, and if they were aware of the source they might be more skeptical of the information presented. By the time they understand who is supplying the information and what their motives are, they are already aligned with those organizations' viewpoints.

Once a person starts down the conspiracy spiral, it's very hard to get back out. There is such a gap between what they see in "respected" sources and what they see from extremist sites that they come to believe the respected sites must be in on the conspiracy. And while in the past many people might hold one or two conspiracy theories, the hyper-connected, algorithmic nature of the internet creates a situation where believing in one conspiracy theory may lead to your exposure to more and more radical conspiracy theories.

Questions for reflection

- Do you think media literacy could help some people avoid processes of radicalization? Or are the social drivers too strong?
- Are all conspiracy theories bad? Are all wrong? What do you think makes a conspiracy theory harmful? Do you hold beliefs that others would dismiss as conspiracy theory?
- Do you know anyone that has gone down the conspiracy rabbit hole on an issue? What have you learned from that experience about what drives conspiracy thinking?

Source Information

Check, Please! Starter Course

- Merlot
- https://www.notion.so/Check-Please-Starter-Course-ae34d043575e42828dc2964437ea4eed
- CC BY

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15.3: Content Moderation and Deplatforming

"The wave of violence has shown technology companies that communication and coordination flow in tandem. Now that technology corporations are implicated in acts of massive violence by providing and protecting forums for hate speech, CEOs are called to stand on their ethical principles, not just their terms of service." – Joan Donovan, author of "Navigating the Tech Stack: When, Where and How Should We Moderate Content?"

Overview

At first glance, the issue of whether a private company has the right to moderate content for the purpose of removing (perceived) offensive or misleading content is simply a matter of conducting business. The most common meme used to describe this policy is the "No shirt. No Shoes. No Service" policy used by restaurants to refuse service to those who do not comply with the rules. Not even the First Amendment to the U.S. Constitution applies to common instances of content moderation since the social media companies in question are not entities of the government curtailing free speech.

However, the issue becomes more complicated when you consider that a small handful of tech companies now control the vast majority of content that people engage with – there is no equivalent "public sphere."

What happens when a municipal government entity that uses Facebook blocks a user because their posts were considered offensive? When then-president Donald Trump used his personal Twitter account as a forum for his political purposes, the legal question arose whether he was allowed to block users who's views he did not like. The courts stated that, even when a person could still express their viewpoints elsewhere, Trump's inflicting a burden on speech was a violation of the First Amendment, especially since he was using private property for public use. These instances point to potential *viewpoint discrimination*.

This chapter of study asks: Under what conditions does content moderation and deplatforming fall into the realm of censorship? Is freedom of speech synonymous with an entitlement to *freedom of reach*?

Numerous legal arguments have been made to claim that social media systems, by virtue of their function and reach, constitute a "transformation" from being a private entity into a public forum (which must not discriminate against viewpoints). All of these arguments have failed in the court of law. As Justice Kavanaugh stated, "Providing some kind of forum for speech is not an activity that only governmental entities have traditionally performed. Therefore, a private entity who provides a forum for speech is not transformed by that fact alone into a state actor."

This chapter will provide you with a range of perspectives on how content on social media systems are moderated (and by whom) and the means by which a person or entity can be deplatformed (it's more complex than you'd imagine!).

Key Terms

Deplatforming – An action taken by a tech company to remove or constrain a person's communication on its private, commercial system due to violation of its terms of use. The most prominent example of deplatforming took place following the 2020 presidential election. Deplatforming can also refer to a data hosting system cutting off services to a communication platform for lack of moderating content considered dangerous to the public.

First Amendment to the Constitution of the United States of America – *"Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances."* Please note that **the First Amendment applies to government actions to abridge free speech**. It does not pertain to the right of private companies to censor content according to the Terms of Service policies each user agrees to upon joining. Arguments for unabridged free speech in social media as an unalienable right are often predicated on the misbelief that *all speech* is protected under the First Amendment when in fact it only pertains to *government actions* to curtail free speech.

§ 230(c) of the Communications Decency Act: This act of Congress (1996) states, *"No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content*

provider." This provision protects online platforms from liability for the content posted by its users. Review the infographic published by the Electronic Frontier Foundation, and organization dedicated to free speech issues on the Internet.

Viewpoint discrimination: "When [the government] engages in viewpoint discrimination, it is singling out a particular opinion or perspective on that subject matter for treatment unlike that given to other viewpoints." Source: The First Amendment Encyclopedia.

Capitalism – An economic and political model that sanctions private ownership of the production of goods and services. This is relevant to this area of study because a private company can set their own Terms of Use policy within the limits of statutory rules of commerce. When a user agrees to the Terms of Use, they are bound by those terms without government recourse, provided those Terms of Use do not violate laws related to discrimination against a protected class.

What should you be focusing on?

Your objectives in this module are:

- Identify the range of methods SM systems use to moderate content.
- Examine the ethical factors involved in employing human content moderators where they are exposed to violence, cruelty, hatred, and death as a focal point of their work.
- Develop an executive position on the conditions under which a person or entity should or should not be deplatformed.

Readings & Media

Thematic narrative in this chapter

In the following readings and media, the authors will present the following themes:

1. Content moderation removes violent and objectionable content from social media and the Internet.
2. Content moderators are exposed to a non-stop flow of horrible content that causes psychological damage.
3. Companies that facilitate online communication are making discretionary decisions to remove users or entities from their systems that they deem to impose a risk to their customers or the public.
4. There are several ways that companies can deplatform a person or entity.

Required Article: WIRED Magazine – "The Laborers Who Keep D**k Pics and Beheadings Out of Your Facebook Feed" by Adrien Chen, October 3, 2014.

This article contains foul language and references to violent imagery (it does not show any), so please be warned in advance as you read about the tasks human content moderators perform to keep social media systems "clean."

*Chen, A. (2014, October 3). The Laborers Who Keep D**k Pics and Beheadings Out of Your Facebook Feed. WIRED Magazine. https://www.wired.com/2014/10/content-moderation/*

Optional: Bloomberg.com "TikTok Sued by Content Moderator Disturbed by Graphic Videos" by Robert Burnson, December 23, 2021

"TikTok's 10,000 content moderators are exposed to a regular diet of child pornography, rapes, beheadings and animal mutilation, according to a lawsuit filed against the video-sharing platform and its parent, ByteDance Inc."

Required Article: "5 Types Of Content Moderation And How To Scale Using AI" by Thomas Molfetto, Clarifai, Inc., June 13, 2021

This article describes the different ways that artificial intelligence (AI) can be used to moderate content without human intervention.

Molfetto, T. (2021, June 13). 5 Types Of Content Moderation And How To Scale Using AI. Clarifai, Inc., https://www.clarifai.com/blog/5-type...-ai-is-helping

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Deplatforming: The following media describe the legal framework through which content moderation and deplatforming is viewed, according to various perspectives and legal interests. In the Supplemental resources, you will find an article that describes the various ways that a person or entity can be deplatformed according to the layers of service in the Internet architecture.

Required Article: "Normalizing De-Platforming: The Right Not to Tolerate the Intolerant" by Robert Sprague, Professor of Legal Studies in Business, University of Wyoming College of Business Department of Management & Marketing, September 1, 2021.

This article describes the legal boundaries within which online platforms operate. It traces the origins of the § 230(c) of the Communications Decency Act and the various legal cases that have been tried to moderate online content and control users' access to Internet platforms.

There are details provided for specific legal cases which you can skim if you like. However, your focus of interest should be about how corporate interests interpret their roles, obligations, and responsibility for user generated content:

- Where is the line of responsibility when user generated content causes harm while using the tools provided to them by a platform?
- At what point, if at all, does the state (our government) assert an interest in sustaining free speech on a privately owned business's property? Wouldn't this be considered a Socialist intervention?
- Under what conditions is a corporate action to deplatform a user considered *viewpoint discrimination*?
- How strong is the argument that *the lack of a comparable alternative* to publish speech amounts to a constraint of free speech if a person is deplatformed from a global publishing platform?

Sprague, R. (2021). Normalizing De-Platforming: The Right Not to Tolerate the Intolerant. Social Science Research Network: https://ssrn.com/abstract=3915739 or http://dx.doi.org/10.2139/ssrn.3915739

Required Video: Al Jazeera English – "Trump-free Twitter: The debate over deplatforming | The Listening Post"

It is difficult to find objective unbiased reporting on the issue of deplatforming since the majority of those who have been subject to it have been predominantly right-wing, politically. The program below is produced by Al Jazeera, a global news agency that often frames issues from a perspective other than a strictly western/American point of view.

View only the first 12 minutes of this video (the rest of it is related to different topics). Consider the following as you watch:

- **What does being "silenced" really mean**, from a Constitutional perspective? Does being deplatformed prevent anyone from actually speaking, or are there special conditions to the exercise of free speech today that the Founding Fathers could not have anticipated?
- Does government intervention into controlling a private company's platforming decisions deviate from our traditional private capitalist *laissez-faire* economic model into the realm of state controlled socialism?

Al Jazeera English. (2021, January 17). "Trump-free Twitter: The debate over deplatforming | The Listening Post"[Video]. YouTube. https://youtu.be/PxCmtHie6HM

Optional: Supplemental resources that are relevant to content moderation

Centre for International Governance Innovation – "Navigating the Tech Stack: When, Where and How Should We Moderate Content?" by Joan Donovan, Centre for International Governance Innovation, October 28, 2019. This article describes how content

moderations and deplatforming occurs at each level of the Internet's service structure.

The New York Times – "The Silent Partner Cleaning Up Facebook for $500 Million a Year" By Adam Satariano and Mike Isaac. Published Aug. 31, 2021, updated Oct. 28, 2021. This article traces the historic efforts by Facebook to outsource content moderation to a third-party provider, Accenture, and how they realized they needed to expand their resources to keep up with the flood of disturbing content being published all day, everyday.

Source Information

Trends in Digital & Social Media *(*Covello, Steve)

- Pressbooks
- https://granite.pressbooks.pub/comm601/front-matter/title-page/
- Attribution 4.0 International License

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15.4: CRITICAL THINKING

Students often jump right into researching their topic without having any clear understanding of their own thinking and how their opinions and beliefs might affect their research process. Developing critical thinking skills is essential for students to understand their thinking processes, avoid biases, and detect the strengths and weaknesses in the sources they uncover.

Source Information

Using Research to Support Scholarly Writing- A Critical Thinking and Research Methodology Sandbox for First year Composition (Bloom, et. al.)

- Pressbooks
- https://open.maricopa.edu/researchsandbox/
- Creative Commons Attribution Noncommercial ShareAlike

15.4.1: Do Facts Really Matter?

15.4.2: Conspiracies and Theories- Questions to Ask

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15.4.1: Do Facts Really Matter?

You might be thinking that as a society, we've progressed in our knowledge and understanding of the world beyond what the folks in Plato's time had achieved. You might also be thinking that as long as you practice strong-sense critical thinking, keep your argument grounded in reality, and avoid the common roadblocks to critical thinking that it should be easy to convince people of your opinion and claims.

Sadly, that isn't always the case. In the following National Public Radio broadcasts, you'll learn about the idea of "backfire" and Brendon Nyhan's research. You can either listen to the broadcast or follow along with the written transcript. As you do, think about these questions and write out your answers.

Questions for NPR audio

NPR Broadcast

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15.4.2: Conspiracies and Theories- Questions to Ask

Masks worn during experiments with plague. Manila, Philippines (1912).

Figure 15.4.2.1: *Image:* Masks worn during experiments with plague. Manila, Philippines (1912). Original image from National Museum of Health and Medicine. Digitally enhanced by rawpixel, Public Domain (CC0).

This page reproduces two articles that were originally published by ProPublica, a Pulitzer Prize-winning investigative newsroom, and are provided here under Creative Commons (CC BY-NC-ND 3.0).

Please read both articles by Marshall Allen below.

If you end up quoting or paraphrasing from either of these sources in your assignments for this class, please cite the original articles:

Allen, Marshall. "I'm an Investigative Journalist. These Are the Questions I Asked about the Viral 'Plandemic' Video." *ProPublica*, 9 May 2020, https://www.propublica.org/article/im-an-investigative-journalist-these-are-the-questions-i-asked-about-the-viral-plandemic-video.

Allen, Marshall. "Immune to Evidence: How Dangerous Coronavirus Conspiracies Spread." *ProPublica*, 17 May 2020, https://www.propublica.org/article/immune-to-evidence-how-dangerous-coronavirus-conspiracies-spread.

I'm an Investigative Journalist. These Are the Questions I Asked about the Viral 'Plandemic' Video.

Marshall Allen, ProPublica, 9 May 2020

The links to the viral video "Plandemic" started showing up in my Facebook feed Wednesday. "Very interesting," one of my friends wrote about it. I saw several subsequent posts about it, and then my brother texted me, "Got a sec?"

My brother is a pastor in Colorado and had someone he respects urge him to watch "Plandemic," a 26-minute video that promises to reveal the "hidden agenda" behind the COVID-19 pandemic. I called him and he shared his concern: People seem to be taking the conspiracy theories presented in "Plandemic" seriously. He wondered if I could write something up that he could pass along to them, to help people distinguish between sound reporting and conspiracy thinking or propaganda.

So I watched "Plandemic." I did not find it credible, as I will explain below. YouTube, Facebook and Vimeo have since removed it from their platforms for violating their guidelines. Now it's available on its own site.

Sensational videos, memes, rants and more about COVID-19 are likely to keep coming. With society polarized and deep distrust of the media, the government and other institutions, such content is a way for bad actors to sow discord, mostly via social media. We saw it with Russia in the 2016 election and we should expect it to continue.

But what surprised me is how easily "Plandemic" sank its hooks into some of my friends. My brother also felt alarmed that his own church members and leaders in other churches might be tempted to buy into it.

The purpose of this column is not to skewer "Plandemic." My goal is to offer some criteria for sifting through all the content we see every day, so we can tell the difference between fair reporting and something so biased it should not be taken seriously.

Here's a checklist, some of which I shared with my friends on Facebook, to help interrogate any content — and that includes what we publish at ProPublica.

Is the Presentation One-Sided?

There's never just one side to a story. I mentioned this point in 2018 when I wrote about my faith and the biblical basis for investigative reporting. One of my favorite Proverbs says, "The first to state his case seems right until another comes and cross-examines him." So a fair presentation should at least acknowledge opposing points of view.

I didn't see this in "Plandemic," so I called the filmmaker, Mikki Willis, who is also the film's narrator, to ask him whether I had somehow missed the other side of the argument. I had not. "The other side of the argument plays 24/7 on every screen in every airport and on every phone and in every home," Willis said. "The people are only seeing one side of the story all the time. This is the other side of the story. This is not a piece that's intended to be perfectly balanced."

I asked Willis if it was fair to call his film "propaganda," which the Oxford dictionary defines as "information, especially of a biased or misleading nature, used to promote or publicize a particular political cause or point of view."

He said he doesn't feel there's anything misleading in his film, but otherwise the definition fits. And based on that definition he feels 100% of news reporting is propaganda. "What isn't propaganda these days?" he asked. "In that sense, what we're doing is fighting fire with fire."

Is There an Independent Pursuit of the Truth?

The star of "Plandemic," medical researcher Judy Mikovits, is controversial. The magazine Science reports that it published and then retracted one of her papers in 2011. A search warrant provided to ProPublica by one of her former attorneys shows she was fired from her position at Whittemore Peterson Institute, a research center in Nevada, in September 2011. Then she allegedly stole notebooks and a laptop computer from the Institute, the search warrant said, leading to an arrest warrant for alleged possession of stolen property and unlawful taking of computer data. She was arrested on Nov. 18, 2011, but denied wrongdoing. The charges were dropped.

But "Plandemic" ignores or brushes past these facts and portrays her as an embattled whistleblower. "So you made a discovery that conflicted with the agreed-upon narrative?" Willis says to Mikovits, introducing her as a victim. "And for that, they did everything in their powers to destroy your life."

A typical viewer is not going to know the details about Mikovits' background. But as the primary source of controversial information being presented as fact, it's worth an online search. The fact-checking site PolitiFact details her arrest and criminal charges. Clearly, there's more to her story than what's presented in "Plandemic." That should give us pause when we assess its credibility.

Is There a Careful Adherence to the Facts?

In "Plandemic," Willis asks Mikovits about her arrest: "What did they charge you with?"

"Nothing," she replies. "I was held in jail, with no charges."

Being charged with a crime is one of those concrete facts that we can check out. Science magazine reported Mikovits' arrest and felony charge. I also found a civil lawsuit she filed against the Whittemore Peterson Institute in 2014 in the U.S. District Court for the Southern District of California. "Mikovits was arrested on criminal charges..." her complaint says in the case, which was eventually dismissed.

I asked Willis about the apparent discrepancy, where she said in his film that she wasn't charged, when court documents show that she was charged. After my inquiry, he said he spoke to Mikovits and now feels it is clear that she meant that the charges were dropped.

I tracked down Mikovits and she said what she meant in the film is that there were no charges of any type of wrongdoing that would have led to her being charged with being a fugitive from justice. She admitted that all the controversy has been hard for her to sort out. "I've been confused for a decade," she told me. She said she would try to be more clear in the future when she talks about the criminal charge: "I'll try to learn to say it differently," she said.

This underscores the importance of careful verification, and it distinguishes the craft of journalism from other forms of information sharing. People often speak imprecisely when they're telling their stories. It's our duty to nail down precisely what they do and do not mean, and verify it independently. If we don't, we risk undermining their credibility and ours. That's in part why we at ProPublica and many other journalists often link directly to our underlying source documents, so you can verify the information yourself.

Are Those Accused Allowed to Respond?

Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, is one of the nation's leaders in the response to the coronavirus. In "Plandemic," Mikovits accuses Fauci of a cover-up and of paying off people who perpetrate fraud, among other things. PolitiFact found no evidence to support the allegations against Fauci.

Every time I write a story that accuses someone of wrongdoing I call them and urge them to explain the situation from their perspective. This is standard in mainstream journalism. Sometimes I've gone to extreme lengths to get comments from someone who will be portrayed unfavorably in my story — traveling to another state and showing up at their office and their home and leaving a note if they are not there to meet me. "Plandemic" doesn't indicate whether the filmmakers reached out to Fauci for his version of the story. So I asked Willis about it. "We did not," he told me.

Are All Sources Named and Cited, and if Not, Is the Reason Explained?

All sources should be identified, with their credentials, so viewers can verify their expertise or possible biases. If they can't be for some reason, then that should be explained. "Plandemic" features unnamed people in medical scrubs, presented as doctors, saying they're being wrongly pressured to add COVID-19 on people's death certificates or are not being allowed to use the drug hydroxychloroquine to treat patients. But the speakers are not named, so we can't really tell who they are, or even if they are doctors at all. That makes it impossible to tell if they are credible.

I asked Willis why he didn't name those people. He told me he was in a hurry to release the 26-minute version of "Plandemic," but the doctors will be named in the final version. "We should have done that," he said.

Does the Work Claim Some Secret Knowledge?

"Plandemic" calls itself a documentary that reveals "the hidden agenda behind COVID-19." We are in the midst of a global pandemic where few people in the world can figure out what is happening or the right way to respond, let alone agendas. We have almost every journalist in the country writing about this. And if the truth about a conspiracy is out there, many people have an incentive to share it. But "Plandemic" would like us to think it's presenting some exclusive bit of secret knowledge that is going to get at the real story. That's not likely.

Plus, to be honest, there were so many conspiratorial details stacked on top of each other in the film I couldn't keep them straight. When I spoke to Willis I told him I was having a hard time understanding his point. Then I took a stab at what I thought was the main thrust of his argument. "Are you saying that powerful people planned the pandemic and made it happen so they could get rich by making everyone get vaccines?" I asked.

It turns out Willis isn't sure either. "We're in the exploratory phase," he told me. "I don't know, to be clear, if it's an intentional or naturally occurring situation. I have no idea."

Then he went on to say that the pandemic is being politicized and used to take away our civil liberties and leverage other political policies. "Certain forces" have latched onto the situation, he said. "It's too fishy."

He had me at, "I have no idea." That sums it up. This is a vast pandemic and massive catastrophe. Our country wasn't prepared for it, and the response by our top leaders has been disjointed. We're restricted to our homes. Many people have lost their jobs and some are afraid or sick or dying. That makes us vulnerable to exploitation by people who will present inaccurate or intellectually dishonest information that promises to tell us the truth.

Perhaps "Plandemic" is guilty of sloppy storytelling, or maybe people really do believe the things they're saying in the video. Or perhaps they're being intentionally dishonest, or it's a biased connecting of the dots rooted in personal and professional grievances. I don't know because I can't get inside their heads to judge their motives.

Ultimately, we're all going to need to be more savvy consumers when it comes to information, no matter how slickly it's presented. This may be but a signal of what's to come in the run-up to the 2020 presidential election, when memes and ads of unknown origin come across our social media feeds. There are standards for judging the credibility of the media we take in every day, so let's apply them.

“Immune to Evidence”: How Dangerous Coronavirus Conspiracies Spread

Marshall Allen, ProPublica, 17 May 2020

Stephan Lewandowsky studies the way people think, and in particular, why they engage in conspiracy theories. So when the cognitive scientist from England’s University of Bristol observes wild speculation related to the COVID-19 pandemic, he sees how it fits into the historical pattern of misinformation and fake news.

I recently wrote about the viral video “Plandemic” as an investigative reporter assessing the range of unsubstantiated COVID-19 allegations put forth by a controversial researcher. Lewandowsky comes at the video and others like it from a science-based perspective. He is one of the authors of “The Conspiracy Theory Handbook,” which explains the traits of conspiratorial thinking.

Conspiracy theories related to the COVID-19 pandemic seem to be proliferating, and some may even be taking root. So I asked Lewandowsky to share how he identifies and understands them, and what we can do to sort through the confusion. The interview has been condensed for clarity and length.

What’s the difference between a real conspiracy and a conspiracy theory?

A real conspiracy actually exists, and it is usually uncovered by journalists, whistleblowers, document dumps from a corporation or government, or it’s discovered by a government agency. The Volkswagen emissions scandal, for example, was discovered by conventional ways when some engineers discovered an anomaly in a report. It was all mundane — normal people having normal observations based on data. They said, “Hang on, something’s funny here,” and then it unraveled. The same is true for the Iran-contra scandal. That broke via a newspaper in Lebanon. True conspiracies are often uncovered through the media. In Watergate, it was journalists not taking “no” for an answer.

A conspiracy theory, on the other hand, is discussed at length on the internet by people who are not bona fide journalists or government officials or whistleblowers in an organization or investigative committees of regulators. They’re completely independent sources, individuals who self-nominate and put themselves forward as being in possession of the truth. In principle, that could be true. But then if you look at the way these people think and talk and communicate, you discover their cognition is different from what I would call conventional cognition.

What are some differences between conventional and conspiratorial thinking?

You can start with healthy skepticism vs. overriding suspicion. As a scientist, I’m obviously skeptical. I’m questioning anything people say. I look at my own data and other people’s data with a skeptical eye. But after skeptics have been skeptical, they are quite capable of accepting evidence. Once something has withstood scrutiny, you accept it. Otherwise you’re in a state of complete nihilism and you can’t believe anything.

That crucial second step of acceptance is absent in conspiracy theorists. That is where conspiracy theorists are different. Their skepticism is a bottomless, never-ending pit of skepticism about anything related to the official account. And that skepticism is accompanied by extreme gullibility to anything related to the conspiracy. It’s an imbalance between skepticism for anything an official may say and complete gullibility for something some random dude on the internet will tweet out. It’s that imbalance that differentiates conspiracy thinking from standard cognition.

Conspiracy thinking is immune to evidence. In the “Plandemic” video, the absence of evidence is twisted to be seen to be as evidence for the theory. They say the cover-up is so perfect that you will never find out about it. That’s the opposite of rational thinking. Usually when you think of a hypothesis, you think of the evidence. And if there’s zero evidence, you give it up or say there is no evidence for it.

Conspiracy theorists may also simultaneously believe things that are contradictory. In the “Plandemic” video, for example, they say COVID-19 both came from a Wuhan lab and that we’re all infected with the disease from vaccinations. They’re making both claims, and they don’t hang together.

More generally, conspiracy theorists show this contradictory thinking by presenting themselves as both victims and heroes. They see themselves as these heroes in possession of the truth. But they also see themselves as victims. They feel they are being persecuted by this evil establishment or the deep state or whatever it is.

Why do you think some conspiracy theories are so popular?

Some people find comfort in resorting to a conspiracy theory whenever they have a sense of a loss of control or they're confronted with a major adverse event that no one has control over. So every time there's a mass shooting in the U.S., I can guarantee you ahead of time that there will be a conspiracy theory about it.

So you would expect conspiracy theories related to the pandemic. That doesn't make them any less harmful. Here in the United Kingdom, people are burning 5G cell towers because of this extreme idea that 5G has something to do with causing COVID-19. More than 70 cell towers have gone up in flames because of this conspiracy theory.

Is conspiracy thinking at an all time high?

Historical records show that there were rampant conspiracy theories going on in the Middle Ages when the plague hit Europe. It was anti-Semitism at the time. That tends to be part and parcel of pandemics. People engage in conspiracies that involve some sort of "othering" of people. During previous pandemics, people chased doctors down the street because they thought they were responsible for the pandemic. In Europe, now a lot of antagonism is directed at Asians, because the pandemic started in China. The internet is helping the spread of conspiracy theories. It's much easier now than it was 30 years ago. But it's difficult to say we have more now.

Are conservatives or liberals any more likely to engage in conspiracy thinking?

There is a lot of research on this and political conspiracy theories tend to be most associated with extreme political views, on the right or the left. But if you quantify it, you frequently find more on the right than the left.

How do we talk to the conspiracy theorists in our lives?

It's extremely difficult. In terms of strategy, the best people to talk to are people who are not conspiracy theorists. The vast majority of people are grateful for the debunking and responsive to it. That should be your target of communication if you have a choice. The hardcore conspiracy theorists are unlikely to change their minds. They will take what you say and display considerable ingenuity in twisting it and using it against you. On Twitter, I block them immediately because I'm concerned about my ability to have a rational conversation and I don't want others to violate that right.

How do we prevent the spread of conspiracy theories?

By trying to inoculate the public against them. Telling the public ahead of time: Look, there are people who believe these conspiracy theories. They invent this stuff. When they invent it they exhibit these characteristics of misguided cognition. You can go through the traits we mention in our handbook, like incoherence, immunity to evidence, overriding suspicion and connecting random dots into a pattern. The best thing to do is tell the public how they can spot conspiracy theories and how they can protect themselves.

Are you aware of any cases where the conspiracy theorists turned out to be right?

There are tens of thousands of conspiracy theories out there, so I haven't checked them all. But if you look at actual conspiracies, Volkswagen, Iran-contra, Watergate — the real conspiracies — they were uncovered by conventional cognition. There weren't people there who took the absence of evidence to be evidence for the theory, or who reinterpreted contrary evidence to somehow support their theory. I'm not aware of any conspiracy theorists discovering something where they turn out to be correct.

Source Information

Using Research to Support Scholarly Writing- A Critical Thinking and Research Methodology Sandbox for First year Composition (Bloom, et. al.)

- Pressbooks
- https://open.maricopa.edu/researchsandbox/

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16: INFORMATION EQUITY AND ACTIVISM

Source Information

Humans R Social Media (Daly, Diana)

- Pressbooks
- https://opentextbooks.library.arizona.edu/hrsm/
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16.1: Equity

16.2: Activism

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16.1: Equity

This is a special chapter devoted to a selection of activist causes to improve the lives of women. We look closely at two online movements outside of the US, one in each hemisphere. Both integrate the global and the local; both work to liberate women from systematic violence. Then we look at a few movements in the US.

But first let's briefly broaden our lens to online activism in general.

Figure 16.1.1: *Passionate public protests: Many protests for women's rights use the publics of the web to expose private worlds of violence, enacted behind closed doors and silenced with shame.*

In the following chapter, we will discuss five strategies evident in creative online activist movements today, including speed, visuals, performances, inclusiveness, and masked leadership. These five strategies can be found in many gender-focused online movements as well. But from my perspective, what is salient – what stands out – about women's movements are the ways the internet is used to enable public conversation around topics previously kept private. Social media in particular affords **exposure**, the affordance of social media to draw matters society guards as private into the public sphere.

People who identify as "men" and people who identify as "women" have lived in the same neighborhoods and households across cultures and time periods. This quality makes gender relationships and activism distinct among activist movements. Issues that arise between groups of different ethnicities, races, and classes are often clearly expressed out in the open; but gender issues are not expressed as openly. Because men and women co-exist so closely in every community, issues between people of different gender identities tend to leak out in whispers and remain more hidden.

WOMEN AS A GENDER IDENTITY: A DISCLAIMER

In order to look closely at two important online movements for women, I have had to exclude many other movements, moments, and identities from this chapter. The premise of the chapter admittedly works against complex understandings of gender, by presenting "women" as a fixed identity group. My goal in chapters 5 and 6 is to give you a selection of histories, tools, and examples to help you understand online activist movements.

As the Wikipedia page on gender reflects, a deep understanding of gender and sexuality must also consider where the boundaries between genders come from and what is left unspoken when we rely on binary gender categories. Movements for the rights of transgender women have evolved within, alongside, and sometimes in response to movements by cisgender women, but these histories are often collapsed into a single narrative. I encourage you to explore and analyze these complex histories with the tools we will discuss in chapters 5 and 6.

Challenging Gender Norms: A Examination Of An Androgynous Social Media Influencer

Student Content

I decided to take a look at a public figure, and that public figure is Jeffree Star. I chose to examine Jeffree's instagram account for qualitative observation because in the influencer and social media culture, he is a very controversial and interesting figure to observe.

As I explained in my video and to give a little background, Jeffree Star is one of the biggest Youtubers of our time, as he has 17.1 million subscribers. Not only does he have a ton of Youtube subscribers, he has almost 15 million followers on Instagram as well. It's compelling to check out his instagram feed...when you have a lot of followers, a lot of opinion and judgement comes with the territory. You are constantly on display. Some people are crazy about him, and some hate him to the core. I think it's both important and fascinating to see everyone's beliefs on such a well known social media figure.

Jeffree Star provides makeup tutorials while promoting his own makeup line and accessories. He films his famous youtube debriefs about on-trend beauty looks and makeup. He has built an empire and gotten very wealthy in the process! Part of his appeal is his dramatic look, the self expression, his outrageous remarks, and the sometimes offensive images he uses. On a

variety of topics, Jeffree seems completely comfortable giving his precise and very blunt opinions. Sometimes the comments are crazy and even racist in nature. The man has no filter whatsoever, and is apparently not concerned with backlash or hateful comments from anyone, as he continues to say and do ridiculous things that frequently gets him cancelled from his channel. Not only does him to do and say as he pleases, but he is consistently caught in the midst of crazy drama, leading some to believe the whole persona is made up and attention-seeking. I would say I consider him as more of a "lone wolf" in the influencer industry because of his narcissistic, yet courageous ways.

I feel like Jeffree Star definitely includes **exposure** into his life because he doesn't care about personal, private information getting out and is willing to share anything to get a rise out of people for publicity.

When looking over his Instagram feed, I noticed the comments on specific posts about his beauty line, makeup, and glam image are overall positive. His fans are very vocal, supportive and fond of who he is and what he does, as it shows in his likes.

Jeffree uses **crowd culture** by promoting and selling his beauty items through his Instagram and Youtube channel to his fans.

As for the posts that contain sexual, explicit and profane content, there are less likes and more hostility all around. You can really tell that most of those comments come mainly from his haters, because there is much more hostility expressed than with other posts. They attack his sexuality, his morality, and more, showing they do not condone what he stands for. Whether you like him or not, he is highly entertaining and his controversial brand is what makes him so popular.

About the author

Mikaela Zamora is a student at the University of Arizona. She is originally from Boulder, Colorado. She loves spending most of her time with friends and family and walking her dog

Graphic of the author

Figure 16.1.2.

SAUDI WOMEN: ONLINE AND DRIVING CHANGE

Saudi Arabian laws and culture enforce a system of **male guardianship** over women, whereby every woman must get the approval of a male guardian for decisions about her body and life including passport applications, travel, and marriage. Online activism helps women who are resisting the system of male guardianship to connect with fellow activists, read the climate for what they are asking, and connect with specific publics who may support their causes.

#savedinaali

Like campaigns for other identity groups, many social media campaigns for women are branded as leaderless or have masked leadership. A particular feature of social media campaigns for women is the naming of the campaign after a woman who has been persecuted, even though she is not organizing the campaign. Sadly, due to the violence women face that leads to these campaigns, the woman the campaign is named after is often one whose persecution has already ensued.

One example is the campaign to #savedinaali. Dina Ali fled Saudi Arabia but was detained in the Philippines and returned to her family, whom she said would kill her. It is unknown if Dina Ali is severely injured or even alive, but organizers started the #savedinaali campaign to help her and women in similar situations, and draw attention to the human rights abuses of Saudi women. Raising awareness around the situations of particular imprisoned women may lighten the punishment inflicted on them – though it does not guarantee safety or survival.

RECOGNIZING THE SMALL BEGINNINGS OF LARGE MEDIA CAMPAIGNS

Activist movements that become large usually began as small, local efforts for change. This is especially true around women's rights; whispers about a case or pattern of abuse first spread locally, then grow into regional or global social movements once it's clear that the abuse is systematic. Take for example the extensive Human Rights Watch campaign (also linked above) to end Male Guardianship in Saudi Arabia. It was many small campaigns like the one to save Dina Ali that led Human Rights Watch to produce a 2016 report entitled Boxed In: Women and Saudi Arabia's Male Guardianship System. The campaign uses the hashtag #TogetherToEndMaleGuardianship along with video and other content.

Human Rights Watch (HRW) is a large, global organization, but small movements gave them key examples and networks on which to build a larger campaign. HRW's decision to focus on Twitter as a platform required the organization to monitor smaller movements for evidence that Saudis would use and respond to Twitter hashtags for activism. Those small movements provided the core of the larger networks HRW would use in their campaign.

One prior online network example for campaigns for Saudi women is the campaign to allow them to drive. Women have been putting themselves on the front lines and driving – and celebrating this civil disobedience online. In 2011-2013 the hashtag #W2drive (women to drive) was used by Saudi activists to gather a public interested in women's right to drive, as did the account @SaudiWomenSpring on Facebook.

Social Media And The Right To Vote

Student Content, Fall 2020

My Perspective and Experience with Social Media

I have come a long way with social media. I have encountered the negatives, as well as the positives that come with using social media. In my personal experience, I have always been involved with the use of social media, especially at a very young age. Being exposed at a very young age to so much criticism and opinions all on different platforms in my opinion is a factor of shaping who you are and how your views on certain topics are made. I am positive that with my generation, while growing up in an age where we were the internet generation also known as Generation Z, that we all had experiences with how social media influenced us at a young age.

Which is why I wanted to touch upon the political side of how the internet allows and influences us in many ways, while also giving everyone a platform to voice our opinions to each other. Many of those times that I have seen result in arguments caused by a disagreement in the comment section of a post. In today's time, the internet is filled with hateful comments towards one another about having opposite opinions. Today you see grown adults shaming young adults for the decision they made in the comments of the post.

In my experience during election time, I find that I see lots of advertisements, and political campaigning that takes place, and inevitably consumes a lot of what people see and hear surrounding the election. I found this organization this past year amidst the fact that the year 2020 is the year of the most recent election. I began to see lots of my own peers finding themselves conflicted and even considering not voting in the 2020 election. Quite honestly, I found myself in the same position. This is the first time I am able to vote in a presidential election. I should have been excited to exercise my fifteenth amendment right, but I was not solely because of the hateful opinions on social media. I felt that I was going to be judged by people for who I voted for and ultimately felt discouraged. I later began looking into different organizations whom I supported and saw how patriotic they were about voting and especially because I am Native American our voice, in my opinion, is suppressed. I began to see things in a new light and later made my mind up about actually going out and voting. I then began to advocate for all voices to have a say in how we vote and how our vote counts, the difference it makes when people do vote.

I find that these types of organizations are truly helpful for those such as myself that really focus on influencing positivity on social media. Social media can be extremely toxic to your mental health and I think overthinking things such as what I did can really affect certain outcomes. If I had not looked into organizations that I like and follow I would not have gotten the courage to really be proud of having the right to vote.

Also by this author: Rock the Vote!

About the Author

Trinity Norris is a sophomore majoring in Journalism with an emphasis in Digital Journalism. Minoring in Information Science and Esociety.

Graphic of the author

Figure 16.1.3

MEMING OF HASHTAGS AND MORE

The use of any hashtag can expand and complicate the spread of a message across a global audience, particularly if the meme flips to become sarcastic or changes direction.

Hashtags relating to Saudi women's rights led to numerous memes, but most just added force to the movement. #TogetherToEndMaleGuardianship was of course translated – you might also say, imitated or memed – into Arabic, and it is that tag which Arabic-speaking social media users began spreading prolifically. #StopEnslavingSaudiWomen is another tag channeling similar publics. Like #HandsUpDontShoot in the Black Lives Matter movement, it is a phrase speaking directly to an oppressing force, telling them to change their behavior.

However, there is some evidence of the spread of misinformation through hashtags related to Saudi women. For example, a story about Saudi male scientists declaring women "not human" started out on a satirical website, but it spread to other publics – including some who believed it was true, and others who found it useful in spreading fear of Islam. As this example shows, hashtags are easy targets for **appropriation** – use for a different cultural purpose than originally intended.

HOW SOCIAL MEDIA CAN HELP WOMEN'S CAUSES IN PARTICULAR

To understand women's online movements, including those for Saudi women and women in the Americas (in the next section), it is important to consider relationship communication. First, let's consider who Saudi women can and cannot speak to and when or where those conversations take place. In traditional Saudi society, women have limited face to face contact; they rarely gather or communicate with people beyond their immediate family, and external communications may be under constant surveillance. This limits the communication of women activists with those who are geographically close to them and to moments of low surveillance.

However, communities devoted to women's activism can interact online on Facebook, Instagram, Twitter, Snapchat, and other social media platforms. So the most important affordance of social media for women's movements is this: movement organizers can orchestrate gatherings and strategies through the use of social media. An example of this is the campaign #women2drive, which Saudi women have been pushing for several years to challenge male guardianship incrementally by focusing on the right to drive.

logo of women to drive

Figure 16.1.4: *women2drive is a campaign in Saudi Arabia that counteracts the prohibition of women in public spaces through online, networked publics*

Another affordance of social media for women's movements is this: social media can extend and deepen communication among activists, transforming short or casual encounters into opportunities for a more profound exchange of ideas. Social media can allow people who will be gathering in person to get a sense before the event of what others are thinking. It also allows people to continue sharing their "**staircase thoughts**" after they leave the meeting (think of the old TV series Columbo, where the detective seems to be leaving the suspect alone but then turns around just before going downstairs and says: "Oh, there's just one more thing..."). Staircase thoughts are sometimes considered simply wit that we thought of too late. But l'esprit de l'escalier or "wit of the staircase" as French philosopher Denis Diderot called it, can deepen communication, especially in activist movements that involve covert communications.

spiraling staircase in the monument to the Great Fire of London

Figure 16.1.5: *Staircase thoughts over mobile phones can deepen communication that was cut short or monitored in person.*

A third affordance: Social media gathers and focuses global publics. The web is chaos! But social objects like hashtags cut across the chaos to connect publics focused on certain topics, at times despite great geographic dispersal and distance. Publics drawn to pay attention to online activism include people who are not necessarily organizers of an activist movement but who are paying attention to activist causes.

Some of the publics gathered by social media include large organizations with resources to support movements, leading to a fourth affordance in creating a global movement: Social media connects activists with their publics. Saudi women can feel the support of women activists across the globe with the hashtag #suffrage, and I imagine that is important at moments when the national culture seems to be changing too slowly. Connecting with supportive publics can also lead to organizational and financial support.

The publics gathered through hashtags around Saudi women's rights and specifically the push to end male guardianship in that country demonstrate how publics can build on and connect to one another, through hashtags among other tools. Saudi women have pushed to end male guardianship in the past, and the gathering of publics by these early movements led to the taking up of the cause by larger organizations.

DEMONSTRATIONS ONLINE AND ACROSS THE AMERICAS AGAINST GENDER VIOLENCE

First march of #NiUnaMenos in Buenos Aires. June 2015

Figure 16.1.6: *Ni Una Menos, Vivas Las Queremos*

NI UNA MENOS, VIVAS LAS QUEREMOS

Beginning in 2016, a new hemispheric movement is underway expressing outrage over violence against women in the Americas. **Ni Una Menos** began in summer 2014 in Argentina, culminating in an August 2016 demonstration in Lima that was characterized as the largest demonstration ever seen in Peru. It was reactivated in South American cities including Buenos Aires and Rio Di Janeiro in October 2016, in response to the drugging, rape, and murder of a 16-year-old Argentinian girl.

Hemispheric hashtags coordinating these movements include #niunamenos (not one less or not one fewer) and #vivaslasqueremos (we want them alive) – proactively worded demands that not a single woman or girl be killed by systematic violence. This proactive framing makes every death cause for further protest.

One striking strategy in this movement is its theatricality. From dressing as death in Mexico to applying makeup to simulate bruised and bloodied faces and crotches in this demonstration in Buenos Aires, Argentina, these movements rely upon visual impact. In the United States, it is common to embody the unjustly dead – in #blacklivesmatter, the #icantbreathe hashtag for Eric Garner and hoodie-posing to say "we are Trayvon Martin" are two of many examples of resurrection through performance. But this practice of embodying a bruised, bloodied woman is distinct from most feminist protests seen in the US.

Figure 16.1.7: *Although the US has significant issues with sexual violence, protests do not usually include the graphic performances embodying the abused women that are seen in Latin American protests.*

The performative, graphic strategies in the Latin American #niunamenos demonstrations were not replicated in the massive Women's March in the US in January 2017, although many women face violence in the US. Perhaps marchers in the US sought to embody the "they go low, we go high" approach – as in Michelle Obama's speech at the DNC following the recording of Trump boasting of using his wealth and stature to grab women "by the pussy." But the difference may come down to class more than nationality.

The performative demonstrations in Latin America reflect the grim reality of being unable to "go high" and hide abuse for many of its survivors. Many abused women wear their visible bruises on their faces. The sounds of abuse are more evident on city streets and in smaller apartment buildings than in large houses and suburbs. Abuse of poor women is more visible than abuse of wealthier women – even when poor women don't live on the streets, lower-class status is generally accompanied by a lack of personally owned or controlled space. As Margaret Rodman has written, "The most powerless people have no place at all." In these hemispheric demonstrations, the streets become women's place, with demonstrators of all classes increasingly marching them. By making the marks of women's abuse and murder public, they drag into the public eye what has long been understood as a feature of women's private lives in the Americas.

Update: #metoo

After this book was released, the #metoo movement ensued, in late 2017. As I write this update, the #metoo movement is sweeping the US and other nations, as charges and evidence of long histories of sexual harassment and abuse circulate in the media and online. The movement has pervaded the academic and political spheres in the US and other nations as well.

Sextortion

Student Content, Fall 2020

500 Word Reflection

> ***Sextortion:*** *A serious crime that occurs when someone threatens to distribute your private and sensitive material if you don't provide them images of a sexual nature, sexual favors, or money. Sextortion is a serious crime that occurs when someone threatens to distribute your private and sensitive material if you don't provide them images of a sexual nature, sexual favors, or money. Often used through social media.*

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Have you ever posted a photo on social media? Have you ever let a random person follow you on social media? Have you ever heard of Photoshop? Have you ever heard of a person's face being photoshopped onto another person's naked body? Have you heard of those people, no, victims being extorted for money, fame, worldly possessions or even real naked photos? If you have then you know what sextortion is. That's right it has a name, and as you can tell from the audio story I attached above my friend was a victim of this. Sextortion is a serious crime that occurs when someone threatens to distribute your private and sensitive material if you don't provide them images of a sexual nature, sexual favors, or money.

I think that the story I spoke about gives me a unique perspective of social media because it is such a understated problem related to the Internet. Quite frankly, a lot of people don't know what they're posting when they post something, nor do they know who is actually seeing it. This experience was very painful for my friend who had this happen, as well as eye-opening for me as an observer. I watched firsthand the absolute panic and potential crumbling of her future happen before my eyes.

When a provocative photo of you, whether it be real or not, is posted and shared around the Internet it can follow you around for the rest of your life. Plenty of people used sex tapes to extort famous people for money and shared fame. Or they use it against politicians and judges to discredit them, but you don't think it will happen to a 19-year-old girl who hasn't begun her professional life. This experience gives me my own personal and cultural knowledge of social media that is different from others due to the fact that I am more aware and a lot more careful with who I allow to follow me on social media platforms.

I know a lot of young women my age who are public and have a ridiculous amount of followers for just being an average college student. These women don't know where their photo is going, they don't know what could be done on Photoshop nor do they use caution when posting. I thoroughly encourage all young men and women on the Internet to use protection and take precautions in regards to sharing their face, name, school, family and especially where they live. You never know when a person you've never met will use sextortion to change or potentially ruin your life.

Our experience with the police in regards to the sextortion scandal was very concerning. The blatant disregard for her panic as well as the assumption that she was lying about the photos, really showed the older generation's attitude towards this type of extortion. He spoke very condescendingly, he shook his head and said "you're just a young girl, why would you send a photo like this" and shook off any idea that it wasn't actually her in the photos. I feel like the younger generation needs to be made aware of this type of scandal as well as the older generation. Because when people who are my age get extorted like this, they need the help from the older generations and when they don't even know what sextortion is, then nothing can be resolved. I know that my friend's case file is just sitting on a computer or in a cabinet, soon to be thrown out with the trash. I am saddened by our absence of knowledge regarding this crime, and hope we educate ourselves soon.

About the author

Graphic of author

Figure 16.1.8

Melanie Norris is a sophomore at the University of Arizona. She can often be found spending time with her roommates and friends!

Critiques of the #metoo movement are also circulating. One example is the response #whataboutus by working-class women that draws attention to the limits of #metoo in telling their stories. Another critique elevates discomfort among feminists with #metoo's simplistic image of women as victims, and of the collapsing of such a vast range of behaviors into the concept of "harassment."

The creative online activism explored in these chapters is remarkable for its inclusiveness and complexity in the face of these critiques. Branding is hard. **Oversimplification** is a threat faced by any spreading movement; in this phenomenon, complex causes can be reduced to a simplistic phrase or meaning as the movement spreads. Oversimplification of a message seems inevitable for it to gain national or global traction, as critiques of the #metoo movement charge. Yet the Black Lives Matter movement has remained complex, so why not #metoo?

As of this writing, I do not include the US-based #metoo among the movements I label creative online activism – yet. Although the Hollywood actresses whose accounts received the most attention are very visible, the movement's strategies are not highly visual, or performative; rather, the movement has gained traction through the voices of people who already have access to significant public attention and national platforms. Imagine if they used their skills at performance and visibility to redirect the attention of their audiences to working-class women and women in nations with oppressive regimes? I hope #metoo advocates where the movement is most visible will turn attention to the women who need help most, rather than celebrating #metoo as a simple success.

> Social and activist movements take time. Decades may pass before the effects of a movement are in full view.

In the next chapter – as we explore cultural branding – keep activist movements in mind. But also remember that whereas the goal of cultural branding is immediate influence, the goal of social and activist movements is long-term cultural change.

CORE CONCEPTS AND QUESTIONS

Core Concept

exposure

the affordance of social media to draw matters society guards as private into the public sphere

male guardianship

the system in Saudi Arabia whereby every woman must get the approval of a male guardian for decisions about her body and life including passport applications, travel, and marriage

appropriation

use for a different cultural purpose than originally intended

staircase thoughts

the affordance of social media to allow people who will be gathering in person also to get a sense of what others are thinking before they meet face to face, and continue sharing their ideas after they leave the meeting

Ni Una Menos

translated from Spanish as "not one less", this is a hemispheric movement expressing outrage over violence against women in the Americas, this movement began in Argentina and led to an August 2016 demonstration in Lima that was characterized as the largest demonstration ever seen in Peru

oversimplification

the threat faced by any spreading movement for complex causes to be reduced to a simplistic phrase or meaning as the movement spreads

Core Questions

A. Questions for qualitative thought

1. Start looking at hashtags online used alongside #metoo and also look at stories posted in #metoo over the last several years.⛢In your groups, choose one or two posts to discuss. What do the stories using like hashtags have in common, and what are some ways that they differ?
2. What are the some of the smaller impacts you have noticed in the years since #metoo and companion hashtags and practices have come about? In your own experiences or those you know about.
3. If you were aware of the women's movements discussed in this chapter before, what had you heard about them? Do these movements influence you to think differently about women's roles in the cultures from which these movements came? Explain.

B. Review: Which is the best answer?

According to this chapter, what is salient about online campaigns for women?

1. They are nothing like other online protests.
2. They succeed when women look sexy or use their attractiveness to gather publics.
3. They enable public awareness, conversations, and protests about situations women often face privately.
4. They are exactly like all other online protests.

Solution

- They enable public awareness, conversations, and protests about situations women often face privately.

Which of the following is NOT emphasized in this chapter as an affordance of social media campaigns for women?

1. Social media can extend and deepen communication among activists.
2. Social movement organizers can orchestrate activist gatherings and strategies through the use of social media.
3. Social media can gather and focus supportive global publics including larger organizations.
4. Social media campaigns guarantee safety and survival for women in oppressive regimes
5. Social media can connect activists with resource support by supportive global publics.

Solution

- Social media campaigns guarantee safety and survival for women in oppressive regimes

RELATED CONTENT

Consider It: Americans' Experiences and Beliefs around #metoo

WORRIED ABOUT SEXUAL HARASSMENT – OR FALSE ALLEGATIONS? OUR TEAM ASKED AMERICANS ABOUT THEIR EXPERIENCES AND BELIEFS

From *The Conversation*



Figure 16.1.9: In a survey, 81% of women and 43% of men said that they had experienced sexual harassment or assault at least once.
Mihai Surdu/shutterstock.com

Anita Raj, *University of California San Diego*

Since the launch of #MeToo, there's been a lot of attention on problems of sexual harassment and assault in the U.S.

Unfortunately, this has not amounted to much progress in terms of reductions in sexual harassment and assault or improvements in conviction rates. This is in part due to the social and political dissension regarding the veracity of accusations and what constitutes fairness of due process when cases arise.

Our new study, published April 30 by nonprofit Stop Street Harassment, in partnership with our team at UC San Diego's Center on Gender Equity and Health, as well as others, looks closely at the scope of these issues in our country.

The headline figure is that, as has long been known, sexual harassment affects most women and many men.

However, our study dug deeper, providing insight into three questions that are central to today's media coverage of #MeToo.

1. HAVE THE RATES OF SEXUAL HARASSMENT AND ASSAULT CHANGED WITH THE #METOO MOVEMENT?

In the nationally representative sample of the approximately 2,000 Americans whom we surveyed in early 2019, 81% of women and 43% of men said that they had experienced sexual harassment or assault at least once in their lives.

Eighteen percent of women and 16% of men reported recent sexual harassment or assault in the last six months, which is not a significant change from 2018.

The overall prevalence of sexual harassment or assault throughout one's lifetime also showed no change.

These findings suggest that improved awareness of #MeToo and potential backlash against it have not altered the incidence or reported prevalence of these abuses.

However, while these data indicate no change in survey reports, U.S. crime data indicate that more people are reporting sexual harassment and assault to the police, possibly due to greater comfort engaging the criminal justice system thanks to #MeToo.

Nonetheless, high rates of sexual harassment and assault, particularly for women, continue to be a norm in the U.S.

2. HOW SAFE FROM SEXUAL HARASSMENT ARE STUDENTS AND WORKERS?

Our study suggests that most sexual harassment occurs on the street or in other public venue.

However, 38% of women and about 15% of men have experienced sexual harassment in the workplace and at school.

Interactive Content

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Figure 16.1.10

Harassment in high school was particularly common, reported by 27% of women and 11% of men. Smaller but significant groups said they had experienced harassment at their middle school and college campuses.

This suggests that, despite concerns about sexual harassment in U.S. schools and workplaces, long-standing federal policies from the Department of Education and the Equal Employment Opportunity Commission against these abuses are not effectively preventing perpetrators from acting anyway, typically with impunity.

3. HOW SAFE ARE BOYS AND MEN FROM FALSE ALLEGATIONS OF SEXUAL HARASSMENT AND ASSAULT?

False allegations of sexual harassment and assault against high-profile individuals are a growing public concern. Some have expressed worry that there is great risk for unfair and unfounded accusations against men and boys.

These fears were raised by some, for example, in national discussions of the allegations against President Donald Trump and Supreme Court Justice Brett Kavanaugh.

While our data reveal that most people believe survivors to varying degrees, one in 20 women and one in 12 men felt that most or all of the allegations in recent high-profile cases were "false and that accusers are purposefully lying for attention or money."

Interactive Content

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Figure 16.1.11

While one-third of respondents reported ever perpetrating sexual harassment or assault, only 2% of men and 1% of women said they had ever been accused of these abuses. That shows that, while ongoing public perceptions of false accusations as a major risk persist, any accusation, including false accusations, is in fact very rare.

WHAT DOES THIS ALL MEAN?

Sexual harassment and assault is a persistent issue in the U.S. Our study underscores that it's particularly common for American children, disproportionately girls. Furthermore, many are also enduring this harassment in the workplace.

When these abuses occur, most bear them in silence, without accusations against those at fault. How do I know this? Well, this is the part where I cannot tell you based on our research, but because I did not tell anyone when I was sexually harassed in school and early in my career: #MeToo.

We say nothing because it is not worth the burden – of tackling institutional accountability when there is little likelihood of repercussions for those who victimize us; of trying to justify or prove ourselves in environments where people continue to believe that false accusations and confused memories are common; of taking the time to process what happened rather than just focusing on moving forward, and avoiding those trying to harm or impede us.

I believe that the U.S. does too little to educate the public regarding the nature and scale of problem, or the fact that men are far more likely to be victims of these abuses rather than of false allegations related to their perpetration.

My team's hope with this work is to give light to the risk and harms of sexual harassment and assault as a social epidemic in our country. Given how rare it is for those affected to seek help, the U.S. needs to prioritize its prevention for the benefit of all, regardless of gender.

Anita Raj, Professor of Society and Health, Medicine, and Education Studies, and Founding Director of the Center on Gender Equity and Health, *University of California San Diego*

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16.2: Activism

Before the internet was an effective product marketing tool, it was a tool of activism – and social media has extended and complicated the ways activists can use it (in other words, its activist *affordances*). This chapter takes a few key movements as examples – from 1994 when Mexico's Zapatista movement forced the Mexican government into a ceasefire, to 2017 when Black Lives Matter hashtags now quickly activate publics in the US and beyond. I refer to these movements under the umbrella of **creative online activism**. What ties these movements together is their creativity in using the affordances of the internet to promote activist agendas and avoid the pitfalls of oversimplification and appropriation.

Note: This chapter focuses on movements that have coalesced (formed) around racial and ethnic identity groups, as well as income inequality and political decisions.

Zapatistas gathering in support of their cause

Figure 16.2.1: *Zapatistas in Chiapas used early social media to advance their cause and protect their lives.*

The Zapatistas

In early 1994, only a tiny percentage of the world was online, and the term "social media" did not exist. The internet was very young and very Web 1.0, with static pages that did not allow visitors to contribute. (You can review Web 1.0 vs Web 2.0 in Chapter 2). Yet our first example of creative online activism begins here, with Mexico's **Zapatistas**. Creative deployment of the affordances of a young, sparse internet both saved indigenous protesters in Chiapas, Mexico from slaughter *and* allowed them to influence the new global economy.

NAFTA signing

Figure 16.2.2: *NAFTA signing by leaders of Mexico, Canada, and the US*

NAFTA signing by leaders of Mexico, Canada, and the US

The beginning of the story was the end of life as many in rural Mexico knew it. Governments of the US, Canada, and Mexico began negotiating the ***North American Free Trade Agreement (NAFTA)*** in the early 1990s, forging interdependence between their economies. Among other deals, this trade agreement would subsidize corporations taking over Mexican land to grow cheap crops. Many Mexicans – particularly the native, or *indigenous,* people – foresaw that this would lead to drastic alteration of the land and to farming by genetic crop modification and spraying of chemical pesticides.

As their political leaders worked toward NAFTA, Mexican farmers fought it using traditional methods. In the early 1990s, protestors staged in-person demonstrations at the zocalo (town square) in Mexico City. And they organized and wrote impassioned statements in print media about the devastating consequences NAFTA would have on farming and many other aspects of life in their country. But North American governments ignored these offline pleas and signed NAFTA into effect in 1992 and 1993.

On January 1st, 1994, NAFTA became the law of the land in the US, Mexico, and Canada – and the Zapatista National Liberation Army (EZLN) rose up against the Mexican Government under the leadership of a masked man known as Subcomandante (Subcommander) Marcos. This army of "Zapatistas" – an army of mostly poor, rural, indigenous people inspired by the historic Mexican revolutionary Emiliano Zapata – peacefully occupied the city of San Cristóbal de las Casas in the state of Chiapas, to demand that their protests against NAFTA be seen and heard. Rising up against the Mexican government seemed like a catastrophic move by the EZLN occupiers, many of whom were poor indigenous farmers from the Chiapas area.

Statue of Janus

Figure 16.2.3: *The internet can be "a Janus machine, an engine of liberation and an instrument of repression.'" (L. Dery via Martinez-Torres, p. 348).*

The Mexican government was enthusiastic about NAFTA, as they would benefit financially from corporate NAFTA investment even if their farmers suffered. So it seemed certain the formidable Mexican army would covertly slaughter the small EZLN forces before their protest could make Mexico look bad as corporate investment. But ironically, in this case the internet was what Martinez-Torres describes as ***Janus faced***, helping governments repress people *while* helping those people protest that repression at

the same time. While young, online global networks made it possible for economies to globalize and to crush poor people in the process, they also made it possible to mobilize networks of popular protest and fight back.

Enter information warfare

When on-the-ground resistance alone got the Zapatistas little traction in their resistance to NAFTA, they turned to the internet and began a campaign of ***information warfare*** – the strategic use of information and its anticipated effects on receivers to influence the power dynamics in a conflict. Thanks to the affordances of the early internet to connect people in similar struggles in different places, international peace activists were already networked online in the mid-1990s; the Internet Archive has lists and snapshots of pages describing some of these organizations. Some of these activist organizations were witnessing or supporting similar struggles in other countries, as poor people battled transnational trade agreements that would destroy their ways of life.

Subcomandante Marcos and Comandante Tacho in La Realidad, Chiapas

Figure 16.2.4: *Subcomandante Marcos (on left): Masked spokesman for the EZLN army of "Zapatistas" in Chiapas, Mexico*

The EZLN Army got the international word out about their cause with remarkable speed, thanks to these online peace networks. With the charismatic masked leader Subcommandante Marcos as a spokesperson, the EZLN Zapatistas created a dramatic campaign online. Their vivid imagery of the EZLN's masked army of farmers spread rapidly across international online networks.

At the height of their online visibility, twelve days after declaring war on the Mexican Government, the Zapatistas publicly called for a ceasefire. The Mexican government still had the physical power to annihilate EZLN – but now the world was watching. Once EZLN called for peace, any action against their forces including women and children would make Mexico look evil – and risky as a corporate investment destination. As a result, the Mexican government was forced to accept the EZLN ceasefire. They could not reverse NAFTA; it would take more than an awareness campaign to reverse such a powerfully backed agreement. But the EZLN protesters lived and continued their demands for social change.

The EZLN's Information War has inspired many civil society movements visible today. These include current movements against genetically modified food and for "fair trade" compensation of farmers. In terms of online strategies, the Zapatistas' activist campaign was an early example for activists of how media can be used sociopolitically to demand civil rights – and to recognize how, Janus-faced, those same media can also work against those rights.

In the next sections I demonstrate now the Zapatistas' strategies fall under the umbrella of creative online activism and why such strategies remain powerful.

CREATIVE ONLINE ACTIVISM IN RECENT TIMES

Political Campaigning In The 21st. Century

Student Contribution, Fall 2020

Music: Automaton en Avant by Scanglobe, CC-BY -NC.

The Accessibility of Politics on Social Media

One of the main features I enjoy about social media is the level of accessibility it provides. In one tap, you can connect with an old friend, find entertainment, get news and so much more. One "old school' medium that has found new life on social media is politics. The accessibility of politics via social media has made politicians and issues easily available to the general public thanks to their integration of the new media into campaigns.

Tana Mongeau is a twenty-two year old influencer who gained a lot of followers from her Youtube "storytime" videos. She tries to be as transparent as possible with her audience, and is not afraid to be herself. Mongeau has over 5 million Youtube subscribers which means that a lot of people value her opinions. I have watched Tana Mongeau's Youtube videos before and I always admired how authentic she was with her audience. Tana usually tries to stay out of controversial situations because she has gotten herself into trouble in the past on social media leading to her almost being cancelled. This is why I was a little surprised to see her actually campaigning which usually means half the people in your audience will disagree with you.

I do not look into politics on social media because I never know if there is misinformation from an unreliable source. I will also see a lot of disinformation where people will intentionally spread fake news to make one politician look better than the other.

Because social media allows for everyone to have a voice, there is a lot of that gets spread around by people who do not actually care about politics, but rather the attention. When I first saw “Booty For Biden”, I thought that it was probably just a meme trying to get Biden’s name out. However, Tana was very passionate about campaigning for Biden and said that it was true. This campaign strategy has proven to be successful with “naked philanthropists” such as Kaylen Ward who fundraised over 1 million dollars for Australia during their fire crisis. They tend to reward people who donate, or in this case vote, with a naked picture of themselves.

However, once again, Tana got a lot of backlash about her Biden endorsement campaign. Lots of people noticed that what she is doing can be considered “vote buying” which is an electoral crime. Vote buying is defined as, “when offering an expenditure to any person, either to vote or withhold his vote or to vote for or against a candidate”. Punishments can include fines and up to two years in prison. It is also illegal to take a picture of your ballot in sixteen states and unclear in thirteen. In light of this knowledge, Tana decided to change her requirements. Instead of sending her a photo of your ballot, you could just send her a video saying that you voted for Biden. With these lower demands, it is hard to account for how many people truthfully sent her proof, but Mongeau claims that she got “tens of thousands” of people to say they are voting for Biden.

Tana’s campaign ended up costing her some Youtube subscribers. She lost twenty thousand subscribers in September, which was around the start of her “Booty For Biden” campaign. Even though her channel took a hit, I believe her passionate dedication to the Biden campaign is admirable even if she may have lost some followers. In the end, she was able to use her platform to shine a light on a topic she was passionate about, which may have even swung some votes and led to Biden’s victory. Having her political view accessible to social media allowed for her to be even more transparent with her audience as well as earn herself some credibility by addressing a newsworthy national topic. “Booty For Biden” generated a lot of attention for the Biden campaign. Whether someone was pro-Biden or not, they were engaged in the political process albeit in a somewhat roundabout way. Perhaps that led to people finding more information on politics, even though it may have simply stemmed from wanting to see a nude pic.

About the Author

Graphic of the author

Figure 16.2.5

Jessica Nickerson is a sophomore at the University of Arizona studying Pre-Business. She enjoys spending time with her hedgehog and going on long drives. Jessica has been active on social media ever since 2011.

Organizers have continued using the internet to mobilize, and their work has arguably been made easier with the development of mobile phone apps and social media. This timeline by Mashable gives a selective overview of noted online activist movements through 2011.

A collage for MENA protests. Clockwise from top left: 2011 Egyptian revolution, Tunisian revolution, 2011 Yemeni uprising, 2011 Syrian uprising.

Figure 16.2.6:*Arab Spring*

Creative online activism has developed in conjunction with social media apps since the mid-2000s. These apps are certainly not created equal when it comes to facilitating activism; in fact, some have been found to intentionally hinder the exposure of social injustice. For example, although they have had a huge user base for the last decade, Facebook algorithms have been found to hide or slow controversial and “negative” stories from its users’ feeds, making it a poor platform for activism.

But the platform is only a small part of the recipe for an activist movement. Human creativity has facilitated the use of technologies in activism in ways software developers never imagined. In a typical example of human shaping of technology, Twitter leadership didn’t build hashtags into the platform intentionally and even rejected the idea that they would be widely used; human users proved them wrong. Several years later, Twitter hashtags began playing important roles in online activism, including in the Arab Spring protests.

#Settleforbiden

Student Content, Fall 2020

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About the Author

Graphic of the author

Figure 16.2.7

Lilly is a first year student at the University of Arizona who enjoys traveling and having a good time.

Social media platforms like Twitter are sometimes practically credited with creating movements, but this technological determinism fails to recognize how much complex human wrangling is required to run an online campaign and keep control of its message. Only a small percentage of protestors used Twitter to exchange key information and then disseminated that information through face-to-face communication and other media. All messages that spread widely online face the threat of oversimplification and appropriation; only the best-executed retain their depth and complexity. And, regardless of platform, the real work for social change still happens across various digital and analog (non-digital) platforms – and most crucially, on the ground.

THE BLACK LIVES MATTER MOVEMENT



Figure 16.2.8



Figure 16.2.9

One of the most well-known online movements to date is Black Lives Matter. The central phrase and hashtag of this movement came from Alicia Garza and Patrisse Marie Cullors-Brignac in July 2013 in response to the acquittal of George Zimmerman in the killing of 12-year-old Trayvon Martin. Armed with this concise phrase – and fueled by outrage over injustices against black citizens by American institutions including law enforcement today – **Black Lives Matter** has built into a sophisticated movement online and offline with profound influence on government policy and popular consciousness.

Although its signature phrase began online, the Black Lives Matter movement gained traction over the next year as Twitter users deployed #blacklivesmatter to mobilize on the ground. Subsequent hashtags used in connection with #blacklivesmatter networked protestors and helped them assemble massive on-the-ground demonstrations very quickly after subsequent police killings. These included #ferguson to organize protests in Ferguson, Missouri after police were acquitted in the killing of Michael Brown there in November 2014.

Social Aware Branding

Student Contribution, Fall 2020

Project 3

I chose the public of The Mayfair Group because it is an account that I am very familiar with and have been following for a long time. I think the content they create and post is incredibly inspiring and relatable to all. Their profile is very unique and full of creativity. It is a newly founded company and does a great job of reflecting some of the younger generations' ideas. The Mayfair Group specializes in the sectors of public relations, social media, sales, graphic design, branding, events and creative content. Their Instagram account inspires me to think out of the box, reflect on my life, and to be more original.

The Mayfair Group's Instagram account affords exposure because it draws matters society guards as private into the public sphere. For example, they post very honest quotes about deeper emotions and the sides of life people do not normally portray. They feature real-life issues such as climate change, mental health, politics, and female empowerment. The brand specifically focuses on gender equality. They provide very positive content, especially things that improve your mental health. It is evolving and revolutionizing as a company and has grown immensely. With a following of over 400k on Instagram, The Mayfair Group has a great deal of influence. Their posts receive a lot of comments from people sharing their own thoughts and beliefs about the topics being discussed. It goes beyond their platform as they plan collaborations, events, social and PR campaigns for specific brands to give them exposure.

The account brings a lot of people from many backgrounds together to fight for one cause. This is a great example of an organizational layer. Modern activist movements are often ignited through interactions between key personalities, and networked groups of people who respond together. On posts discussing activism topics, the comment section is flooded with users who all share the same belief.

The Mayfair group also is a fashion company and many of their products reflect these strong positive quotes and movements. This will bring a greater exposure because as the products and garments are worn, others who are not involved in the public will see it and possibly look into the brand. I am also especially interested in this brand and their public because it relates very well to my current major. I am majoring in marketing and i am extremely passionate about fashion, and the entertainment industry as a whole. The modern feel of this company is something I hold very high and hopefully will be able to work for a brand similar to The Mayfair Group. I pay close attention to the way they market their products and their choices of posts because everything is connected. I find it incredible that they have never paid for ads, followers, promotion. This a very successful marketing story and I can learn a lot from this brand. The CEO says, “It all comes down to hustle and building relationships – that’s how a business should be built”.

About the Author

Graphic of the author

Figure 16.2.10

Created by student for iVoices Media Lab.

CREATIVE ONLINE ACTIVIST STRATEGIES IN BLACK LIVES MATTER AND BEYOND

Sign reading. "Stop Killing Black People"

Figure 16.2.11: *A Black Lives Matter demonstration: broad, inclusive online activism for the 21st century*

Black Lives Matter campaigns have deployed several strategies that were key to the EZLN campaign, as well as to other online activist movements. To make it easy to understand the strategies these movements deployed in common, I will list them and describe them in the next section.

Five strategies deployed by creative online activist movements:

- 1. Speed
- 2. Visuals
- 3. Performances
- 4. Inclusiveness
- 5. “Masked” leadership

Figure 16.2.12: *Speedy response has been key in the Black Lives Matter movement*

1. Speed

Like the Zapatista online campaign, it was crucial in 2015 that Black Lives Matter protestors mobilize with speed. Responding fast to the actions of government or authorities allowed both movements to gather large publics when outrage over authorities’ decisions was high. In Black Lives Matter, an immediate response also sent the message that this public would not tolerate police violence any longer – effective immediately.

people with their hands up at a protest

Figure 16.2.13: *Hands up, don’t shoot is a powerful phrase: It became a hashtag, an easily recognized gesture, and an on-the-ground synced performance.*

2. Visuals

In both the Zapatista and Black Lives Matter movements, campaign organizers gathered attention through effective use of *visual* content. Images of the masked Zapatista army are still widely circulated online. This article in WIRED Magazine explores

the spreadable content of the Black Lives Matter movement, especially the visuals – photographs easily shared online that evoked the in-person experience of being black, in protest.

3. Performances

We must also remember the *performances* involved in each of these protests. The Zapatistas called a truce at a dramatic moment that would have cast the Mexican government as the villain if they continued to fight the small EZLN army. In Black Lives Matter, hashtags like #handsupdontshoot remind us that these protestors moved together in synced gestures that gave tremendous energy to their on-the-ground protests. Reenactment has also been an effective performance strategy, exemplified in protestors using the #icantbreathe hashtag to reenact the video of Eric Garner dying after police ignored his repeated pleas of "I can't breathe."

Online activism scholar Paulo Gerbaudo phrases it this way: Online media can be used for the "***choreography of assembly***" in organizing on-the-ground demonstrations. That is, online organizers can choreograph individual acts of cultural repetition (memes, discussed more in Chapter 7), such as clothing or gestures protestors can repeat to recognize and reinforce one another's work. And they can organize the meeting places, escape routes, and conduct of massive groups of people. Gerbaudo notes that these actions can influence public consciousness most powerfully when they occur in a **symbolic center** – some meaningful public place that serves as a theatrical stage for activism to be seen and performed. A park at a city center, a football field, the Olympic medal ceremonies, a memorial statue: All of these have been symbolic centers for protest in the US and abroad.

4. Inclusiveness

Black Lives Matter's strategy was also similar to the Zapatistas' in the *inclusiveness* of the campaign. It was understood and stated by those in the movement that women must have equal access to the rights being fought for, and that in-family violence was part of what they were fighting. In Black Lives Matter, rights around gender and sexuality were always part of the discussion, as exemplified in this movement "herstory."

Today's social media-fueled movements tend to use rhetoric that acknowledges differences in power among the people they fight for or represent. This sets modern rights campaigns apart from some rights movements in the past. Both the Civil Rights and Black Panther movements focused on black men more than other citizens. The 20th-century women's rights movements focused more on white women than any others. The 20th-century gay rights movement centralized the identities of white gay men. "Not your grandfather's civil rights movement," is one way Black Lives Matter has been described, reminding us that today's movements broaden the focus from fathers and grandfathers to the rest of the family, the organization, and the community.

5. "Masked" organizers

In modern online activism, leaders wear *masks* – literally, and sometimes, figuratively. In the 20th-century, a much-remembered feature of social activism campaigns like the Civil Rights Movement was their visible leadership and culture of "heroes." Dr. Martin Luther King is commonly remembered as the "father" of the Civil Rights Movement. Meanwhile, as this article by Jamil Cobb on Black Lives Matter reminds us, there were other strategies at work in the Civil Rights movement as well as leaders who shunned the spotlight, like Ella Baker of the Southern Christian Leadership Conference. Today, the branding has shifted, with many declaring today's online activist movements "leaderless."

A member of the group known by the pseudonym Anonymous, at the Wall Street occupation protest in New York on September 17, 2011.

Figure 16.2.14: *Anonymous as masked activist*

The Zapatista spokesman Subcomandante Marcos was a bridge between these two styles of organization, the 20th-century heroic leader versus the 21st-century decentralized campaign. Marcos was the Zapatistas' most visible "hero." But he wore a mask, hid his true identity, and chose the false title of "Subcommander" (subordinate Commander) rather than "Commander." A decade later, the "hacktivist" group Anonymous began organizing actions on 4chan in which the identities of the organizers and participants were not known; Anonymous made significant appearances during protests against the World Trade Organization. More recently, there have been figurative masks on many popular online movements including Occupy Wall Street, with all insisting there are no leaders. The strategy of "masked" organizers makes a movement difficult to defeat, while also resisting the persistent surveillance that is a function of the internet, and that can get activists jailed or killed.

ADVANCING AND AND COMPLICATING SOCIAL ACTIVISM THROUGH ONLINE ENGAGEMENT

There are many critiques of online activism as inferior to more traditional forms of activism. For example, techno-sociologist Zeynep Tufecki argues that by removing the hard work and shared risk of social organizing, social media technologies gather demonstrators too quickly for them to understand one another and think together. In another critique, scholar Evgeny Morozov uses the term "***slacktivism***" to characterize certain low-risk levels of "activism" such as signing online petitions, which offer participants the illusion they are contributing significantly, at zero risk to themselves. While these critiques may overlook the subtle shifts in the public consciousness that online chatter can effect, they have merit. As illustrated by the Zapatistas in Chiapas and Black Lives Matter in Missouri, online activism is at its most powerful when on-the-ground action provides roots to online campaigns.

However they are branded, successful online activism movements are never dependent only on leaders, and they are also never leaderless. Rather, modern activist movements in the US in particular are often ignited through interactions between key driving forces or personalities, and then mobilized networked groups of people who respond together. This idea, which author David Karpf has called an "***organizational layer***" of American political advocacy, may be the closest we can come to accurately describing the real effects of the internet on how we do activism.

CORE CONCEPTS AND QUESTIONS

Core Concepts

creative online activism

activist movements that deploy creativity in using the affordances of the internet to promote activist agendas and avoid the pitfalls of oversimplification and appropriation

Zapatistas

an army of mostly poor, rural, indigenous people rose up against the Mexican government in 1994, and successfully used the early internet to reach out for witnesses and support

Janus Faced

a symbol, derived from ancient Roman mythology, of something that simultaneously works toward two opposing goals

information warfare

the strategic use of information and its anticipated effects on receivers to influence the power dynamics in a conflict

North American Free Trade Agreement (NAFTA)

an agreement between the US, Mexico, and Canada in the early 1990s forging interdependence between their economies, including subsidies for corporations taking over Mexican land to grow cheap crops

Black Lives Matter

a sophisticated movement online and offline, fueled by outrage over injustices against black citizens by American institutions including law enforcement today

Five strategies deployed by creative online activist movements:

Speed, Visuals, Performances, Inclusiveness, Masked leadership

choreography of assembly

Paulo Gerbaudo's term describing how successful online organizers preplan social activist movements that will ensue on the ground

symbolic center

Paulo Gerbaudo's term for a meaningful public place that serves as a theatrical stage for activism to be seen and performed, such as park at a city center, a football field, the Olympic medal ceremonies, or a memorial statue

slacktivism

coined by Evgeny Morozov, this concept relates to critiques of online activism as inferior to more traditional forms of activism, with organizing online perceived as so fast, easy, and risk-free, it results in insufficient gains or change

organizational layer

political scientist David Karpf's term for the networked groups of people responding together who he argues form the most important agents for change in American political advocacy today

Core Questions

1. How is the internet "Janus-faced?"

A.) It is very beautifully put together

B.) It has two faces, so can be used simultaneously as a tool for and against a cause.

C.) It is very ugly in the biases conveyed within

D.) All of the above

E.) B and C only

Answer available at the end of this section.

2. What and where were the EZLN Zapatistas protesting?

A.) The drug war in Mexico

B.) The US election of Donald Trump

C.) The Mexican government's agreement to join NAFTA

D.) All of the above

Answer available at the end of this section.

3. What circumstances led directly to the beginning of the Black Lives Matter movement, according to this chapter?

A.) The Southern Christian Leadership Council began the movement in the 1960s

B.) Patrice Cullors and Alicia Garza started the use of the phrase and hashtag #blacklivesmatter in 2014

C.) The killing of black citizens by authorities led to large on-the-ground Black Lives Matter demonstrations in 2015

D.) All of the above

E.) B and C only

Answer available at the end of this section.

4. Which of the following are characteristics shared by creative online activist movements including Black Lives Matter and the Zapatistas, as discussed in this chapter?

A.) Visual content and performances

B.) Speed and inclusiveness

C.) Masked organizers

D.) All of the above

Answer available at the end of this section.

5. Facebook algorithms have been found to hide or slow controversial and "negative" stories from its users' feeds, making it a poor platform for activism.

- True
- False

Answer available at the end of this section.

RELATED CONTENT

Consider it: A new era in online activism?

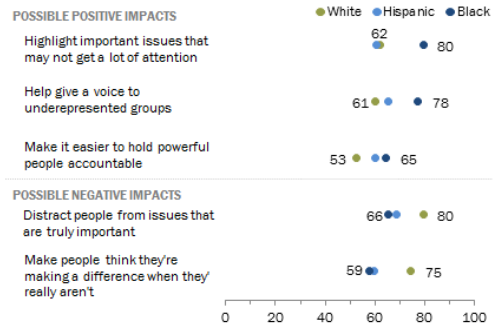
First, read the article "The Second Act of Social Media Activism" by Jane Hu, published in June 2020 in *New Yorker Magazine*.

Also consider findings from the Pew Research Center's 2018 study of American perceptions of the internet as a tool for social activism.

Techno-sociologis Zeynep Tufecki argued in 2015 that the tools to organize activist movements online may move too fast to build coalitions that "think together". Whether that was true then, is it now? Support your answer, including what might you say to others in the Pew polls who think differently than you in order to explain your views.

Eight-in-ten blacks say social media help shed light on rarely discussed issues; the same share of whites say these sites distract from more important issues

% of U.S. adults who say the following statements describe social media ***very*** *or* ***somewhat*** *well*

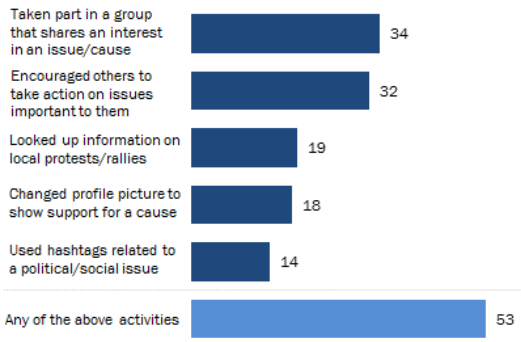


Note: Whites and blacks include only non-Hispanics; Hispanics are of any race. Respondents who gave other responses or who did not give an answer are not shown.
Source: Survey of U.S. adults conducted May 29-June 11, 2018.
"Activism in the Social Media Age"

PEW RESEARCH CENTER

Roughly half of Americans have been civically active on social media in the past year

% of U.S. adults who say they have done the following activities on social media in the past year



Note: Respondents who gave other responses or did not give an answer are not shown.
Source: Survey of U.S. adults conducted May 29-June 11, 2018.
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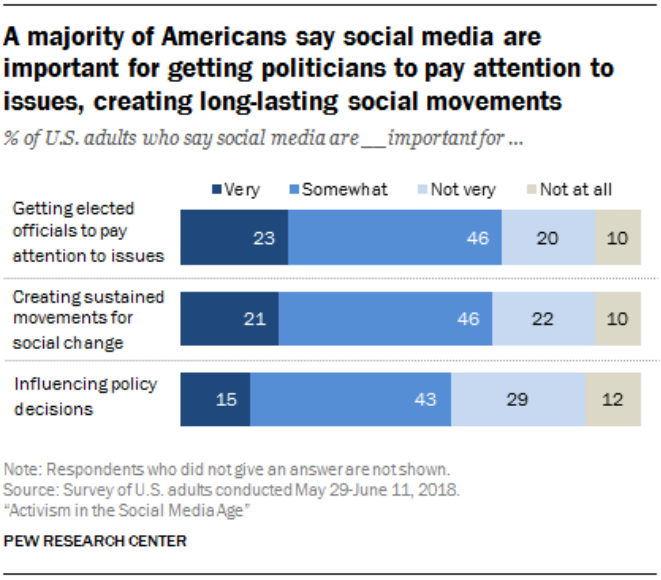


Figure 16.2.15: *Graphics by Pew Research Center.*

Read it: Grassroots activists must consider the costs of digital campaigns (Delia Dumitrica, The Conversation)

GRASSROOTS ACTIVISTS MUST CONSIDER THE PERSONAL COSTS OF DIGITAL CAMPAIGNS



Figure 16.2.16: Attendees at the women's March on Edmonton, Alta on Jan. 21, 2017.
Mylynn Felt, Author provided

Delia Dumitrica, *Erasmus University Rotterdam* and Mylynn Felt, *University of Calgary*

Widespread use of social media has made it easier to mobilize collective action, yet citizen activists struggle to navigate these digital tools and increasingly report feeling burned out. Our research on grassroots digital activism in Canada has revealed some of the strategies organizers employ when dealing with the technological, interactional and personal barriers of digital activism.

People's use of social media for activist purposes clashes with the commercial goals of these platforms. For example, as these platforms prioritize popular and recent content, activist messages have to be constantly updated and liked or shared in order to remain visible to wider audiences. This places the burden to adapt upon activists, who must make the best of these tools within the constraints set by the platforms' algorithms.

DILUTION OR DISSEMINATION?

Social media can enhance activist communication at the cost of loss of control over the message. This matters in collective action, because a clearly communicated set of demands and complaints is essential to obtaining political recognition.

During the 2014 teachers' strike in British Columbia, three parents came up with the idea of hosting playdates in front of the offices of members of the B.C. Legislative Assembly (MLAs). The parents wanted to pressure the provincial government to negotiate with teachers and end the strike. As they circulated the idea of #MLAPlaydates on social media, they reflected on the possibility of message dilution:

> It's not the traditional command and control. It's like: here's an idea, why don't you play with it and see what you can do. You share, you pass on stuff.... So, it's a different framework of activism.... It's like beta testing, you don't know where it's going to fly.

Their solution was a form of "open-source activism," which entailed monitoring social media to reinforce the message and prevent it from being co-opted, while inviting supporters to adapt and personalize this message.

ECHO-CHAMBER EFFECT

Filter bubbles of like-minded people make it difficult for digital activists to get their messages outside of individual networks. Yet, some platforms are more public than others, using different algorithms to make content visible to their users.

Organizers of Alberta's #SafeStampede wanted to call attention to the rape culture around the annual Calgary Stampede. They found that:

> Facebook is far and away the best place to have actual discourse [around these issues], but again, you're mostly talking to your own friends, so it does become a bit of a feedback loop.

To combat this barrier, organizers created public profiles on more open platforms like Twitter and Tumblr to breach the echo chamber effect.

POPULARITY CONTESTS

On social media, visibility is often enabled by the newness and reactions a message receives. Activists need to constantly monitor how algorithms push content to the top of other users' newsfeed. This pressures them to think and act like digital marketers, strategizing their message production and circulation.

The digital activists in our research spoke to the necessity of adapting to platform-specific practices, as well as the learning curve of understanding these practices in the first place.

> You have to be careful of the algorithms, so if you're posting too much, you're not going to get as wide of an audience.... With Instagram, if you posted three or four really good pictures with good descriptions and hashtags a week, you're going to get more of a response than if you're posting like, you know, five times a day every day. So, you want to be kind of conscientious in what you're posting, and how often.

ALLIES AND TROLLS

Alongside algorithms, interaction on social media brings along its own challenges to digital activism.

For the #SafeStampede organizers, social media platforms helped them find each other through their existing networks. Online connections grew into face-to-face meetings and relationships, facilitating critical backstage efforts to their public social media campaign:

> I don't think anything exclusively happens on social media anymore. There needs to be a point where things transcend social media and you end up having real conversations with people and you build relationships.

Social media also opened the campaign up for abuse and trolling. This was also the experience of another gender-related movement, the Women's March in Alberta. The organizers described how people searching terms like "transgender" and "pussy hat" launched a gender-biased calculated attack a few days before the march. To deal with the backlash, the organizers resorted to a strategy of "block, delete, report, repeat," pointing out that:

> It had to be done, and we just tried really hard not to let all of our time and emotional energy get sucked up by that.

The camaraderie built online and offline helped mitigate the toll of these confrontations. Still, online attacks and trolling can easily deplete the already scarce resources that citizen activists have at their disposal.

BURNING OUT AND DROPPING OUT

While our participants minimized the personal and professional costs of their digital activism during our conversations, they also spoke of burnout making long-term involvement unsustainable.

The emotional cost of trolls, backlash and hyper-aggression on social media was difficult for organizers to escape as social media tied their public names to their activism:

> You attract negative comments on you ... attract people who feel they have the right to attack you ... I try not to think about this too much, having too much information out there leaves me open to potential stalkers, or people who want to harm me or my child.

Distancing one's self, either from the movement or from the potential risks of your activities, seems to be the only possible strategy for organizers in these situations.

Furthermore, because social media algorithms display the messenger alongside the message, organizers also expressed concern that their visible activism may create potential career risks.

DIGITAL ORGANIZING STRATEGIES

The citizen activists interviewed in our research employed various strategies to navigate barriers to digital activism. Here are some of their lessons for other activists:

- Stay up-to-date with how algorithms are designed and updated for the platforms you are using.
- Use multiple platforms to reach different audiences and mitigate the effects of echo chambers.
- Allow some for some change in your message, but monitor the conversation in order to maintain its core.
- Connect with fellow organizers and supporters offline.
- Join a local, regional or national collective so you have fellow activists to lean on and pass the baton to when you need to step away.
- Anticipate the costs and risks of activism, and reflect on where you need to draw your own boundaries.
- Build flexibility and adaptation into your tactics of action.

While digital activism can be a crucial part of any successful campaign, activists needs to remain aware about the costs and limitations of social media.

Delia Dumitrica, Associate professor, Department of Media and Communication, *Erasmus University Rotterdam* and Mylynn Felt, PhD Candidate, Communication, Media and Film, *University of Calgary*

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Answers

Core Questions

B.) It has two faces, so can be used simultaneously as a tool for and against a cause.

Core Questions

C.) The Mexican government's agreement to join NAFTA

Core Questions

E.) B and C only

Core Questions

D.) All of the above

Core Questions

True

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Academic library	A collection of materials developed and managed to support the student and faculty research interests of a college, university or other institution of higher education.
APA Style	The formatting and publication style developed by the American Psychological Association and used in psychology, education, health science and other disciplines.
Author	The creator of an original idea or material.
Call number	The designation of the location of library materials, assigned based on the subject, author's name and intended use.
Card catalog	Printed information on library materials kept in file drawers in alphabetical order by author, title and subject headings
Catalog	An index for a library's collection, it may be printed in books, cards or in a database.
Chicago Manual of Style (CMOS)	The formatting and publication style developed by the University of Chicago and *Chicago Tribune* for their publications. It has two options, the Notes & Bibliography (NB) style, used mostly in the humanities disciplines, and the Author-Date (AD), used mostly in the social sciences.
Circulation	The department that maintains the physical arrangement to the library collection, facilitates access and checks materials in/out to patrons.
Citation	Information about a source of information with the original creator, and the availability of the material. Citations are in a style format designated by the publisher and/or profession affiliated with the topic. *APA, MLA* and *Chicago Manual of Style* are the most commonly used.
Cornell method	A style of note-taking with two columns, the left for terms and the right has the explanation or description. There is a summary section at the bottom of each page. It was developed at Cornell University.
Database	Computer software system to organize materials into descriptive fields, which can be easily sorted and accessed.
Document	verb- to provide detail information on the location and source of information. noun- any government publication
Editor	A member of a publisher's staff who reviews and selects submitted materials to include in a publication, coordinate further publishing tasks, such as peer review, editing and formatting the material for publication.
Evidence	Facts and results of research to document a trend, condition, or hypothesis evaluated for research purposes.
Experiment	A type of research assessing the impact of a change in environment or treatment.
Full-Text	The complete version of a publication available online.
Idea map	A style of note-taking and organizing information using diagrams, connecting the ideas by relationships to each other.
Index	A tool that provides location information of materials. The location may be specific pages in a book, a call number in a collection or other designation.
Integrated Library System	A library resource used to provide location, description, circulation status and other information about titles in a library collection.
Inter-Library Loan	A system to loan materials between libraries to address patron needs.
Internet	Electronic access to information and entertainment using wireless online access.
Journal	Periodical with articles published for members of professions and scholarly research.
Library catalog	A resource with descriptive and location information about a library's collections.

Library:	A collection of materials acquired to address patron needs and interests.
Magazine	A periodical published to address interests, entertainment and information needs of the general public.
MLA Style	The citation and formatting style developed by the Modern Language Association that has been adopted by many of the humanities disciplines.
OPAC	Acronym for Online Public Access Catalog, this type of library catalog is available to their patrons via the Internet and facilitates keyword searching.
Outline	A style of organizing information and ideas by grouping concepts in a hierarchy and numbering them accordingly.
Peer Review	A process to assess materials submitted for publication in professional literature. Materials received by an editor or publisher are distributed to professionals in the appropriate discipline (without identifying information) for evaluation and discernment of the content, which is provided to the publisher and the author.
Periodical	A publication published on a recurring basis at regular intervals, such as daily, weekly, monthly, quarterly, annually, etc.
Preliminary Research	The practice of locating background information on a topic to prepare to understand more advanced research on the topic.
Public library	A library with materials and programs selected for residents of a particular location, supported through taxes.
Publication	Media with information, entertainment and/or advertisements sold for public or professional sharing of ideas.
Publisher	Company that developed materials for publications, and its administrators.
Reference	Verb: to cite a source of information Noun: a type of publication to assist in understanding a concept; examples are dictionary, atlas, encyclopedia, index, etc. Adjective: a type of assistance to locate and/or use materials in a library
Research	The practice of probing or exploring a topic for independent learning and sharing new knowledge with peers.
School library	A library with materials and programs selected for the students of the school.
Search engine	An electronic system to locate information, entertainment and advertisements available online via the Internet.
Special library	A library with materials and programs selected for patrons in a specific field of study, business or industry.
Spider graph	A style of taking notes with diagrams to note the relationship of concepts and supporting information. Also known as Idea Map.
URL	The online address for a website, it is an acronym for University Remote Locater.
Website	An online source of information, entertainment or advertisement developed to share their products, services, ideas via the Internet.

Source Information

Bridging the Gap: A guide to College-Level Research (Gray, Catherine J.)

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INDEX

B

boolean
9.1.1.2: Combining terms effectively- Boolean, phrase searching and proximity searching

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GLOSSARY

S

Sample Word 1 | Sample Definition 1

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