

Research in Design

Integrated Design | February 23, 2023 | Hollie Gardner

SMU Libraries

About Me

Hollie Gardner (she/her)

Director of Strategic Initiatives at SMU Libraries

Librarian for Design & Innovation for 6 years

BA in Music; MS in Library Science; MS in Data Science

How many research papers have you written in college?

**What feelings and emotions do you have
when you learn you have to write a research
paper in the class?**

**Have you worked with a research librarian
on any of these research papers?**

Metacognition

Metacognition

"thinking about thinking"



"Research Therapy"

Research Question

Characteristics of a Good Research Question



Represents a gap in knowledge



Builds upon existing work.
"Dialogue with past sources."



Too challenging to answer within time,
resource, skills, etc constraints



Something you are interested in.



Already answered.



Free-writing of your own thoughts



Too broad; Too narrow
Easily answered (i.e. Yes/No question)



Not relevant to your course

Question Examples

1. Why do objects fall to the ground?
2. How might we improve the income tax filing process in the United States?
3. How might we create an alarm clock that improves morning experience for my friend Madison?

From Topic to Research Question

Topic Areas:

Immigrant experience
in Texas

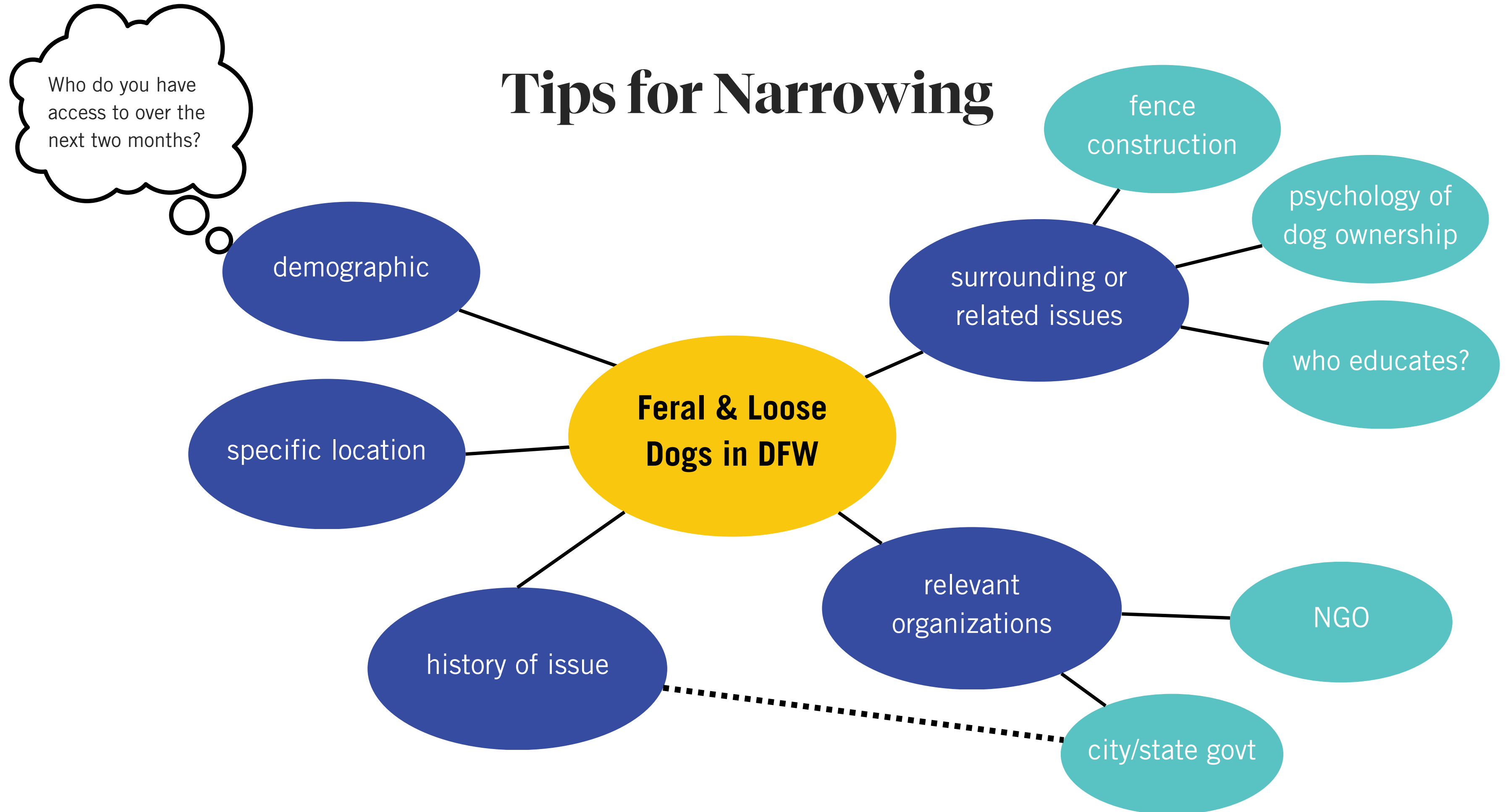
Feral & loose dogs in DFW

Design Research Questions:

How might we improve the experience of
graduate students who recently moved from
China to Austin?

How do improve the relationship of the ASPCA
with dog owners in the 75007 zip code
neighborhood?

Tips for Narrowing



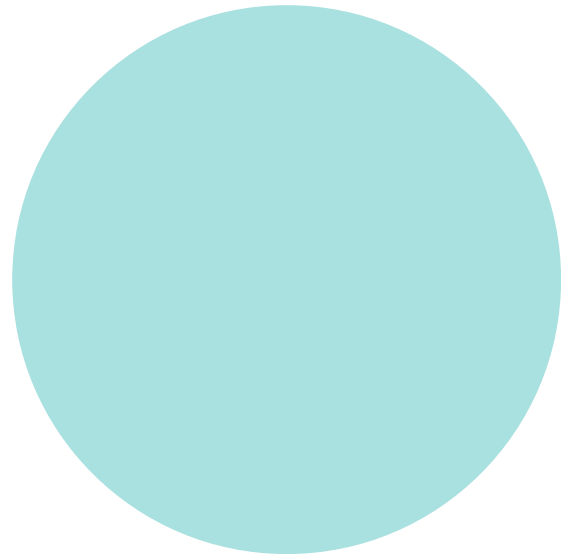
Mind Mapping Your Topic



Eating Ramen

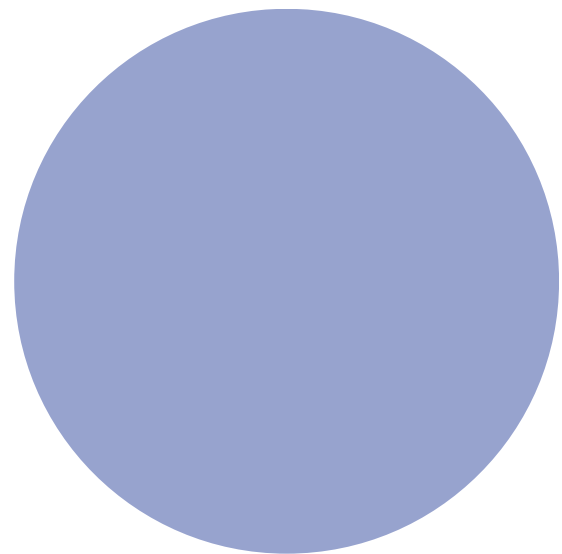
Secondary Research

General Research Terms



Primary SOURCE

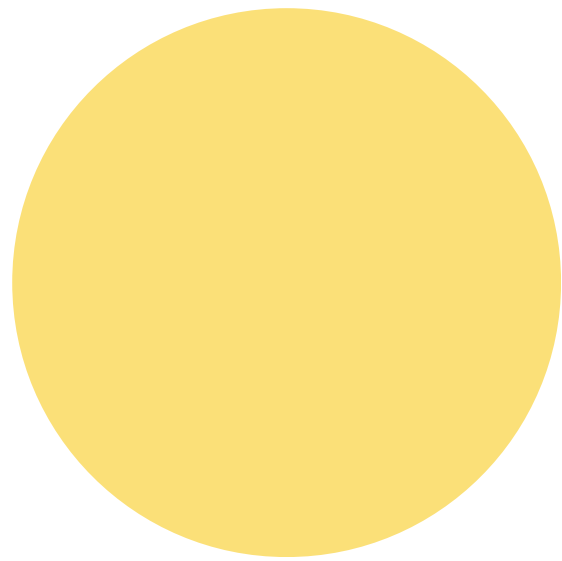
First-hand account of an event. Can be items such as news articles, tweets, artifacts, art work, datasets, autobiography, recordings, or any other source of information that was created at the time under study



Secondary SOURCE

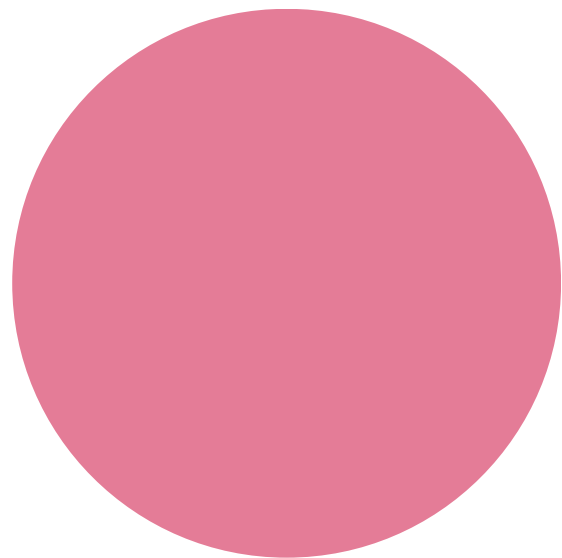
Step removed from the first-hand account. Sources about the primary sources. Can be journal articles providing analysis on the primary source, textbooks, biographies, commentaries, etc.

Design Research Terms



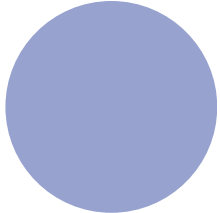
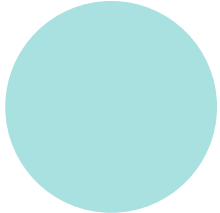
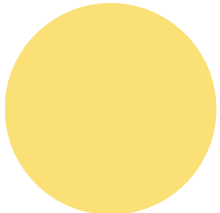
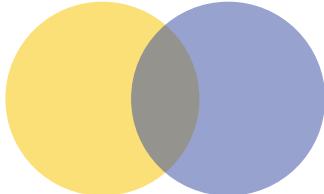
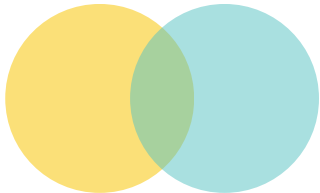
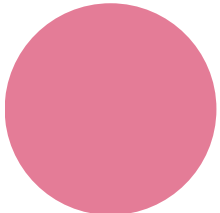
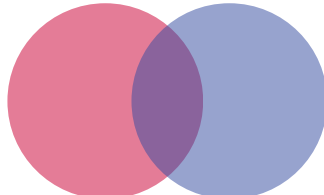
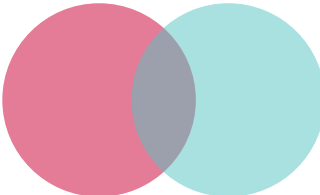
Primary RESEARCH

Collecting original data through different methodologies such as interviews, card sorts, surveys, focus groups, ethnographies.

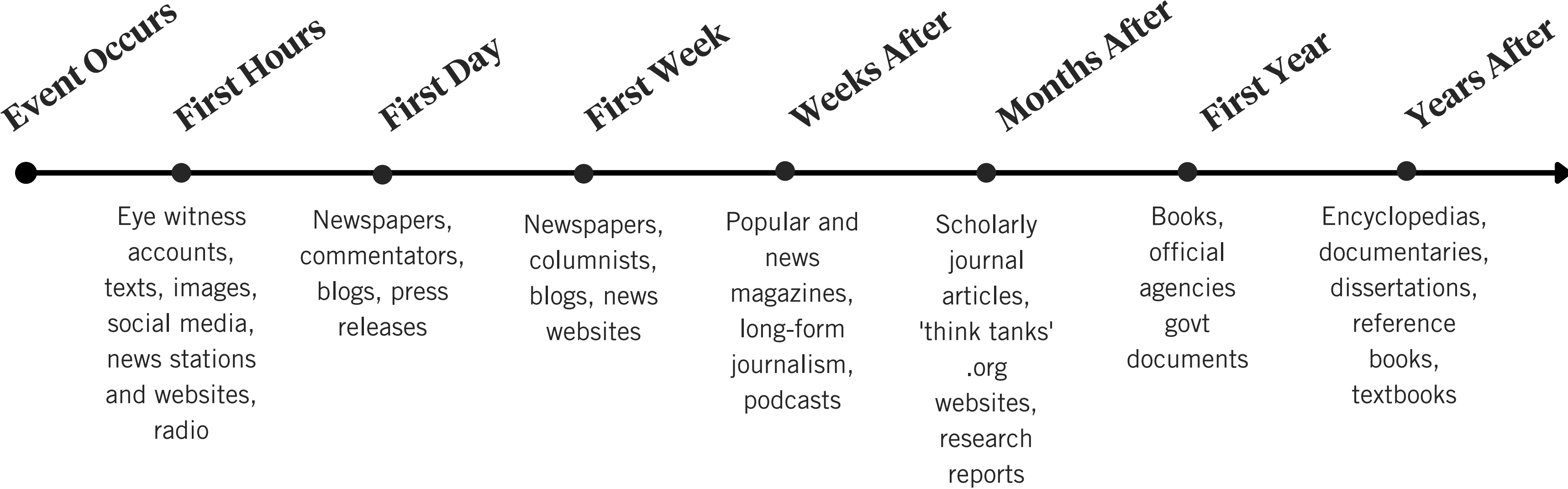


Secondary RESEARCH

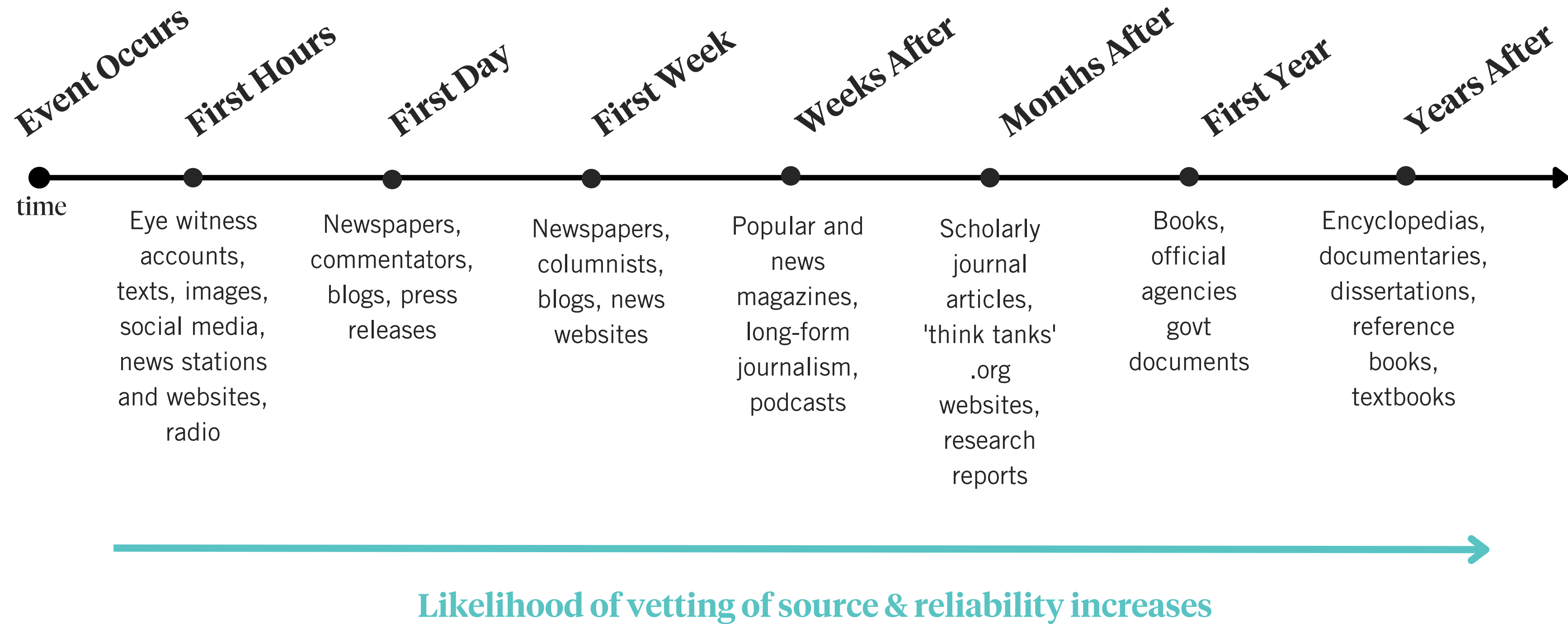
Synthesizing and analyzing works published by others.

	 Primary Source	 Secondary Source
 Primary Research	 <p>You interview someone about their personal experience</p>	 <p>You perform text mining on language usage in psychology journal articles to understand the field's attitudes towards women</p>
 Secondary Research	 <p>You read blog post or tweet from someone who describes their own experience</p>	 <p>You read journal articles to get background information on your topic and create an annotated bibliography.</p>

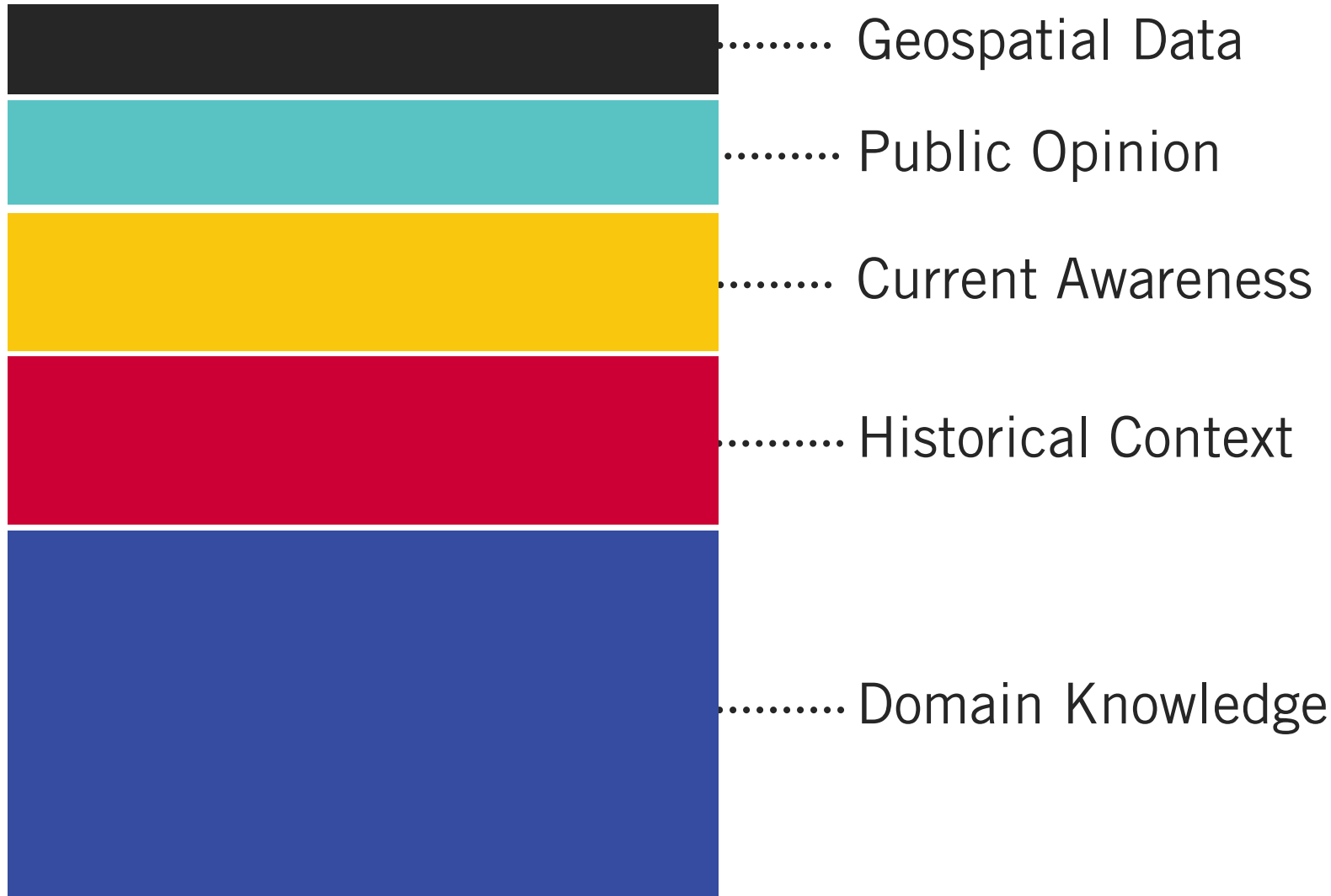
Information Cycle

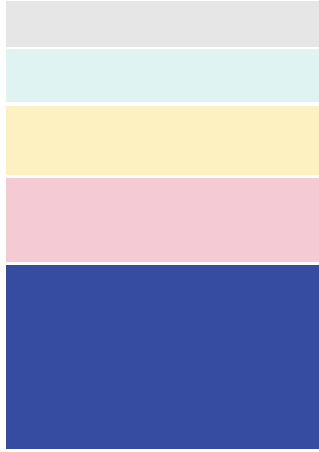


Information Cycle



Secondary Research





Domain Knowledge

What is it?

Subject-matter background and expertise

Types of Materials

- Scholarly Journal Articles
- Textbooks
- Trade Publications
- Conference Proceedings
- Blogs by experts in field
- Interviews with experts

Starting Points

- Library Search - <https://www.lib.utexas.edu/>
- Research Guides - <https://guides.lib.utexas.edu/>

Tips & Best Practices

- Subject Heading searches are your best friend
- Use bibliographies to identify more sources



Historical Context

What is it?

Information about the period or place when an event occurred. Could be social/cultural, economic, political, etc

Types of Materials

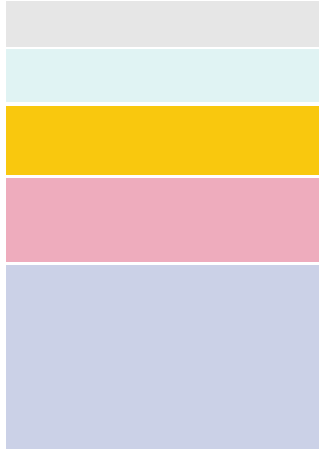
- Newspapers
- City Documents
- State Documents
- Company Archives

Starting Points

- Newspapers - <https://guides.lib.utexas.edu/news>
- Austin American Statesmen - (see above)
- Texas State Library - <https://www.tsl.texas.gov/>
- Internet Archive - <https://archive.org/web/>

Tips & Best Practices

- Archivists are usually pretty friendly & helpful
- Start early. Appointments may be required.
- Ask yourself, "Who would be interested in keeping this information?"



Current Awareness

What is it?

Information about the current period or place where an event is occurring. Could be social/cultural, economic, political, etc

Types of Materials

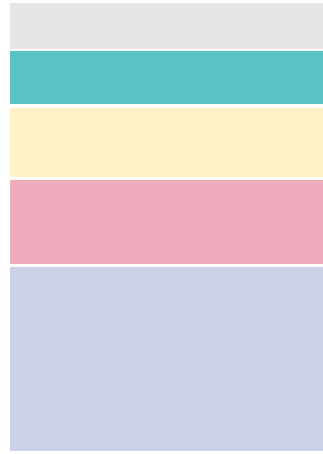
- Newspapers
- Local News Reports
- Radio Shows
- Blogs

Starting Points

- Current Newspapers - <https://guides.lib.utexas.edu/news/newspapers>
- Local news websites

Tips & Best Practices

- Check who wrote the articles. Check expertise.
- Look for words like editorial, opinion, etc.
- Cross check sources using sites like <https://www.allsides.com/media-bias/media-bias-ratings>, <https://www.politifact.com/>, etc



Public Opinion

What is it?

Views and thoughts of the general public

Types of Materials

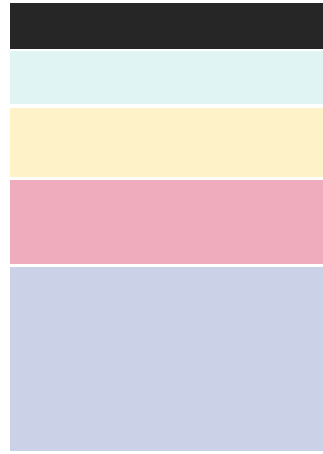
- Twitter and other social media
- Newspaper - opinion pieces
- Podcasts
- Polls

Starting Points

- Twitter text-mining guide
- Local news websites
- Popular polling research centers such as <https://www.pewresearch.org/topics/polling/>

Tips & Best Practices

- Check who wrote the articles. Check expertise.
- Look for words like editorial, opinion, etc.
- Cross check sources using sites like <https://www.allsides.com/media-bias/media-bias-ratings>, <https://www.politifact.com/>, etc



Geospatial Data

What is it?

Applying data to maps in order to create new insights about a topic.

Types of Materials

- Local, state, country maps with data

Starting Points

- Austin Open Data - <https://data.austintexas.gov/>
- UT Libraries GIS - <https://www.lib.utexas.edu/research-help-support/research-data-services>
- ArcGIS Online - see above

Tips & Best Practices

- Use Austin Open Data shapefiles in ArcGIS Online
- GIS websites provide links to other data sources

