

¶s & sentences

Practice: Scientific Methods and Writing

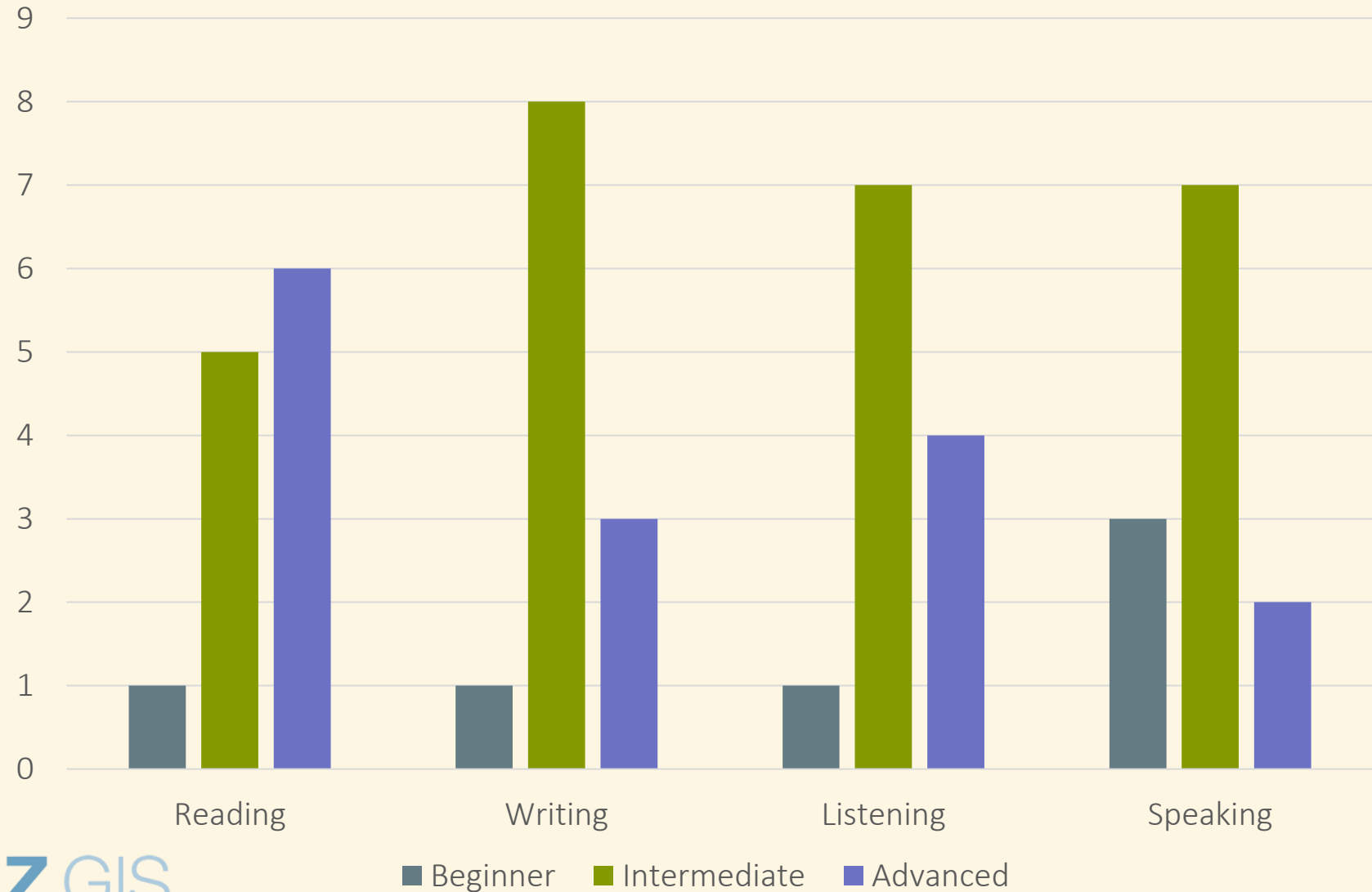


survey results

4 partial and 13 full responses

Thank you for participating!

English language skills



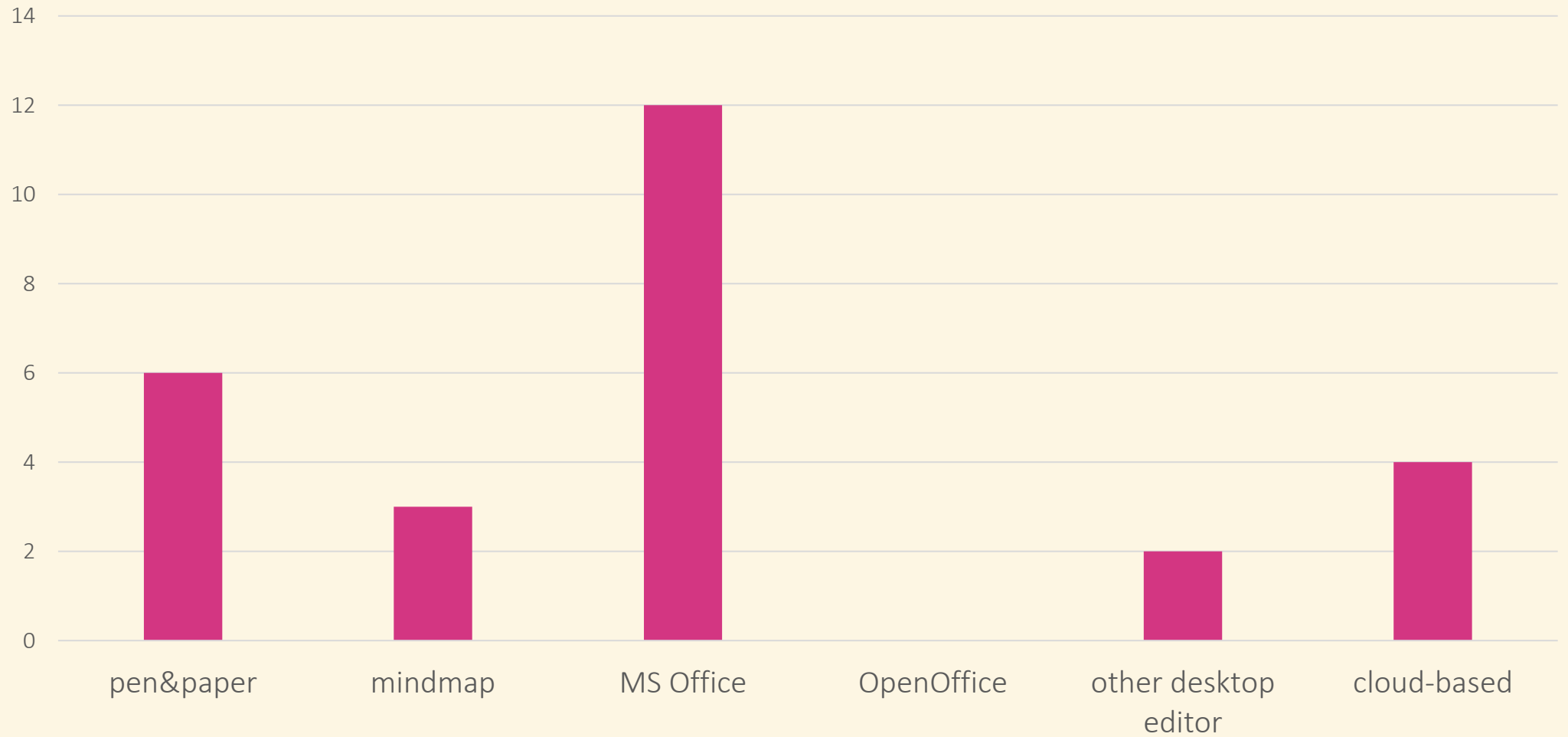
Have you ever written...

- _ Public blog, newsletter or similar
 - _ 3 yes
- _ Press related stuff
 - _ 2 yes
- _ Academic paper
 - _ 10 yes
 - _ but only 7 longer than 10 pages
- _ Thesis or dissertation
 - _ 12 yes

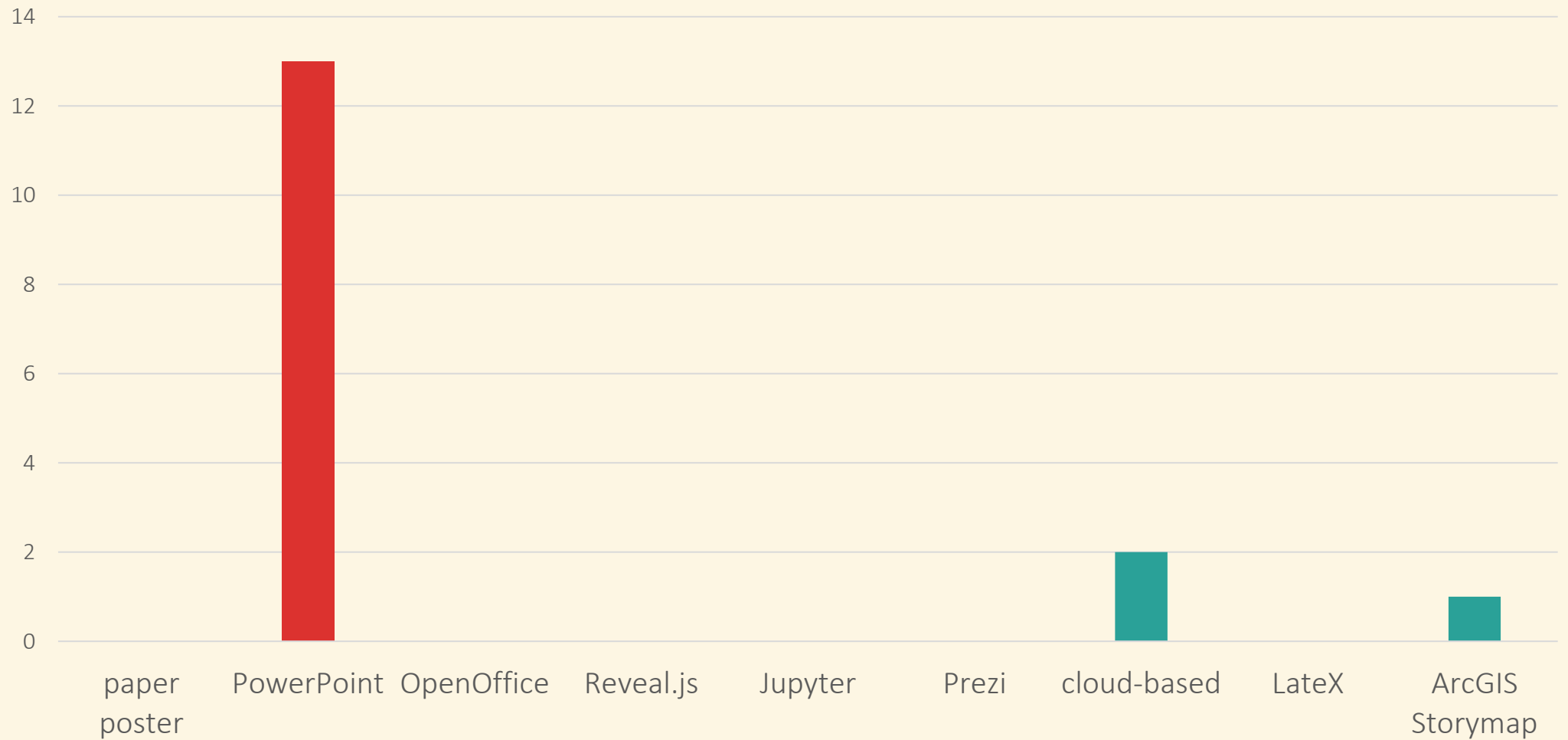
other experiences:

- _ ca. half are familiar with different citation styles, and have used a citation manager
- _ 4 people have reviewed an academic paper before
- _ 4 people have submitted something to an event, 6 have attended an academic conference before but only 2 have presented research there
- _ 3 (+1 uncertain) have moderated or facilitated a discussion or workshop, but none with more than 5 participants to facilitate
- _ Summary: focus on citation managers and review process

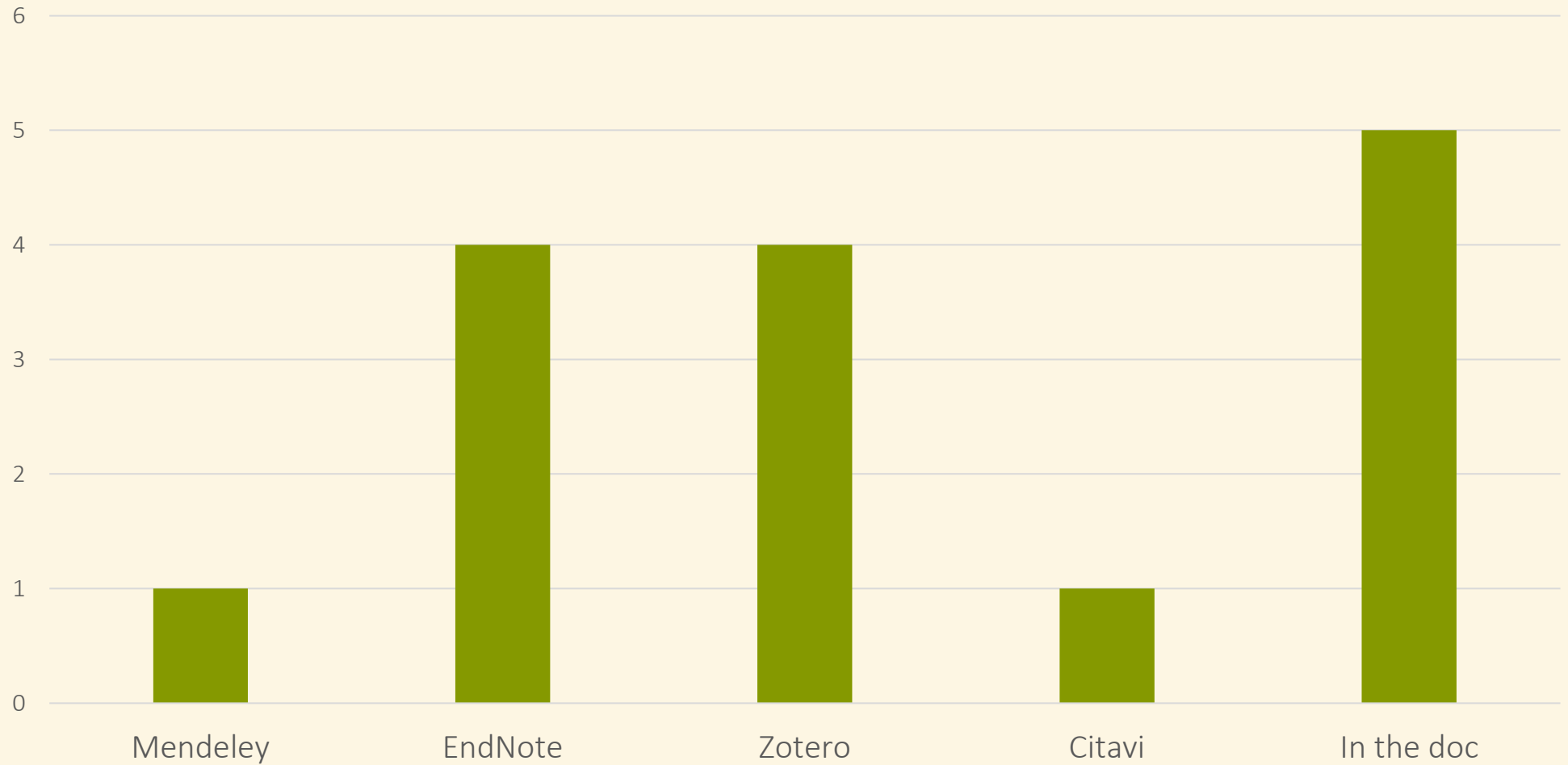
writing tools



presentation tools



citation manager



reading strategies

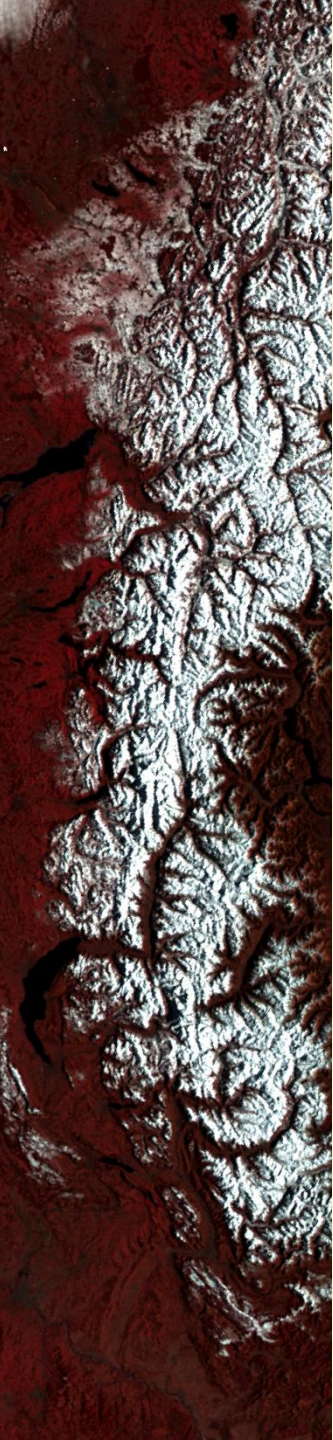
- _ 5 No, 4 unsure; 4 yes; 4 comments
- _ PQ4R: Preview, Question, Read, Reflect, Recite, and Review
- _ AI tools to clarify structure
- _ Read only specific things
 - _ Read abstract and conclusion first (maybe also the discussion)
 - _ Maybe read the introduction and discussion
 - _ Only then decide whether to read the rest of the paper...
 - _ Read summary/abstract and headings first
 - _ Understand main topics and structure

specific skills

- _ Citation managers and citation rules at PLUS
- _ Vocabulary – this course won't cover this directly, but I can support
- _ Get familiar with existing journals in GI world
- _ "Do's and don'ts" of paper writing
- _ majority would like to improve their **writing skills** (in English)
 - _ entire process from development to publishing

Self-conscious about your English?

- _ TEDx: *2 Billion Voices: How to speak bad English perfectly*
 - _ https://www.ted.com/talks/heather_hansen_2_billion_voices_how_to_speak_bad_english_perfectly
- _ Rough Translation Podcast: *How to speak bad english*
 - _ <https://www.npr.org/2021/04/21/989477444/how-to-speak-bad-english?t=1622104868395>
- _ What does it mean to speak or write „good english“ and who gets to decide?
- _ insights and anecdotes from English speakers from around the world
- _ “non-native” English speakers have been shown to communicate significantly better in English when no “native” speaker is in the room/conversation
- _ „native speakers“ can communicate better by changing how they think about language

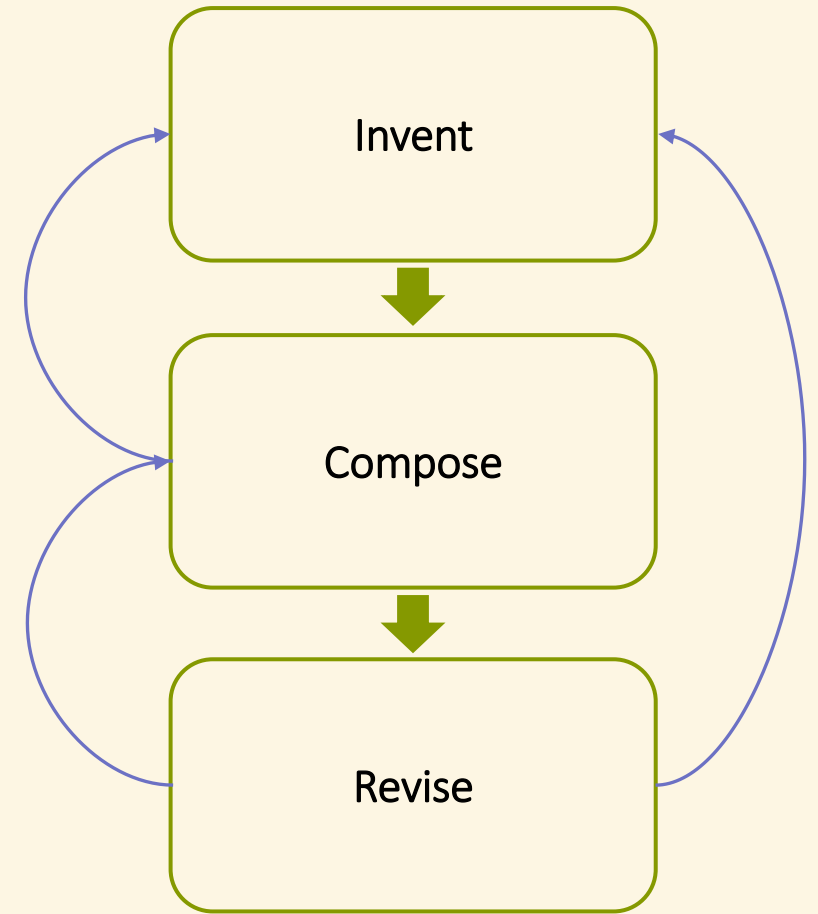


practice, process & misconceptions

writing is a practice and a process

- _ Knowledge is renewable, not finite, generated through the process of writing itself.
- _ Ideas take time!
- _ Writing is not an end-product, but a process.

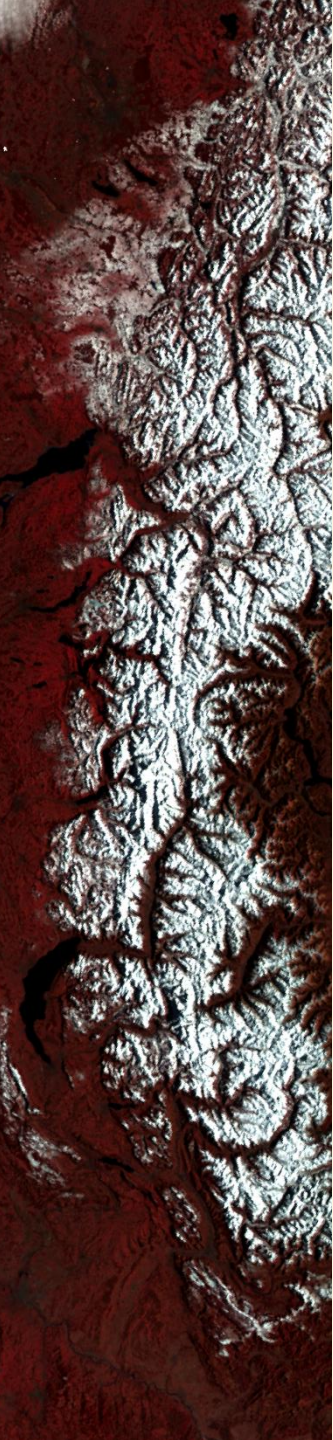
- _ *Writing is a process: introduction to graduate writing series:* <https://youtu.be/D6sn8FaaPWk>



(Purdue OWL 2021)

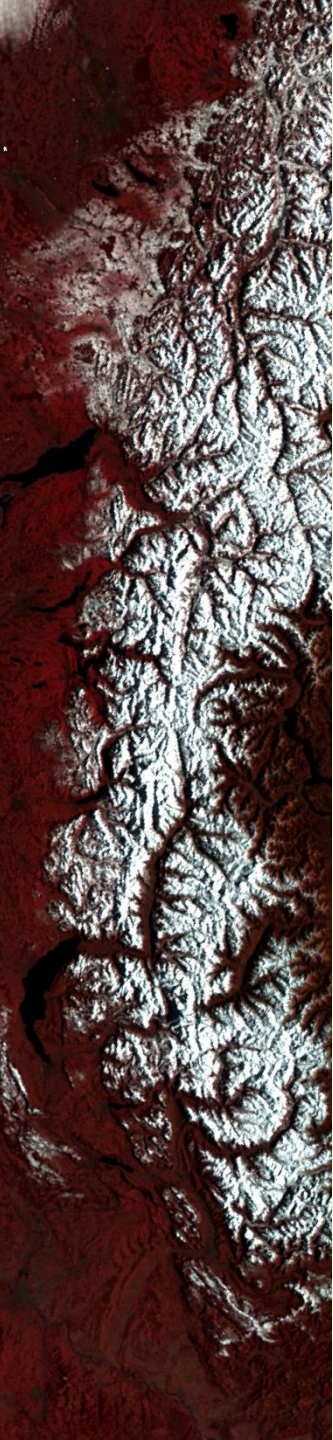
writing ≠ speaking

- _ **spoken** conversation is mostly utterances, and **incomplete**
 - _ our brains evolved to understand spoken language, not written language
- _ **written** language is mostly **complete sentences**
 - _ complex sentences can quickly overwhelm a reader's working memory capacity
 - _ a badly constructed sentence requires a reader to go over it more than once!
- _ presenting is also different – monologuing is a strange thing!



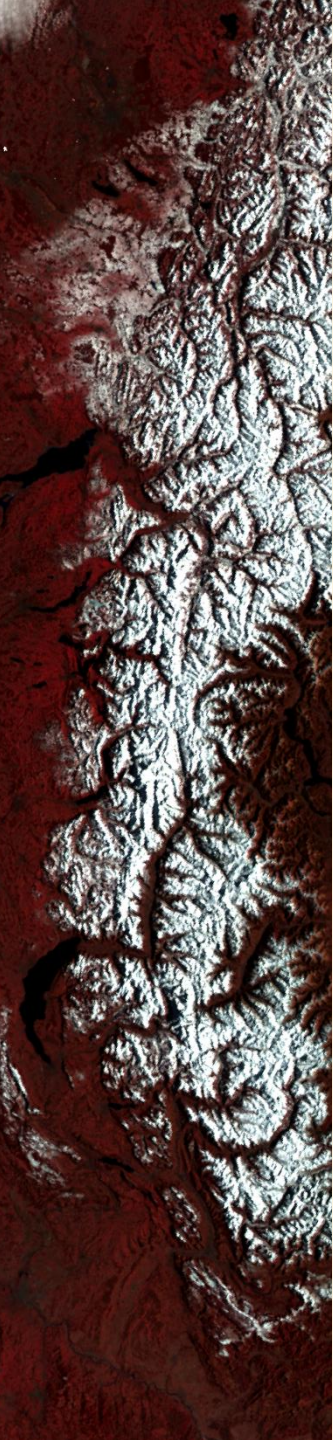
1: „I can't write because I only have twenty minutes.“

- _ develop a practice of **writing little and often**
 - _ having a huge chunk of time to write is actually a luxury!
- _ regular work also helps you remember where you left off
- _ many people put off writing until close to a deadline
 - _ „that's the kind of intense, creative genius I am!“
- _ try to shift your mind-set to writing similar to how you would tackle saving a large amount of money, or walking a long distance
- _ Tip: build in 10-20 minute sessions plus any larger blocks of time



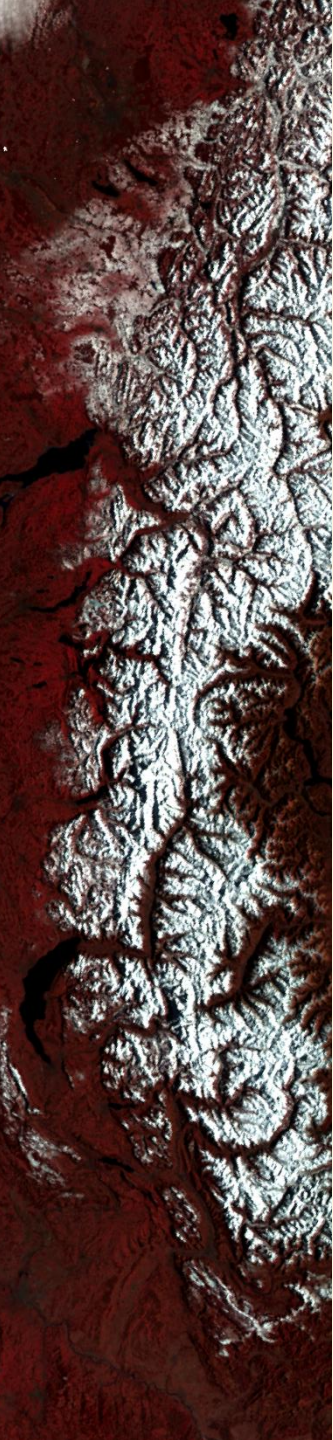
2: „I can't write because I don't feel inspired.“

- _ inspiration is completely outside your control
- _ sometimes writing is easy, and sometimes it is hard
- _ Surprise: forcing yourself to write even when you don't feel like it helps you develop more ideas!



3: „I can't write because I don't know what I'm going to say.“

- _ writing and thinking are not separate
- _ writing allows you to work beyond your limited working memory
- _ writing adds to your cognitive capacity
- _ If you don't know your argument, **start writing to figure it out!**
- _ having ideas is like rolling dice, so try to roll as often as you can and write them down



How do you start writing if you are stuck?

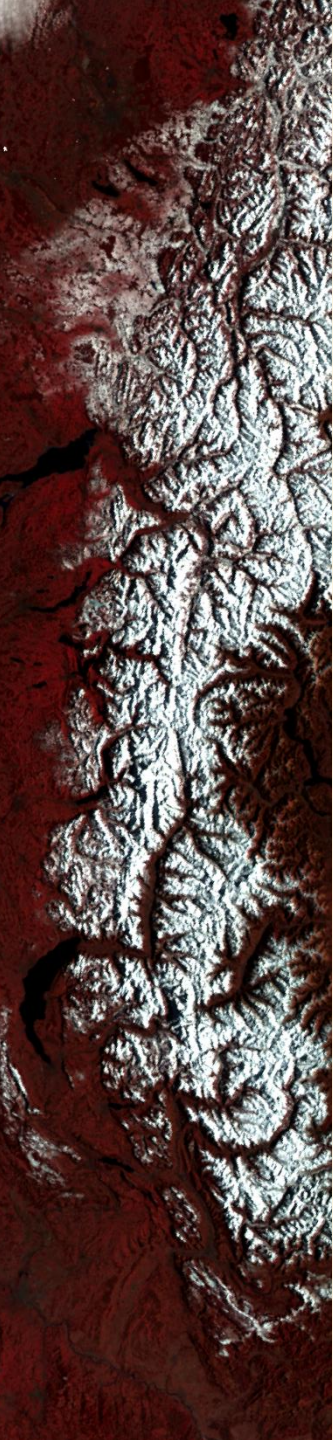
Discuss.

tips to start writing:

- _ lower **quantity**: write just a little
- _ alternate chunks of work with **rewards**
- _ lower **quality**: write something bad
- _ just write something, even if you don't consider it „real writing“
- _ **speak** instead of writing
- _ schedule writing time **together** with others
- _ create your figures/**visualisations** first!



paragraphs (¶s)



What is a (good) paragraph?

Discuss.

What is a paragraph?

- _ collection of related sentences on **one single topic**
 - _ **Foundation of writing!**
- _ signals to a reader that the writer is making a single point
- _ different paragraphs are different ideas or evidence for an argument
- _ **single unit** with one adequately developed idea
- _ Use indentations to visually mark the beginning of a paragraph
- _ many academic writers organise sections, but neglect paragraphs
- _ Readers really notice paragraphs!

elements of a paragraph

- _ **unity**: single focus
 - _ try not to end with another point or different idea (instead create a new ¶)
- _ **coherence**: easily understandable
 - _ logical bridges
 - _ same idea from sentence to sentence
 - _ successive sentences can be constructed in parallel form
 - _ verbal bridges
 - _ key words and/or synonyms repeated in several sentences
 - _ pronouns refer to nouns in previous sentences
 - _ transition words link ideas from different sentences
 - _ check for coherence by only reading the topic sentence and concluding sentence
- _ **topic sentence**: main idea or thesis
- _ **adequate development**: fully discuss the topic!
 - _ be wary of paragraphs that only have 2-3 sentences – too short!

flow through a paragraph

- _ put old information before new
 - _ readers expect old information at the beginning of a sentence
 - _ readers expect new information in the comment position
 - _ old: mentioned earlier in the piece
 - _ new: introduced for the first time
- _ create topic chains or topic-comment **chains**
 - _ both are easy for readers to follow

flow: topics and comments

Topic	Comment
Penguins	form huddles.
Huddles	are formed by penguins.
Prosecutors	hold a lot of power.
A lot of power	is held by prosecutors.
The Lannisters	always pay their debts.
The Lannisters' debts	are always paid.

Examples showing topic/comment structure sentences

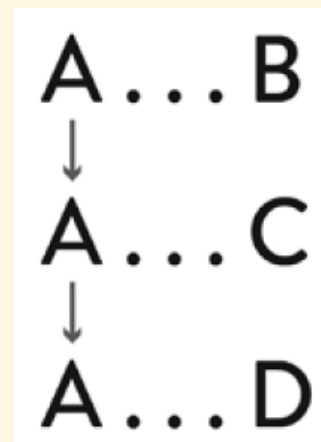
Examples of sentences where the main subject and predicate are both in the comment part of the sentence

Topic	Comment
As for penguins,	they huddle to stay alive.
Speaking of criminal justice reform,	prosecutors have a lot of power.
In <i>Game of Thrones</i> ,	the Lannisters always pay their debts.

flow: topic chains

- _ strong, clear link when all sentences share the same topic
 - _ better when focusing on a single theme or variations on it
 - _ e.g. protestors/organisers

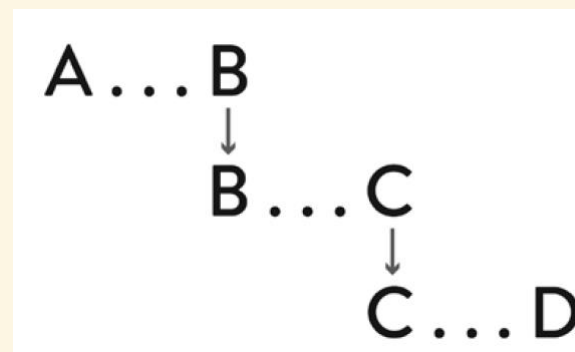
Topic	Comment
Fifty years ago, hundreds of nationalist protesters	gathered on Duke Street in Londonderry.
Their demonstration, organized by the Northern Ireland Civil Rights Association—inspired in part by the civil rights movement in the United States—	had been outlawed when unionist opponents announced plans for a rival march.
The organizers	resolved to protest anyhow, fired by a long-simmering discontent with what was perceived as widespread discrimination.



flow: topic-comment chain

- _ the comment of one sentence becomes the topic of the next
- _ better for series of events or claims that build on each other

	Topic	Comment
1	Starting in the 1990s, many U.S. states (A)	passed laws (B) mandating minimum sentences.
2	These laws (B)	inadvertently shifted power from judges to prosecutors (C) .
3	Now, in many cases when prosecutors (C) decide what charges to bring, they	effectively decide sentences (D) .



- _ *you can also, obviously, mix the two chains*

clarity

_ referencing already mentioned things

- _ to refer to a **different** thing, use a different word
 - _ avoid general terms like „people“ for different, more specific terms
- _ to refer to the **same** thing, use the same word
 - _ this mainly refers to nouns
 - _ do, however, use variety in adjectives and verbs

_ beware of this, **that**, and **they**

- _ ensure that it is very clear what ~~they~~ the pronoun refers to
- _ replace with a noun to **remove ambiguity**

_ complete **comparatives**

- _ e.g. higher, lower, better, worse → compared to what?
- _ e.g. advantages and disadvantages → compared to what?

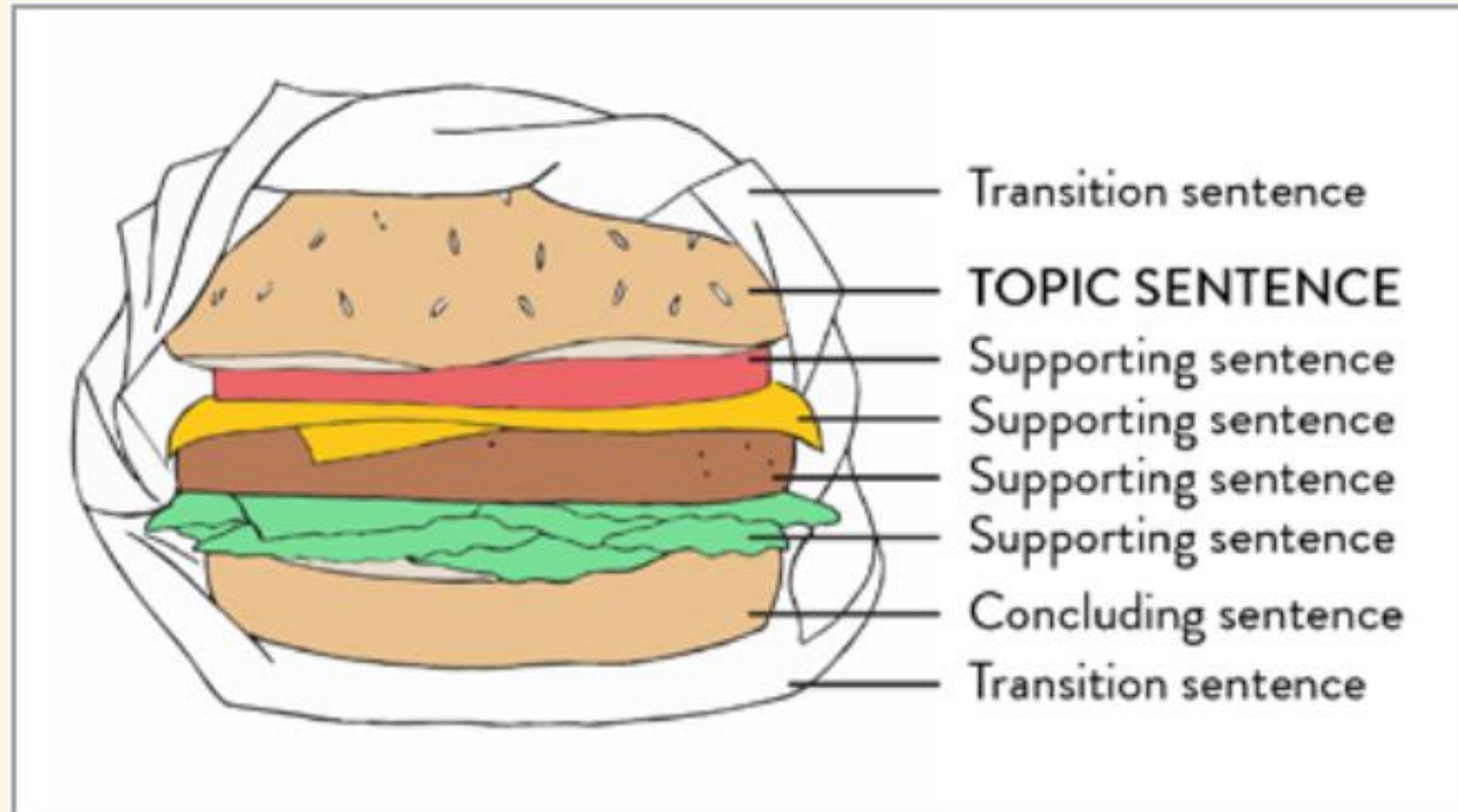
make sure your ¶ is well developed

- _ use **examples** and **illustrations**
- _ **cite** data (facts, statistics, evidence, details, and others)
- _ examine testimony (what other people say such as quotes and paraphrases)
- _ use an anecdote or **story**
- _ **define** terms in the paragraph
- _ compare and contrast
- _ evaluate causes and reasons
- _ examine effects and consequences
- _ analyse the topic
- _ describe the topic
- _ offer a chronology of an event (time segments)

When to start a new ¶?

- _ when you begin to **transition** to a new idea
- _ **if points get long**, break each point into their own paragraph and elaborate
- _ to **contrast** information or ideas
 - _ Use a paragraph for each argument rather than piling them into one
- _ when your readers may need a **pause**
 - _ Usually if the paragraph is too long, or material too complex
 - _ This makes your writing more readable
- _ when ending your **introduction** or starting your **conclusion**
 - _ Both generally require multiple paragraphs, but should be separate.

hamburger ¶s



(Gernsbacher, 2013; Sarnecka, 2021)

5¶ essay

- _ A hamburger of hamburgers!
- _ Contains paragraphs of ca. 5-8 sentences each
- _ **Introductory paragraph**
 - _ context and thesis statement
- _ **Body paragraph 1**
 - _ strongest argument to support the thesis statement
- _ **Body paragraph 2**
 - _ another argument to support the thesis statement
- _ **Body paragraph 3**
 - _ usually the weakest argument of the three and transition to conclusion
- _ **Conclusion paragraph**
 - _ reiterate main supporting points, restate thesis and/or leave the reader with something to think about

introduction ¶

- _ purpose
 - _ introduce the topic
 - _ grab reader's attention (**hook**)
- _ provide background or context
 - _ just enough for a reader to understand the topic
- _ **thesis statement**
 - _ generally the paragraph's last sentence
 - _ presents the paper's purpose
 - _ provides an overview of the main argument(s)
- _ usually doesn't follow a “hamburger” structure

body ¶: 1

- _ begin with a topic sentence
 - _ identifies one main idea that supports the thesis statement
 - _ usually the **strongest argument** of the three
- _ supporting sentences
 - _ specific details that support the argument in the topic sentence
 - _ maintain “paragraph unity” – all ideas should be related to the topic sentence.
- _ If you introduce a **new** idea, it should be in a new paragraph!
- _ *Not important enough to make an entire paragraph? Leave it out!*
 - _ *Tangential information is generally distracting and confusing to readers.*

body ¶: 2

- _ begin with a topic sentence
 - _ identifies one main idea that supports the thesis statement
 - _ new argument or idea compared to the first body paragraph
- _ supporting sentences
 - _ specific details that support the argument in the topic sentence
 - _ maintain “paragraph unity” – all ideas should be related to the topic sentence.
- _ Feel free to build in some transition at the beginning and end.
 - _ can improve flow, but can also be unnecessarily distracting

body ¶: 3

- _ begin with a topic sentence
 - _ identifies one main idea that supports the thesis statement
 - _ usually the **weakest argument** of the three
- _ supporting sentences
 - _ specific details that support the argument in the topic sentence
 - _ maintain “paragraph unity” – all ideas should be related to the topic sentence.
- _ Feel free to build in some transition to the conclusion.
 - _ ...but don't introduce any new ideas!

conclusion ¶

- _ purpose
 - _ revisit overall **thesis**
 - _ restate **main ideas** and explain their **importance**
 - _ leave reader with something to think about
 - _ outline **further research** or work
- _ can rephrase thesis statement with different wording
- _ make it clear why this thesis and argument matters
- _ try not to introduce new or unrelated ideas.
 - _ this is less restrictive in other formats, but still generally holds true!

non-hamburger ¶s

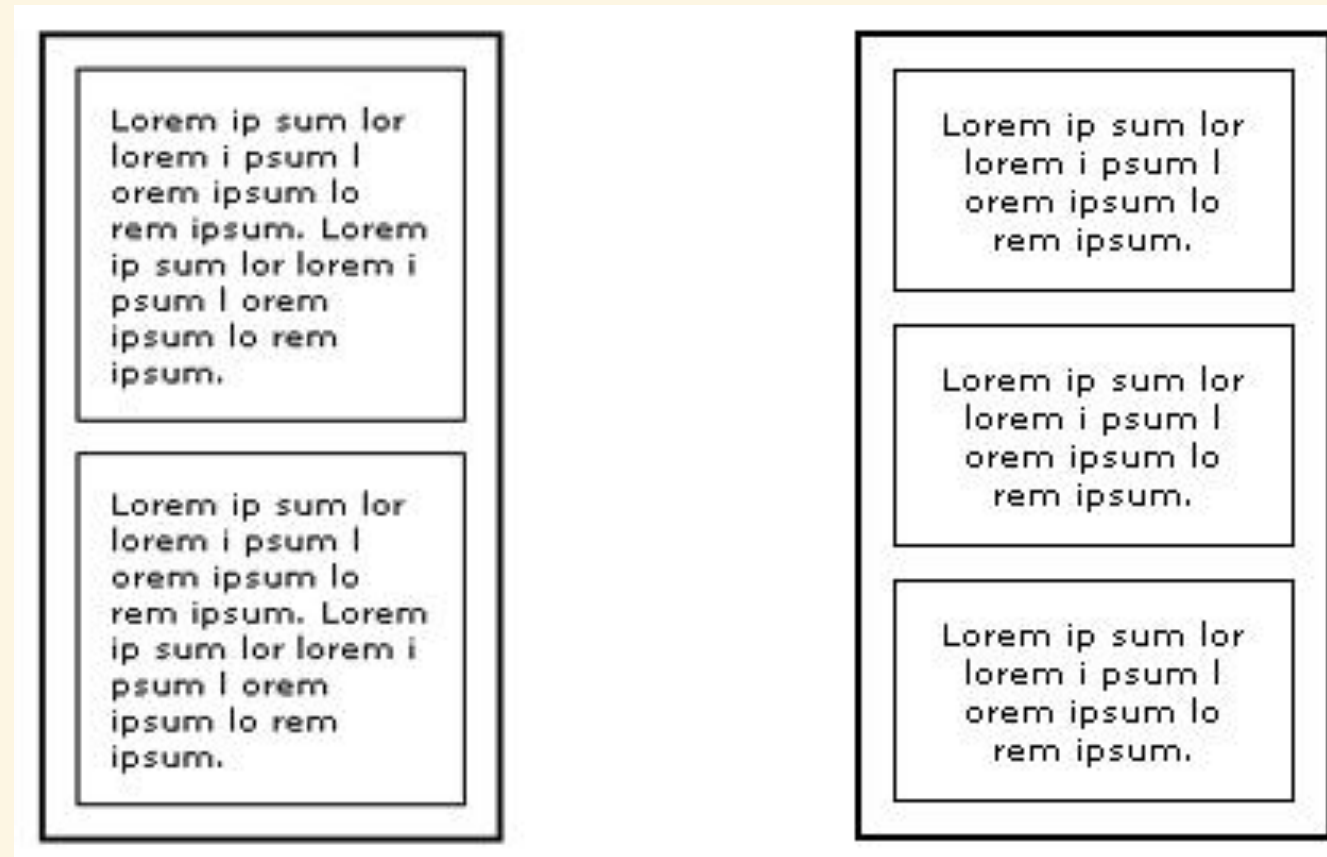
- _ many introductory paragraphs
 - _ first paragraph of a paper or section
- _ transitional paragraphs
 - _ signal shift in topic between one section and the next
 - _ usually draw a connection between two sections
- _ serial paragraph(s)
 - _ function as a series all relating to one topic sentence
 - _ the alternative to one really long paragraph (that is hard for readers)
 - _ use only if you can't figure out a different way to structure the content



¶ length consistency

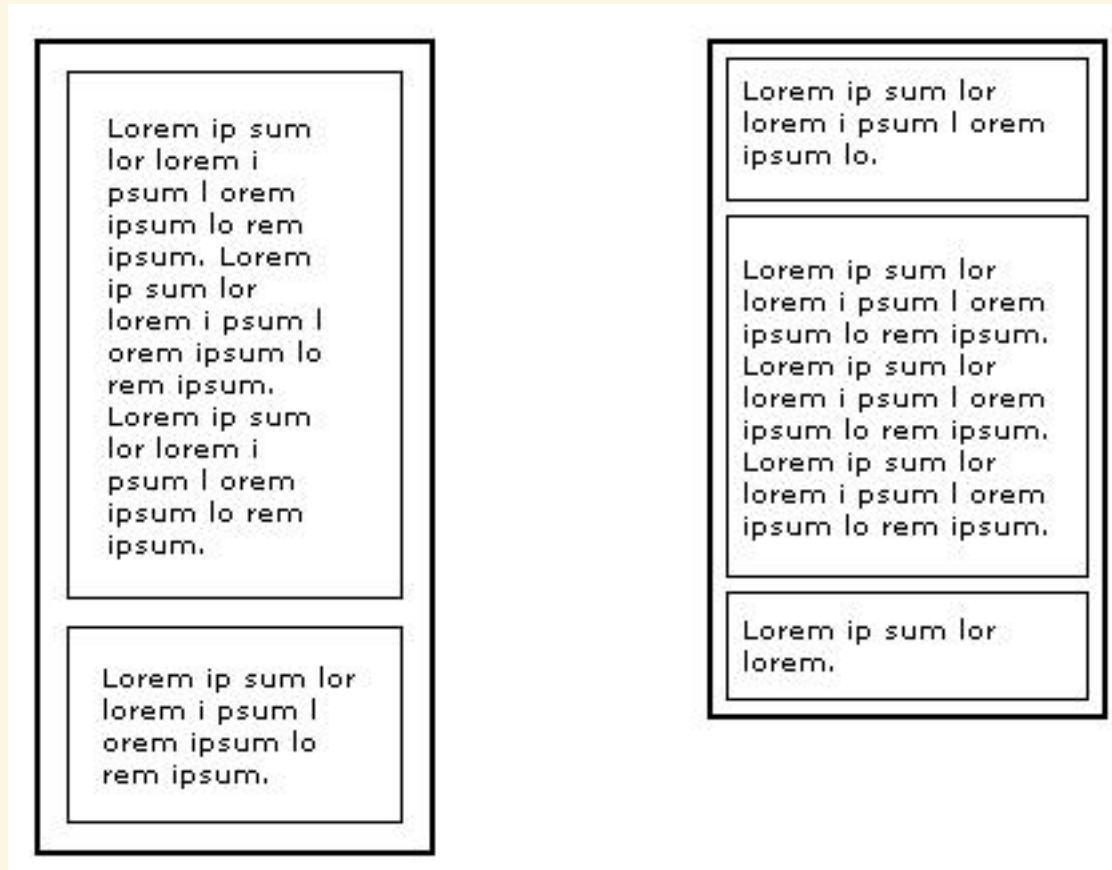
- _ minimum 3-5 complete sentences
- _ ca. 3-4 paragraphs per page
 - _ format or layout matters for readability
- _ length proportional to the paper
 - _ shorter papers require generally shorter paragraphs!
- _ If you have a few very short paragraphs...
 - _ **combine** them into existing paragraphs
 - _ **add** details to support the points to better develop the paragraph
 - _ **remove** if not essential for your argument

¶ length consistency



balanced pages

¶ length consistency

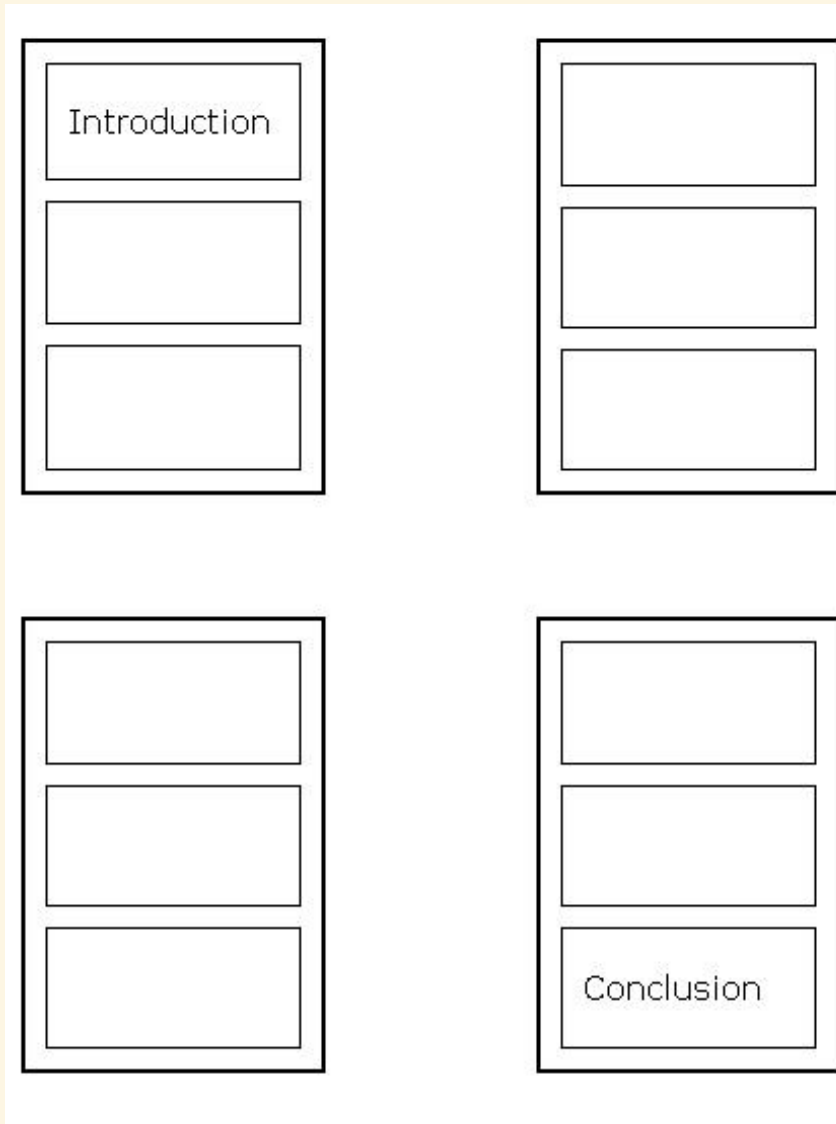


unbalanced pages

¶ length consistency

Layout matters for readability!

Use a simple graphic tool to help with balance and organisation



summary

- _ tight, coherent, consistent paragraphs improve clarity and readability
 - _ aim for ca. 4-8 sentences
- _ most academic writing consists of:
 - _ claims and evidence
 - _ abstract statements with concrete details
 - _ general statements with specific examples
- _ topic sentence paragraphs help...
 - _ readers keep track of the argument
 - _ writers with organising ideas
 - _ with switching back and forth between outlines and drafts
 - _ magic when developing complicated arguments!
- _ hamburger paragraphs are made for this!
- _ use indentation at the beginning



10 minute break

Sentences

What is a (complete) sentence?

(...in English)

- _ bite-sized piece of written language (ca. 14 words)
- _ most language processing happens at the sentence level
- _ must have a subject and a finite verb
 - _ i.e. not only an „-ing“ verb: Hannah reading → Hannah is reading.
 - _ i.e. not only an infinitive: Hannah to read → Hannah reads.
- _ subject and predicate → topics and comments
 - _ topic: the thing being talked about
 - _ comment: what is being said about it
 - _ topic and comment are usually the subject and predicate, but not always

connecting: coordinating conjunctitons

Complete Sentence ,	and	Complete Sentence.
	but	
	for	
	or	
	nor	
	yet	
	so	

connecting: semi-colons

Complete Sentence	;	Complete Sentence.
-------------------	---	--------------------

Complete Sentence	;	conjunctive adverb	,	Complete Sentence.
-------------------	---	--------------------	---	--------------------

- accordingly
- also
- besides
- consequently
- furthermore
- however
- moreover
- nevertheless
- otherwise
- then
- therefore
- thus
- still

readability vs imageability

_ **readability**: ease with which a reader can **understand** a written text

- _ Legibility (e.g. font type or size)
- _ „difficulty“ of word choice
- _ focus on **syntax**: how to construct sentences that are **easy to process**

_ **imageability**: how easily a reader can form a **mental image** of content

- _ often discussed at a word or phrase level
- _ also relevant for sentences
- _ Impacts how we process – concrete words are easier than abstract ones
- _ Humans are a visual species – this is not just what you see, but how you represent and organise information within the brain

readability tip: 1

_ put long structures at the end of a sentence

- _ **end weight principle:**
shorter before longer structures
- _ e.g. if a series, longest element at the end

Longer structures at the end (original, better version) vs. at the beginning (revised to be worse)	
End	For seven years this number has followed me around, has intruded in my most private data, and has assaulted me from the pages of our most public journals.
Beginning	For seven years this number has assaulted me from the pages of our most public journals, has intruded in my most private data, and has followed me around.

readability tip: 2

- _ avoid multiple negations; swap some negatives for **positives** instead
 - _ to interpret a negative statement, the reader must:
 - _ first represent a positive statement
 - _ hold it in memory
 - _ then negate it
 - _ multiple negations overburden a reader's working memory

Misnegation examples
No head injury is too trivial to ignore. (cited by Kai von Fintel, 2004)
It is impossible to underestimate the value of the early diagnosis of breast cancer. ("Scan promises early cancer detection," 2001)
The photograph was prominently displayed and occupied almost the entire right-handed side of page 15. Readers of the newspaper could not fail to miss the article. (Bowcott & Watt, 2017)
Thousands march in Berlin to protest against anti-racism (SCMP News, 2018)

(Sarnecka, 2021)

readability tip: 2

Prefix	Negative	Potential substitute
DE-	deactivate	turn off, close
	decompose	rot, break down
	deconstruct	take apart
	decontaminate	clean, purify
	decrease	shrink
	deform	warp
DIS-	disagree	argue
	disbelieve	doubt
	discontinue	stop
	dishonest	lying
	dishonor	shame
	disinfect	clean, purify
	displease	annoy
	distrustful	suspicious
IL-	illegible	sloppy
	illegitimate	bogus
	illogical	wrong
IM-	immature	childish
	impatient	antsy
	imperfect	flawed
IN-	inaccurate	wrong

Prefix	Negative	Potential substitute
NON-	nonobvious	subtle
	nonresident	outsider
	nonstop	constant
	nontrivial	important
NOT	not allow	prevent
	not careful	rash, negligent
	not different	same
	not dissimilar	similar
	not include	omit
	not many	few
	not notice	overlook
	not often	seldom, rarely
	not stop	continue
	not the same	different
	not unless	only if
	not unlike	like
UN-	unaided	alone
	unafraid	brave
	unanticipated	surprising
	unbelievable	shocking



readability tip: 3

- _ put **subject and main verb** close together near the **beginning**
 - _ a clause requires a subject and a finite verb
 - _ to interpret a clause, the reader must find the main subject and main verb
 - _ giving non-side, non-corner information before the subject and verb means the reader has to hold those pieces in memory while waiting for the subject and verb to arrive → hard to understand

readability tip: 3

	Sentence (All sentences have only one clause.)	Word count	Words before the main verb (in bold)
1	Based on data from animals indicating that the basilar-membrane response to a tone of a given frequency is linear at a place with a characteristic frequency (CF) well above the tone frequency (Yates, 1990; Yates et al., 1990; Ruggero, 1992; Ruggero et al., 1997; Rhode and Recio, 2000), Oxenham and Plack assumed that the response to the 3-kHz masker at the 6-kHz frequency region was linear.	50 (excluding citations)	35
2	According to experts in the field, the need for all 34 cities in Orange County to start building affordable and permanent supportive housing for nearly 7,000 homeless people should be a wake up call.	34	29
3	Relying on anecdotes and false information, with little or no evidence to back up claims of vaccine danger, antivaccine activists have infected an entire generation of parents with fear.	29	21

Sentences that take a long time to get to the main verb (bolded) thus
hard to process

3	Relying on anecdotes and false information, with little or no evidence to back up claims of vaccine danger, antivaccine activists have infected an entire generation of parents with fear.	29	21
4	Extending lifespan, increasing resistance to age-related diseases in rodents and monkeys, and improving the health of overweight humans, intermittent fasting (IF; reduced meal frequency) and caloric restriction (CR) show great promise.	31	28
5	Arguably more troubling is the fact that the fundamental labor rights of increasing numbers of workers are being violated .	19	18
MEAN		32.6	26.4

other readability tips

- _ Avoid undefined **jargon** (specialised terms)
- _ Avoid (author-created) **acronyms** – difficult for readers
- _ **Use specific terms**
 - _ Don't write that something *is related* to something else, explain **how**
- _ Avoid fluffy, throw-away, feel-good sentences
 - _ „These findings provide new insight into...” (let your readers judge)
 - _ “Future research is needed ...” (future research is always needed...)
- _ Avoid „These results suggest...”
 - _ make a (strong) statement instead and use the results as support

imageability

Abstract subject, insipid verb	Concrete subject, interesting verb
The incumbency advantage of authoritarian regimes is in their control of public resources	Authoritarians stay in power by controlling public resources.
The policy of refusing treatment based on immigration status has the potential for widespread negative health effects.	When we leave sick people untreated because they don't have visas, we endanger everyone's health.
It is argued that the static model of adult neuropsychology is inapplicable to the explanation of atypical pediatric development.	Adult brains differ in many ways from the brains of children with developmental disorders, and cannot serve as a model.

Examples of less imageable (left) and more imageable (right) subjects and verbs (bolded)

imageability tip: 1

- _ Describe **concrete** subjects doing **actions** that readers can picture
 - _ Avoid abstract subjects and verbs
 - _ E.g. often a variant of *be* or *have*
 - _ Use concrete subjects (like a person or clear noun)
 - _ Use specific verbs that can be visualised
 - _ „*There is/are*“ sentences can almost always be rewritten with a more concrete subject and/or more interesting verb

imageability tip: 1

Sentence beginning with “there is/there are”	Revision
There is an airplane safety assessment committee, made up of engineers who are revising the standards for safety assessment of airplanes and their related systems.	Engineers on the airplane safety assessment committee are revising the standards that technicians use to assess the safety of airplanes and their related systems.
There are five factors that moderate the contribution of early peer victimization to subsequent depressive symptoms.	Some children who are bullied become depressed; others don’t. This paper identifies five factors that make a difference in how children recover from victimization by peers.
There is a tendency to assume progress in reducing poverty and then to be shocked when it does not materialize.	Voters assume that cities are making progress in reducing poverty and are shocked when progress does not materialize.
There are “freeloaders,” who wish to benefit from herd immunity without being vaccinated themselves.	“Freeloaders” benefit from herd immunity without being vaccinated themselves.

Examples of how sentences can be revised
to avoid *There is/are*

(Sarnecka, 2021)



imageability tip: 2

- _ Follow abstractions and generalisations with **concrete** specific examples

New technologies are increasing learners' access to content. Students can now listen to lectures via podcast while commuting to internships. Clinicians in remote and rural areas can access training and academic support that were previously inaccessible because of geographic isolation from the large central hospitals and academic centres in the main cities.

imageability tip: 3

- _ know when to use the active versus passive voice
 - _ Use the **active** voice whenever possible
 - _ Active: subject performs the action (verb)
 - _ Passive: subject is being acted on
 - _ Active constructions are usually shorter
 - _ Passive constructions put the direct object before the verb and subject, or omit the subject entirely → readers need more words in memory to process the sentence

Active voice	Passive voice
The octopuses refused their food.	Food was refused by the octopuses.
The squid are organizing a protest.	A protest is being organized by the squid.
The predatory mollusks will form a union called 'Cephalopods for Justice'.	A union called 'Cephalopods for Justice' will be formed by the predatory mollusks.

(Sarnecka, 2021)



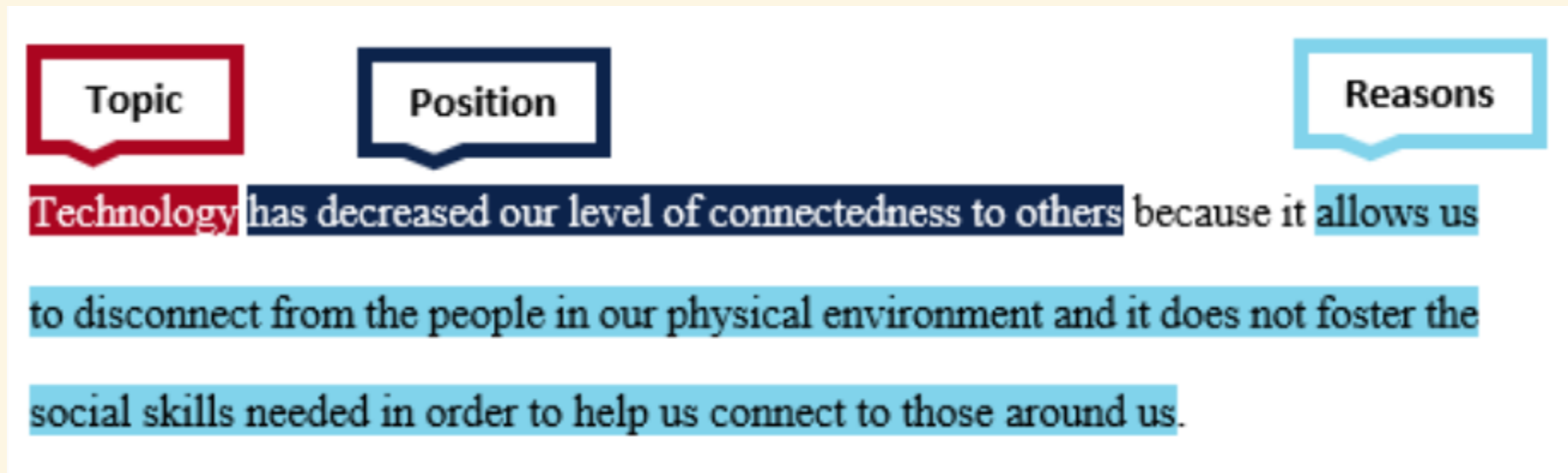
specific types of sentences

thesis statement

- _ makes an **assertion** about an issue
 - _ Not just an overview of facts
 - _ Not too diffuse, rather specific
- _ **direct** and **clear** statement about your intentions
- _ Example: presenting your results in one bold sentence
 - _ Topic + what's analysed + conclusion

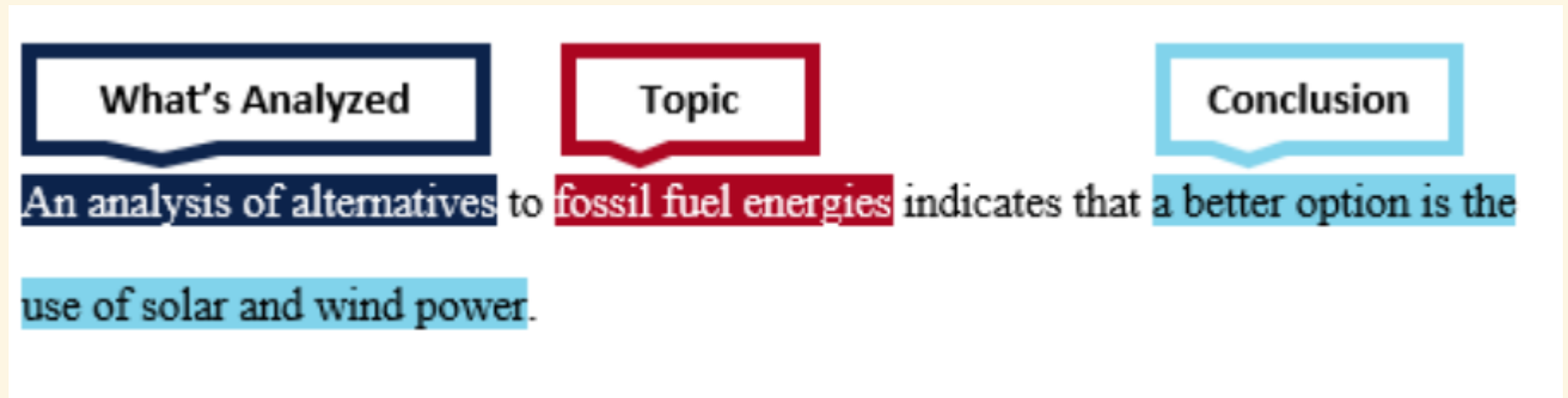
thesis statement types

_ Argumentative: making a claim



thesis statement types

_ Analytical: analysing an issue



thesis statement types

_ Expository: explaining a topic



topic sentences

- _ tells the **main idea** of a paragraph
 - _ Usually includes a **what** and **why** (importance)
 - _ May also include **how** it will be discussed in the paragraph
- _ usually the first sentence of a paragraph, maybe the second
- _ also, usually the first sentence to be written when writing a paragraph
- _ Usually a compound or complex sentence
 - _ ...followed by simpler supporting sentences in the paragraph

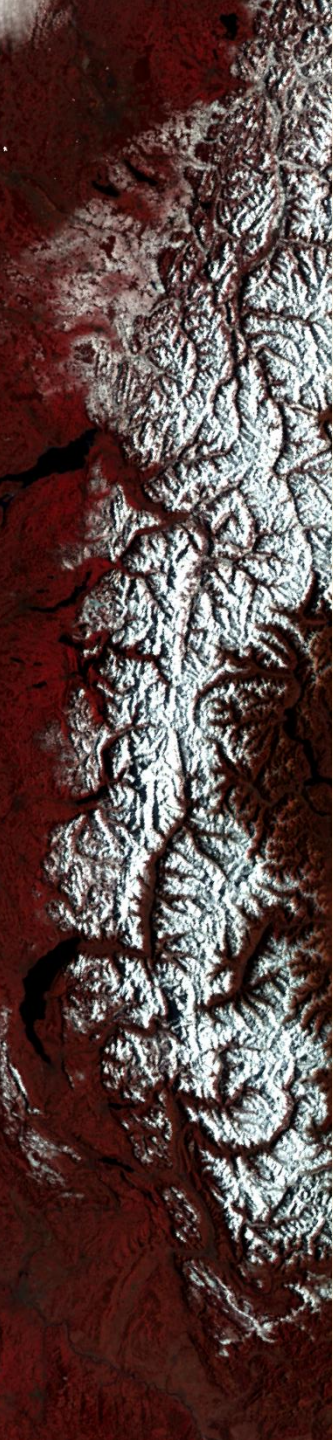
hook

- _ Purpose: grab the reader's **attention**!
 - _ Make reader want to read more
- _ If a full sentence, then usually starting an introduction or section
- _ Can also be part of a sentence (i.e. clause)
- _ Can be...
 - _ Surprising facts
 - _ Impressive data
 - _ Mystery
 - _ Emotion or topic with personal connection

guidelines for better writing

- _ Write in the present tense as much as possible
- _ Write in first person as much as possible
 - _ ... although, this is often discouraged in journal publications
- _ Write shorter rather than longer sentences (ca. 14 words long)
 - _ omit any needless words for improved clarity
- _ Write shorter rather than longer paragraphs
 - _ aim for at least 3-4 paragraphs per manuscript page – this is better for readers!
- _ Use strong working verbs (e.g., reflects, indicates, suggests), rather than weak linking verbs (e.g., is suggestive of, is indicative of, is reflective of)
- _ Avoid negation; write positive, active sentences

(Gernsbacher, 2013)



How do you edit or revise your work?

Discuss.

self-editing/proofreading tips

- _ read each sentence **aloud**
- _ **take a break** and read the paper or section later
- _ change the document **formatting**
 - _ E.g. font type/size, margins, columns, spacing, colour
- _ **print** the text
 - _ can be different than reading on a screen
- _ read the paper **backwards**, evaluating each sentence and/or paragraph
- _ **discuss** the content with others and then re-read
- _ use integrated automated grammar and spell-checks

outlines

planning: the outline

- _ collect points to make and how they will fit together
 - _ hierarchical relationships or logical ordering of information
- _ 1: determine purpose, audience and thesis
- _ 2: **brainstorm** all ideas to include
- _ 3: **organise** by grouping related ideas
- _ 4: **order** by general to specific, abstract to concrete
- _ 5: **label** by creating main and sub headings
- _ optional 6: turn your outline of points into **full sentences**
- _ *Note: this is a tool that can be used at the beginning of the writing process, but can also happen after writing has already started*

planning: effective outlines

- _ parallelism
 - _ if the first heading is a verb, the second heading should be a verb
- _ coordination
 - _ coordinate level of significance between headings, subheadings, etc.
- _ subordination
 - _ headings should be general, subheadings more specific, etc.
- _ division
 - _ each heading should be divided into 2 or more parts
 - _ If you have lots of subdivisions, consider combining to reduce, or create a different grouping.

reviewing: the reverse outline

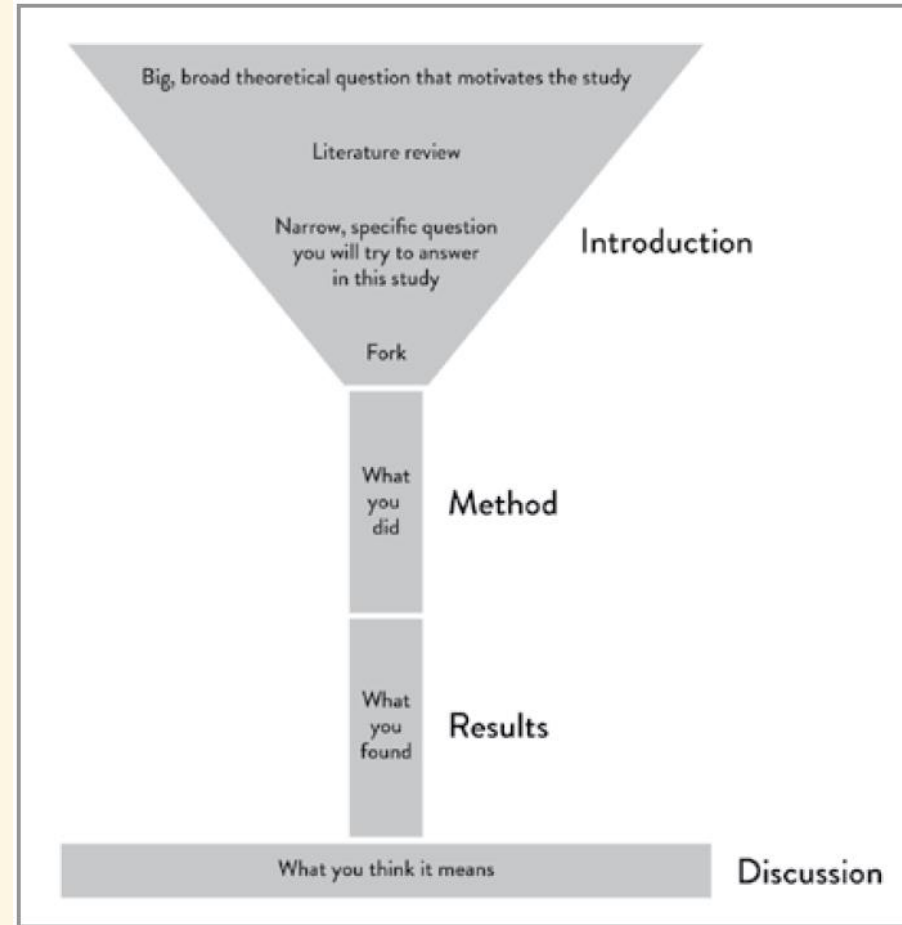
- _ a.k.a. a topic-sentence outline
- _ from draft back to outline!
- _ can help **distill main ideas**
- _ **1:** write the **topic sentence** of each paragraph
 - _ In the case of conclusion/intro ¶s, use the thesis or closing statement
 - _ If a paragraph doesn't have one (yet?), write one!
- _ **2:** write down **how** the paragraph topic advances the overall argument
- _ *this is also considered a reading strategy*



other formats

IMRaD format

- _ Introduction
- _ Methods
- _ Results
- _ Discussion
- _ [Conclusion]



literature review / SotA

- _ New research always builds on existing research!
- _ SotA: State of the Art
 - _ collection that summarises work already done
 - _ may identify research gaps
- _ Stand-alone review (review article)
 - _ published to provide an overview of a topic
- _ Introductory literature review
 - _ near the beginning of a larger piece of writing (e.g. book, article)
- _ Student's review
 - _ Helps a student learn
 - _ Allows faculty/advisor to check student's understanding of a topic/field
- _ Most citation managers also serve well as reading list and note managers!

resources

- _ Gernsbacher, M. A. (2013). *Improving Scholarly Communication: An Online Course*. Retrieved from <https://osf.io/z9dh7/>
- _ Purdue Online Writing Lab (OWL) (2021). Retrieved from https://owl.purdue.edu/owl/purdue_owl.html
- _ Truss, L. (2004). *Eats, Shoots & Leaves: The Zero Tolerance Approach to Punctuation*. New York: Gotham Books.
- _ Sarnecka, B. W. (2021, June 29). *The Writing Workshop: Write More, Write Better, Be Happier in Academia* (2nd ed., full text). Retrieved from <https://doi.org/10.31219/osf.io/5qcdh>
- _ Skern, T. (2019). *Writing scientific English: A workbook*. utb GmbH.

[A1]: (5%) free-essay

_ See Blackboard – Due 07.11.2023

_ 5 total assignments

_ A1: Free essay

_ A2: Scientific essay (first draft)

_ A3: Reverse outline and written peer-review (plus in-class review)

_ A4: Final, revised scientific essay

_ A5: Presentation (mini-conference)