ENGLISH COMPOSITION · STUDY GUIDE

# Exam 4 Study Guide

This guide covers chapters 7 and 8. First you will take an argument apart into named pieces, arrange it on the page, learn the standard ways arguments break, and stress-test your own draft. Then you will learn to research on purpose: a bounded question, the right kind of source, a search built from concepts, and a fast way to judge whether a source can carry your claim. Work one chapter at a time. Read the "what to know" paragraphs, copy the tables by hand, then try each worked case with the steps covered. Finish each chapter with its ten self-test items. The cram sheet at the end holds every list and rule.

WHAT THIS GUIDE COVERS

- Chapter 7 · claim, reason and evidence, the because test, arguable versus fact, preference and topic, Toulmin's six parts (claim, grounds, warrant, backing, qualifier, rebuttal), classical and Rogerian arrangement, concession and three depths of refutation, eighteen fallacies, the fallacy fallacy, steel-manning, the argument reverse outline, the objection audit and qualifying versus hedging.
- Chapter 8 · bounded, arguable, answerable questions and the four narrowing levers, scholarly, trade and popular sources, primary, secondary and tertiary, gray literature and preprints, keyword grids, Boolean operators, truncation, controlled vocabulary, citation chaining, lateral reading and SIFT, CRAAP and its critics, predatory journals and fabricated citations, matching source to stakes, the research log, Q, P and M notes, annotated bibliographies and the synthesis matrix.

CHAPTER 7

## Argument: Structure and Fallacies

Read it in full: **Chapter 7 in the textbook**. Practice it in the lab: **The Warrant Excavator** and **The Fallacy Repair Shop**.

### What to know

An academic argument is a **claim** supported by **reasons**, and reasons supported by **evidence**. The claim is what you want accepted; the reason answers "why should I accept that?"; the evidence

answers "how do you know?" Beginning writers usually have the claim and the evidence and are missing the middle. Numbers never argue for themselves; the reason tells the reader what the number is doing there.

The **because test**: write the claim, add "because," and finish the sentence. If the reason is obviously true, it is too weak to need arguing. If it restates the claim, you have gone in a circle. If a reasonable person could deny it, you have a real reason and know what the paragraph must prove. Not every sentence can anchor an argument: verifiable **facts** are looked up, **preferences** cannot be judged, and **topics** are not positions. The line between fact and claim shifts with audience and time. If you cannot imagine a specific, non-foolish person who disagrees, you have a summary with a confident tone.

Stephen Toulmin (1958) built a vocabulary from how practical arguments behave, more like law than formal logic. His six parts: **claim**, **grounds** (the data offered), **warrant** (the principle that makes the grounds relevant), **backing** (support for the warrant when readers doubt it), **qualifier** (usually, in most urban districts) and **rebuttal** (when the claim would not hold). Warrants hide because they feel like common sense to the writer. Ask what a person would have to already believe for the evidence to matter. Different audiences accept different warrants, so you may need backing in terms the room already accepts. A margin note saying "so what?" is usually asking for the warrant, not more evidence.

**Classical arrangement** comes from Roman handbooks: exordium (earn attention), narratio (background), partitio (thesis and preview), confirmatio (reasons with evidence), refutatio (strongest objection) and peroratio (stakes). **Rogerian argument**, adapted for writing classrooms in the late 1960s and 1970s from psychologist Carl Rogers's work on listening, first restates the opposing view so accurately its holders would agree, shows when their view makes sense, then offers your position as an extension. It suits audiences who already distrust you. Whether the strongest reason goes first or last is unsettled; persuasion research on primacy and recency is mixed. Do not open or end on your weakest reason.

A **concession** grants something true in the opposing view; a **refutation** shows why the view still fails. A fake concession names a weak objection and dismisses it in half a sentence. A real one states the objection at its strongest. Refute at three depths: the **evidence** (outdated,

unrepresentative), the **warrant** (the evidence does not support that conclusion) or the **relevance** (true but beside the decision). Attacking the warrant is usually most powerful and least used. "Some people say" is a warning light for a straw man.

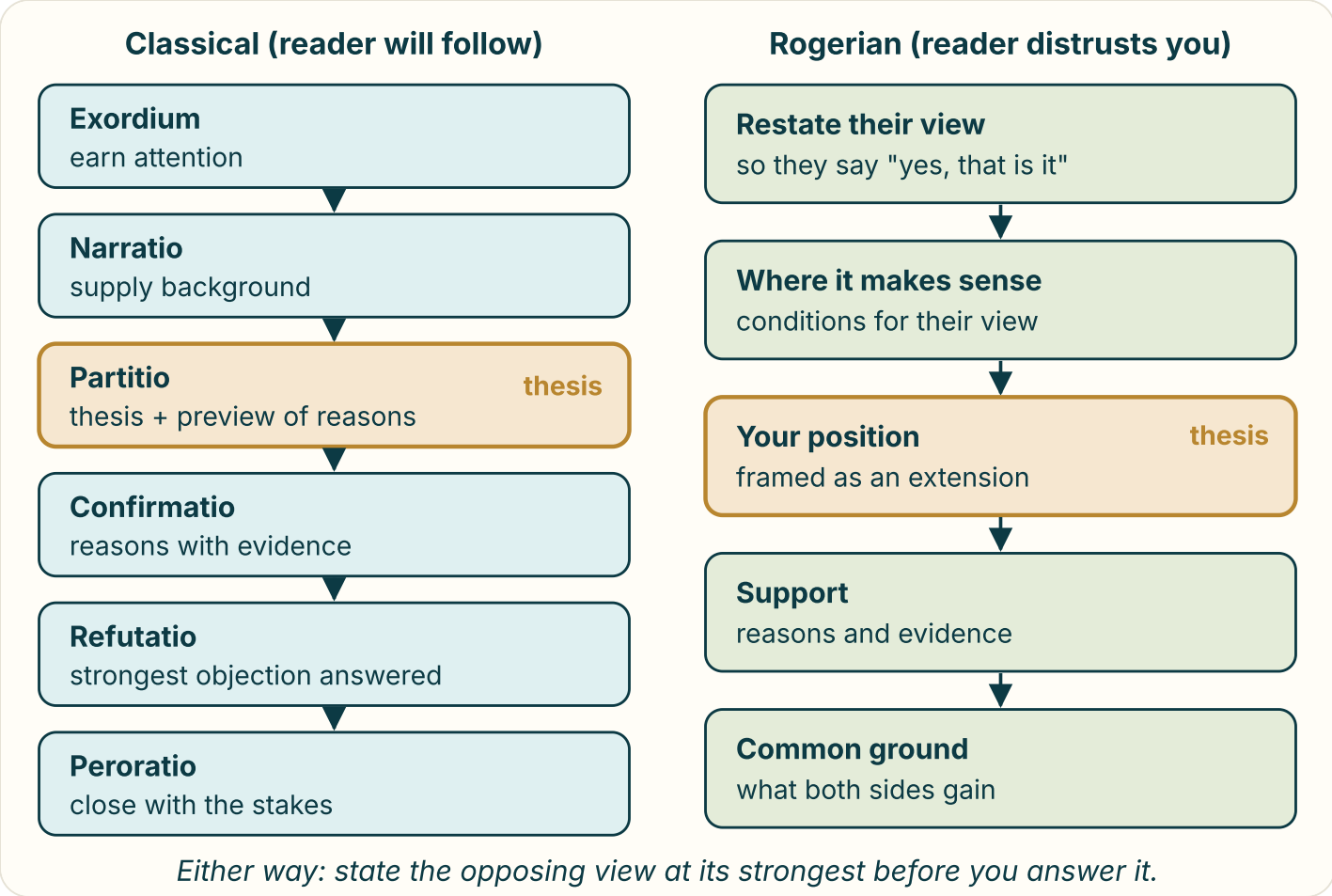
A **fallacy** is reasoning that feels persuasive but does not support its conclusion. Informal fallacies fail on relevance, sufficiency or honest framing. Two cautions: labels are context-dependent (scholars such as Douglas Walton and the pragma-dialectical tradition argue many are legitimate moves gone wrong), and naming a fallacy is not refuting an argument. Concluding a claim is false because one argument for it is bad is the **fallacy fallacy**. The useful move is: "that is not the position I hold; here is the one I do hold."

Relevance and pressure fallacies: **ad hominem**, **straw man**, **appeal to popularity**, **misused appeal to authority**, **red herring**, **appeal to fear**, **tu quoque** and the **genetic fallacy**. The opposite of a straw man is a **steel man**, the strongest charitable version of the opposing view. Evidence and framing fallacies: **hasty generalization**, **post hoc**, **slippery slope**, **false analogy**, **false dilemma**, **begging the question**, **equivocation**, **loaded question**, **no true Scotsman** and **moving the goalposts**. A slippery slope with evidence for each link is just a good causal argument.

Stress-test before you submit. The **argument reverse outline** writes only the claim and the reason of each body paragraph in the margin: two identical notes mean one paragraph in two hats; a note unconnected to the thesis is a digression; "background on X" three times means you have not started arguing. Beside each piece of evidence write who, how many, when. The **objection audit** attacks your own evidence, warrant, scope and cost. Answerable objections become refutations; unanswerable ones become qualifiers. Hedging weakens a sentence without adding information; qualifying narrows a claim to what the evidence covers. Words like "obviously" and "clearly" often mark a skipped step.

**LOCK THESE IN**

- Claim, reason, evidence. The reason in the middle is what drafts most often lack.
- Because test: obvious = too weak; restatement = circular; deniable = a real reason.
- Toulmin (1958): claim, grounds, warrant, backing, qualifier, rebuttal.
- Classical for readers who will follow a thesis; Rogerian for readers who distrust you.
- Refute the evidence, the warrant or the relevance. The warrant is the strongest target.
- Naming a fallacy is a diagnosis, not a refutation. Beware the fallacy fallacy.
- Steel man the opposing view; "some people say" signals a straw man.
- Objections you cannot answer become qualifiers.




**Two shapes for an argument.** Classical order front-loads the thesis for readers who will follow it. Rogerian order earns a hostile reader's goodwill first by restating their view fairly.

## Toulmin's six parts

| Part | Question it answers | Example from the chapter |
|---|---|---|
| **Claim** | What are you asking me to accept? | Add Saturday morning writing center hours |
| **Grounds** | What have you got? | 61% of requesters listed a weekday work conflict |
| **Warrant** | Why does that count as support? | Services should run when the students who need them can attend |
| **Backing** | Why accept the warrant? | The center's mission commits it to working and commuting students |
| **Qualifier** | How strongly? | At least during midterm and finals weeks |
| **Rebuttal** | When would it not hold? | Unless pilot Saturday use falls below the weekday average |

## Eighteen fallacies at a glance

| Fallacy | What it does |
|---|---|
| **Ad hominem** | Attacks the arguer instead of the argument |
| **Straw man** | Refutes a distorted version of the opposing view |
| **Appeal to popularity** | Treats wide belief as evidence of truth |
| **Misused appeal to authority** | Cites an unqualified or off-topic authority, or one expert as consensus |
| **Red herring** | Changes the subject to something easier |
| **Appeal to fear** | Uses dread in place of evidence |
| **Tu quoque** | Deflects criticism by pointing at the critic's conduct |
| **Genetic fallacy** | Judges a claim by its origin, not its merits |
| **Hasty generalization** | Generalizes from too few or unrepresentative cases |
| **Post hoc** | Treats sequence as causation |
| **Slippery slope** | Asserts an unsupported chain of consequences |
| **False analogy** | Compares cases that differ in the relevant respect |
| **False dilemma** | Reduces a range of options to two |
| **Begging the question** | Assumes in the premise what it claims to prove |
| **Equivocation** | Shifts a key term's meaning mid-argument |
| **Loaded question** | Smuggles an unproven assumption into a question |
| **No true Scotsman** | Redefines a category to dodge a counterexample |
| **Moving the goalposts** | Raises the bar once the evidence meets it |

## Worked cases

### WORKED CASE 1 · THE BECAUSE TEST AND A STATED WARRANT

Claim: "The campus should offer a late-night shuttle." Try three reasons, pick the real one, and state its warrant.

#### STEP 1 · FIRST ATTEMPT

"...because students need to get home." True of everyone; it proves nothing about a shuttle.

#### STEP 2 · SECOND ATTEMPT

"...because a shuttle is a good idea." Circular: it restates the claim.

#### STEP 3 · THIRD ATTEMPT

"...because the last bus leaves at 9:40 p.m., before most evening labs end." A reader could check and deny it. Keep it.

#### STEP 4 · SURFACE THE WARRANT

What must a reader already believe? *Campus transport should run until scheduled classes end.*

#### STEP 5 · DECIDE WHETHER TO STATE IT

A budget committee might not share that warrant, so state it and add backing: the college's own safety policy. **Add a qualifier too: "on lab nights."**

### WORKED CASE 2 · TURNING A FAKE CONCESSION INTO A REAL REFUTATION

Draft: "Some people say open-book exams make students lazy, but that is not true. Students still study. Therefore all exams should be open-book."

#### STEP 1 · NAME THE REAL OBJECTION

The strongest objection is not laziness; it is that some jobs require recall without time to look anything up.

#### STEP 2 · CONCEDE HONESTLY

"That objection is correct for skills that must be performed under time pressure."

#### STEP 3 · CHOOSE THE DEPTH

The evidence is fine, so refute the **scope** of the conclusion drawn from it: it argues against open-book exams for timed skills, not for every exam.

#### STEP 4 · NARROW THE CLAIM

"Open-book exams suit analysis and application; recall checks should stay closed-book."

#### STEP 5 · CHECK WHAT CHANGED

A named objection replaced "some people," the concession is real, and "therefore" is gone. **The narrower claim is harder to knock over.**

### WORKED CASE 3 · NAMING AND REPAIRING THREE FALLACIES

(a) "Ridership rose after the new bus app launched, so the app caused it." (b) "Either we raise parking fees or we cut the shuttle." (c) "We can ignore her budget plan; she has never run a business."

#### STEP 1 · SENTENCE (A)

**Post hoc**: sequence is not cause. Repair: "Ridership rose after the app launched, but fares were also cut that month; we cannot yet separate the two."

#### STEP 2 · SENTENCE (B)

**False dilemma**: two options presented as the only ones. Repair: name a third, such as off-peak parking pricing.

#### STEP 3 · SENTENCE (C)

**Ad hominem**: attacks the person. Repair: address a specific number in the plan.

#### STEP 4 · CHECK CONTEXT

If (a) had a comparison route without the app and ruled out fare changes, it would be a fair causal argument.

#### STEP 5 · THE LESSON

Labels diagnose; repairs persuade. **Calling "post hoc!" proves nothing about whether the app worked.**

### TRAPS PEOPLE FALL INTO

- **Letting the statistic argue for itself.** Write the reason that says what the number is doing there.
- **Choosing an unarguable thesis to be safe.** If nobody disagrees, there is nothing to write.
- **Adding a third statistic when readers ask "so what?"** They are asking for the warrant.
- **Assuming your audience shares your warrant.** A finance committee may weigh efficiency, not dignity. Supply backing.
- **Faking a concession.** State the objection at its strongest, then answer that version.
- **Thinking any slope or authority is a fallacy.** Supported links and qualified experts are legitimate.
- **Treating a fallacy label as a win.** A flawed argument does not make its conclusion false.
- **Hiding objections you cannot answer.** Narrow the claim instead.

## Chapter 7 self-test · ten items

### 1. What is missing from most beginning writers' arguments, according to the chapter?

A. A strong and memorable hook in the opening line
B. Enough statistics to fill out every paragraph
C. The reason linking the claim to the evidence
D. A summary of the topic before the thesis

**C. The reason linking the claim to the evidence** Writers drop in a number after the thesis and move on. The reason says what the number is doing there.

### 2. "Staffing ratios should be capped because understaffing is bad." The because test shows the reason is:

A. Strong and checkable by readers
B. Circular, restating the claim
C. A factual claim to look up
D. A preference that cannot be judged

**B. Circular, restating the claim** "Understaffing is bad" restates the claim in gloomier words.

### 3. In Toulmin's model, what is backing?

A. The data offered for the claim
B. A limit on how strong the claim is
C. The condition where the claim fails
D. Support for the warrant itself

**D. Support for the warrant itself** Backing is needed when the audience does not already accept the warrant.

### 4. When does Rogerian arrangement work better than classical arrangement?

A. When the paper must be under one page long
B. When the reader already agrees with you
C. When the audience already distrusts you
D. When the evidence is entirely statistical

**C. When the audience already distrusts you** Restating their position fairly first buys the goodwill a hostile reader needs to keep reading.

### 5. "Even accepting those numbers, the conclusion follows only if we assume X." This refutes the:

A. Evidence
B. Relevance
C. Qualifier
D. Warrant

**D. Warrant** The evidence is granted; the inference is challenged. That is usually the strongest refutation.

### 6. "Advocates of open-book exams think students should never learn anything." Which fallacy?

A. Straw man
B. Red herring
C. Tu quoque
D. Equivocation

**A. Straw man** It refutes a distorted position. A steel man would state the real argument about recall under time pressure.

### 7. "This remedy is natural, and what is natural is safe." Which fallacy shifts the meaning of a key term?

A. False analogy
B. Loaded question
C. Genetic fallacy
D. Equivocation

**D. Equivocation** "Natural" as plant-derived and "natural" as harmless are different claims.

### 8. A peer says your argument is a slippery slope. Has it been refuted?

A. Yes; any slope argument is automatically invalid now
B. No; it is refuted only if a specific link lacks support
C. Yes; naming the fallacy is always enough to refute it
D. No; slippery slopes are always acceptable

**B. No; it is refuted only if a specific link lacks support** A chain with evidence for each step is a legitimate causal argument. Labels diagnose; they do not refute.

### 9. Concluding a claim is false because one argument for it is flawed is called:

A. The fallacy fallacy
B. Begging the question
C. Moving the goalposts
D. The genetic fallacy

**A. The fallacy fallacy** A conclusion can be true even when a particular argument for it is bad.

**10. During your objection audit you find an objection you cannot answer. What should you do?**

A. Leave it out and hope the reader misses it
B. Call it a straw man and move to the next point
C. Narrow the claim to what the evidence covers
D. Add several more statistics to outweigh it

---

**C. Narrow the claim to what the evidence covers** Unanswerable objections become qualifiers. An honestly limited claim survives review.

CHAPTER 8

# Research: Finding and Evaluating Sources

Read it in full: **Chapter 8 in the textbook**. Practice it in the lab: **The Search String Workbench** and **The Ninety-Second Lateral Read**.

## What to know

Research is a loop: ask, search, read, revise the question, search again. It is supposed to change what you think. A topic is a place; a **research question** is a destination. A good one is **answerable** with evidence you can reach, **arguable** (informed people could answer differently, which is not the same as controversial) and **bounded** (who, where, when, what about it). Answerable but not arguable gives a summary; arguable but not bounded gives a survey of everything.

Narrow with four levers: **population**, **setting**, **period** and **angle** (cause, effect, comparison, evaluation, definition). Comparison is the single most useful angle. Before searching, check that the question fits in one sentence with a verb like does, how, why or to what extent; that someone could answer it differently; that you can picture the evidence that would settle it; that it fits the length; and that you are willing to be wrong. Write the question in pencil and revise it after the first five sources.

Sort sources in ten seconds. **Scholarly**: structured abstract, affiliated authors, discipline vocabulary, long reference list, DOI, no ads. **Popular**: byline without credentials, links instead of citations, no reference list. **Trade**: practitioners writing for practitioners, light on citations, strong on current practice. The reference list is the tell. Peer review is a filter, not a guarantee of truth; flawed papers pass review and some are retracted.

A **primary** source is direct evidence from a participant or original investigator; **secondary** interprets it; **tertiary** compiles the secondary literature. The labels move by discipline: in literature the novel is primary; in history a 1943 ration book or a newspaper printed that year is primary; in health sciences the original study is primary and a review is secondary. Librarians disagree about where systematic reviews belong. The constant question: how many hands has this evidence passed through? **Gray literature** (dissertations, agency reports, guidelines, preprints) is often newest and most specific but lacks a consistent filter. Label a **preprint** as not yet peer reviewed in your prose.

Databases match strings, not sentences. Build a **keyword grid**: two to four core concepts, every synonym for each. Join synonyms with **OR** and concepts with **AND**; **NOT** is risky because it drops papers that merely mention the word. Quotation marks lock a phrase; quote phrases, never whole questions. An asterisk truncates (nurs* finds nurse, nurses, nursing), but cutting too early (cat*) drags in cathedral. Parentheses group OR sets. Apply filters last. **Controlled vocabulary** such as MeSH in PubMed retrieves every indexed article on a subject whatever words the authors used, but it lags new terms, so combine headings and free-text keywords.

**Citation chaining** uses one strong source as a doorway: **backward** through its reference list, **forward** through everything that cites it ("Cited by" in Google Scholar, times-cited in Scopus or Web of Science). Forward chaining is essential when your best source is several years old. If your first search returns exactly what you hoped, run one using the opposing side's vocabulary.

Stanford researchers found professional fact-checkers judged unfamiliar sites faster and more accurately than students or historians because they left the page and read what others said about it: **lateral reading**, versus grading a page's design (vertical reading). The four **SIFT** moves: **Stop**, **Investigate the source**, **Find better coverage**, **Trace claims to the original**. For scholarly sources, interrogate authority, purpose (read the funding and conflict-of-interest statement),

evidence, currency and convergence. Checklists like **CRAAP** work on scholarly sources but a well-funded disinformation site can pass every item, so use lateral reading on the open web.

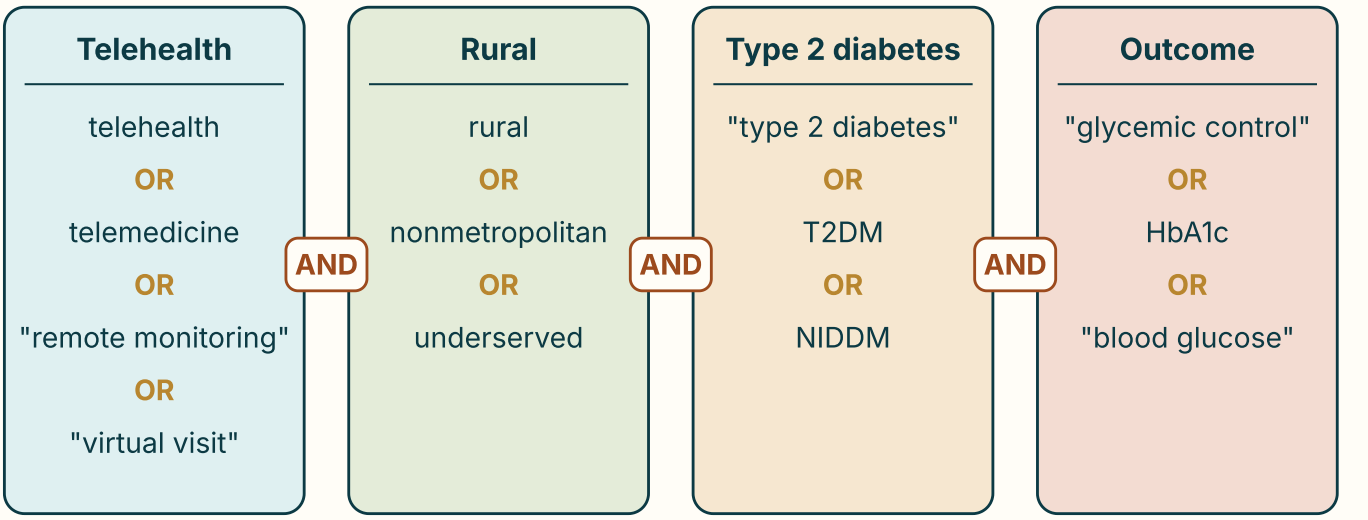
**Predatory journals** take a fee with little or no review. Signs: flattering spam, fees revealed after acceptance, review promised in seventy-two hours, a scope spanning unrelated fields, a title one word off a known journal, and no indexing in PubMed, Scopus, Web of Science or the DOAJ. Content farms and machine-generated pages have no findable author and citations that do not resolve. Language models can fabricate plausible references, so **never cite a source you have not personally opened**. Credibility is a relationship between a source and a claim: a manufacturer's site is poor evidence that a drug works and good evidence of which forms it sells. Ask "recent enough for what?"

Capture what you find. A **research log** records date, database, exact search string, filters, result count, what you kept and what to change. Label notes **Q** (exact quotation with page), **P** (paraphrase in your own structure, with page) or **M** (your own thinking). **Patchwriting**, swapping synonyms into a source's sentence structure, is still plagiarism with a citation. An **annotated bibliography** entry (about 100 to 150 words) summarizes, evaluates and relates the source to your question. A **synthesis matrix** puts sources in rows and sub-questions in columns; reading down a column gives a paragraph organized by idea. Stop at saturation, when you can predict the next article, or when the budget runs out. Draft, then search again for the thin claims.

LOCK THESE IN

- A research question is answerable, arguable and bounded.
- Four levers: population, setting, period, angle. Comparison is the most useful angle.
- Scholarly, trade, popular: the reference list is the tell. Peer review is a filter, not a guarantee.
- Primary, secondary, tertiary: ask how many hands the evidence passed through.
- OR joins synonyms; AND joins concepts; quote phrases; truncate with care.
- Chain backward (references) and forward (cited by).
- SIFT: Stop, Investigate the source, Find better coverage, Trace claims to the original.
- Never cite a source you have not opened. Notes: Q, P, M.

## One column per concept; OR inside a column, AND between columns




**Finished search string**

(telehealth OR telemedicine OR "remote monitoring") AND
(rural OR underserved) AND ("type 2 diabetes" OR T2DM)
AND (HbA1c OR "glycemic control")

**Search in concepts, not sentences.** Synonyms inside a concept are joined by OR, concepts are joined by AND, and quotation marks lock a phrase.

## Search moves

| Move | What it does | Example |
|---|---|---|
| **AND** | Requires both; joins different concepts | telehealth AND rural |
| **OR** | Accepts either; joins synonyms | telehealth OR telemedicine |
| **NOT** | Excludes a term (risky) | diabetes NOT gestational |
| **Quotation marks** | Locks an exact phrase | "type 2 diabetes" |
| **Asterisk** | Matches every ending on a stem | nurs* = nurse, nurses, nursing |
| **Parentheses** | Groups OR sets so logic runs in order | (telehealth OR telemedicine) AND rural |
| **Controlled vocabulary** | Indexer-assigned subject terms | MeSH "Myocardial Infarction" |
| **Filters** | Date, peer review, language, type | Apply last |

## Matching source to stakes

| Kind of claim | Adequate source | Not adequate |
|---|---|---|
| **Undisputed background fact** | A reference work or textbook | An unsourced listicle |
| **A specific statistic** | The agency or study that produced it | A news story quoting a press release |
| **A causal claim** | A systematic review or well-designed trial, with limits stated | One small uncontrolled study |
| **A technical term** | A disciplinary dictionary or standard-setting body | The first search snippet |
| **What a scholar argued** | That scholar's own text | A summary of a summary |
| **A developing event** | The primary document plus two independent outlets | A single outlet or an unlinked post |

## Worked cases

### WORKED CASE 1 · NARROWING A TOPIC WITH THE FOUR LEVERS

Topic: "online learning." Narrow it into a research question.

#### STEP 1 · ANGLE

Effect, with a comparison: does an online format change course completion compared with in-person sections?

#### STEP 2 · POPULATION

First-semester students at community colleges.

#### STEP 3 · SETTING

Gateway math courses.

#### STEP 4 · PERIOD

Studies published since 2018.

#### STEP 5 · ASSEMBLE AND TEST

"Do fully online gateway math sections have lower completion rates than in-person sections for first-semester community college students, in studies since 2018?" **It names who, where, when and a comparison, and informed people could answer it differently.**

### WORKED CASE 2 · BUILDING A BOOLEAN SEARCH FROM A KEYWORD GRID

Question: "Does later school start time improve attendance among high school students?"

#### STEP 1 · PULL THE CONCEPTS

Start time; high school students; attendance.

#### STEP 2 · LIST SYNONYMS

Start time: "school start time", "later start", "delayed start". Students: adolescen*, teen*, "high school". Outcome: attendance, absenteeism, tardiness.

#### STEP 3 · OR INSIDE, AND BETWEEN

("school start time" OR "later start" OR "delayed start") AND (adolescen* OR teen* OR "high school") AND (attendance OR absenteeism OR tardiness)

#### STEP 4 · CHECK THE TRUNCATION

adolescen* catches adolescent, adolescents and adolescence. teen* also catches teenager. Neither drags in unrelated words.

#### STEP 5 · ADD THE OPPOSING SEARCH

Run it again with "no significant difference" so the database is not just agreeing with your phrasing. **Apply date and peer-review filters last.**

### WORKED CASE 3 · A NINETY-SECOND LATERAL READ

A slick page says a study app "boosts exam scores by 38 percent." Run SIFT.

#### STEP 1 · STOP

You do not know this site, and one precise number is doing all the persuading.

#### STEP 2 · INVESTIGATE THE SOURCE

Search the site's name plus "funding" in a new tab, not its About page. It is run by the app's maker.

#### STEP 3 · FIND BETTER COVERAGE

No independent outlet or research database reports the finding.

#### STEP 4 · TRACE THE CLAIM

The page links a press release, which names a small pilot with no comparison group, funded by the maker.

#### STEP 5 · DECIDE ADEQUACY

Good evidence of what the company claims; poor evidence that the app works. **You did not need to read the page closely; you needed to leave it.**

### TRAPS PEOPLE FALL INTO

- **Searching a topic instead of a question.** Without a question you cannot tell which sources belong.
- **Confusing arguable with controversial.** You need evidence that pulls more than one way, not a culture-war topic.
- **Typing the whole question into the database.** Databases match strings. Search in concepts.
- **Overusing NOT.** It also drops papers that merely mention the word.
- **Equating peer reviewed with true.** Review is a filter. Flawed papers pass and are later retracted.
- **Judging a site by its look or .org domain.** Those are purchasable. Read laterally.
- **Citing a source you never opened.** Fabricated references look real. If you cannot retrieve it, leave it out.
- **Organizing notes by source.** That produces "Smith says, then Jones says." Use a synthesis matrix.

## Chapter 8 self-test · ten items

### 1. Which research question is bounded, arguable and answerable?

A. Is nurse burnout bad for the many people who experience it?
B. How does social media affect all of society in the modern world?
C. Do 12-hour shifts add more to med-surg burnout than ratios do?
D. Should college be free for every single American student?

**C. Do 12-hour shifts add more to med-surg burnout than ratios do?** It names a population and a comparison that informed people could answer differently.

### 2. Which of these is NOT one of the four narrowing levers?

A. Population
B. Setting
C. Period
D. Publisher

**D. Publisher** The levers are population, setting, period and angle.

### 3. What is the quickest tell that a source is scholarly?

A. A long reference list at the end
B. A polished design with many photos
C. A short byline and a catchy title
D. A newsletter signup at the bottom

**A. A long reference list at the end** Scholarly sources carry references, an abstract and usually a DOI; popular ones link instead of cite.

### 4. A 1972 wire story breaking news of a public health scandal is, for a paper on how the story was reported:

A. A tertiary source
B. An outdated source
C. A secondary source
D. A primary source

**D. A primary source** For a claim about framing at the time, the original report is the primary evidence.

### 5. Which search joins synonyms and concepts correctly?

A. (telehealth AND telemedicine) OR rural
B. telehealth NOT telemedicine AND rural
C. (telehealth OR telemedicine) AND rural
D. "telehealth telemedicine rural areas"

**C. (telehealth OR telemedicine) AND rural** OR joins synonyms within a concept; AND joins different concepts.

### 6. Why use controlled vocabulary such as MeSH?

A. It searches only articles from the current year
B. It finds articles whatever words authors used
C. It removes every non-scholarly source for you
D. It replaces the need to read the abstracts

**B. It finds articles whatever words authors used** A subject heading retrieves every indexed article on the topic, though new terms may not be indexed yet.

### 7. Your best source is from 2017. Which move shows whether later work confirmed or overturned it?

A. Backward citation chaining
B. Truncating the main keyword
C. Forward citation chaining
D. Adding a NOT operator

**C. Forward citation chaining** Forward chaining finds everything published since that cites it.

### 8. What did fact-checkers do differently in the Stanford comparison?

A. Read every page slowly from the top to the bottom
B. Left the page to see what others said about it
C. Checked whether the web domain ended in .org
D. Judged the page by its design and tone

**B. Left the page to see what others said about it** Lateral reading is faster and harder to fool than grading the page itself.

### 9. Which is a warning sign of a predatory journal?

A. Peer review promised within seventy-two hours
B. Indexing in both PubMed and in Web of Science
C. A clear conflict-of-interest statement
D. A long reference list and a working DOI number

**A. Peer review promised within seventy-two hours** Others include fees revealed after acceptance and a scope spanning unrelated fields.

**10. A student swaps a few words in a source sentence but keeps its structure, then cites it. This is:**

A. Patchwriting, still plagiarism
B. An acceptable and fair paraphrase
C. A properly labeled Q note
D. Fine because it is properly cited

---

**A. Patchwriting, still plagiarism** A citation does not license borrowed structure. Quote it exactly or rebuild it from your understanding.

ONE PAGE

# Cram sheet

Everything from chapters 7 and 8 in one place. Cover the right column and see if you can rebuild each row.

## Argument parts and moves

| Item | The list | Note |
|---|---|---|
| **Smallest unit** | Claim, reason, evidence | The reason is the usual gap |
| **Toulmin (1958)** | Claim, grounds, warrant, backing, qualifier, rebuttal | Warrants hide as common sense |
| **Classical order** | Exordium, narratio, partitio, confirmatio, refutatio, peroratio | Thesis early, objection near the end |
| **Rogerian order** | Restate their view, where it makes sense, your view as extension | For readers who distrust you |
| **Refute at** | Evidence, warrant, relevance | Warrant is strongest, least used |
| **Objection audit** | Evidence, warrant, scope, cost | Unanswerable = qualify |
| **Evidence check** | Who, how many, when | Missing one = filler |

## Fallacy families

| Family | Members |
|---|---|
| **Relevance and pressure** | Ad hominem, straw man, appeal to popularity, misused authority, red herring, appeal to fear, tu quoque, genetic fallacy |
| **Evidence and framing** | Hasty generalization, post hoc, slippery slope, false analogy, false dilemma, begging the question, equivocation, loaded question, no true Scotsman, moving the goalposts |
| **About fallacies** | Labels depend on context; the fallacy fallacy; steel man instead of straw man |

## Research lists

| Item | The list | Note |
|---|---|---|
| **Good question** | Answerable, arguable, bounded | Arguable is not controversial |
| **Narrowing levers** | Population, setting, period, angle | Add a comparison |
| **Source tiers** | Primary, secondary, tertiary | Labels shift by discipline |
| **Source kinds** | Scholarly, trade, popular, gray literature | Label preprints |
| **SIFT** | Stop, Investigate, Find better coverage, Trace | Leave the page |
| **Scholarly check** | Authority, purpose, evidence, currency, convergence | Read the funding statement |
| **Notes** | Q quotation, P paraphrase, M me | Prevents patchwriting |
| **Annotation** | Summarize, evaluate, relate | About 100 to 150 words |
| **Stop searching** | Saturation, predictability, you can answer aloud, budget gone | Then draft and search the gaps |

## Rules that are not formulas

| Topic | The rule |
|---|---|
| **Because test** | Obvious = weak; restatement = circular; deniable = real. |
| **"So what?" in the margin** | Supply the warrant, not another statistic. |
| **Some people say** | Name who holds the view or drop the move. |
| **Boolean** | OR inside concepts, AND between; quote phrases, never whole questions. |
| **Credibility** | A relationship between a source and a claim. |
| **Currency** | Ask "recent enough for what?" |
| **Citations** | Never cite what you have not opened. |

Dr. Garg Learning · CC BY-SA 4.0