

# ‘Thinking about citations: Metacognitive Foundations

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Produced as part of the University of Alberta 2019 TLEF Seed Grant funded project  
'Developing graduate students' metacognition regarding their use of citations.'



# Why are we doing this?

- Citing & the Use of Citations has been identified in the literature as a common issue for students.
- This issue is evident for librarians at the University of Alberta
- Citing and the Use of Citations is an important element of academic/scholarly life, the process of which is also relevant to aspects of everyday thinking.



# What do we hope to achieve?

- A more extensive knowledge of the cognition (thinking) related to citing and the use of citations.
- Insights into our own cognition related our citing processes and our use of citations.
- A more mindful approach to our scholarly and academic activities.
- Ultimately, improved learning and improved academic performance.



# The Logic of this Project

- How can we talk about cognition?
- How can we talk about metacognition?
- How can we relate citing and using citations to a metacognition framework?
- How can we talk about metacognitive experiences?
- How can we stimulate metacognitive experiences that assist you reflect on your current processes...to improve them (?)



## Important Side Note

- I engaged in a lot of self-communication/dialogue, often in the form of self-questions, in constructing this presentation. The importance of this self-communication will, I hope, become evident during this presentation.



# How can we talk about cognition?

- There's no point in talking about metacognition unless we 'share' a way of talking about cognition.
- Often times this is not considered in many (pedagogical) deliberations and suggestions regarding metacognition.

## Anna Sfard (2008)

- “thinking can be *usefully* (my emphasis) defined as an individualized version of interpersonal communication.” (p. 81)
- “this self-communication does not have to be in in any way audible or visible and does not have to be in words.” (p. 82)
- “the type of human doing that emerges when individuals become capable of communicating with themselves the way they communicate with others.” (p. 91)



So...

...my perspective is that, to change our thinking processes, we need to know where our self-communication (about, e.g. citing & the use of citations) 'IS' now and look at other persons' self-communication to explore if we can adopt (possibly with modifications) some of their self-communication that we can then employ. (We need to become self-aware)





# Metacognition: A Definition

- Metacognition refers to an individual's **knowledge**, control and *awareness* of their cognition and learning processes and *their knowledge of the learning processes of others*.

*This definition reflects the importance of individuals understanding how other people as well as how they, as individuals, learn. This has pedagogical implications at all levels of education.*



## In other words:

- Metacognition refers to an individual's knowledge, control and awareness of their self-communication as it relates to their learning processes and everyday decision-making, and *their knowledge of the self-communication of others related to those persons' learning processes and everyday decision-making.*

# Metacognitive Knowledge

- Knowledge and beliefs (conceptions) about the factors influencing the course and consequences of an individual's cognitive enterprises. (all cognition can have metacognition that is related to it)
- Metacognitive knowledge can be categorized as one of three (3) types:
  1. Declarative
  2. Procedural
  3. Conditional

1. ***Declarative:***

Learning is.....

Thinking is.....

Understanding is .....

2. ***Procedural:***

I learn (Chemistry, Music, Languages)

by .....

I think by.....

I think when I.....

He/she learns by.....

They learn by.....

I develop understanding by.....

3. ***Conditional:***

I use this learning process when.....

I use this thinking process when.....

I use this learning strategy at this time  
because.....

I don't use this learning strategy  
time because.....

at this

# Now lets relate that M/C framework to citing and the use of citations

- 1. *Declarative***      Citing is···
- 2. *Procedural***      I cite by···  
I cite when I···  
They cite by···
- 3. *Conditional***      I use a citing process when I···  
I use this citing process in 'x' situation···  
They cite when they want to···

## Therefore:

- The metacognition related to citing and the use of citations is the knowledge, control, and awareness of the ‘self communication’ that we and others engage in when we cite and use citations.
- This knowledge needs to take the form of information that is explicit and reportable...it is only that form that is ‘teachable.’



# Metacognitive Experiences

*Conscious* (we're aware-of them)  
experiences related to cognitive  
endeavors or metacognitive knowledge.

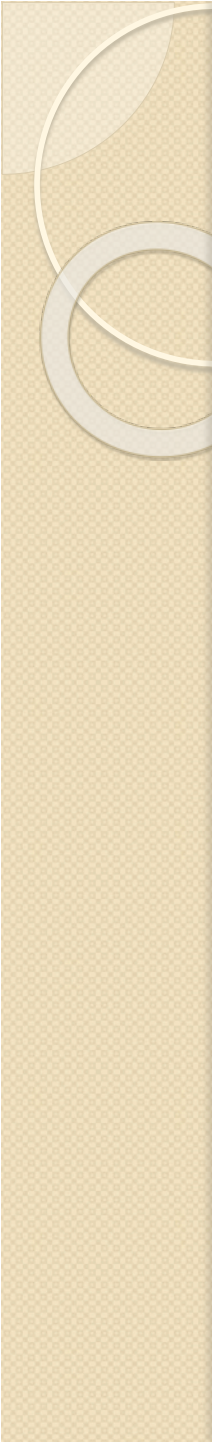
These experiences are keys to developing metacognition as they provide the raw material for *reflection* that might lead to the development of metacognitive knowledge. Therefore, we ALL need to reflect on our processes of self-communication.



## Further, and importantly,

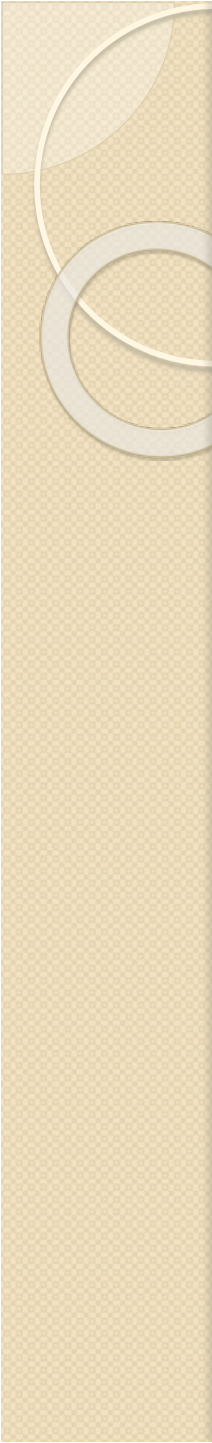
- We may not even be aware of our metacognitive knowledge regarding citing and the use of citations (or any other cognitive process) unless we commit to and engage in such self-reflection.
- Self-reflection is at the heart of improving as a thinker and learner.





## **How can we stimulate metacognitive experiences that assist you reflect on your current processes...to improve them (?)**

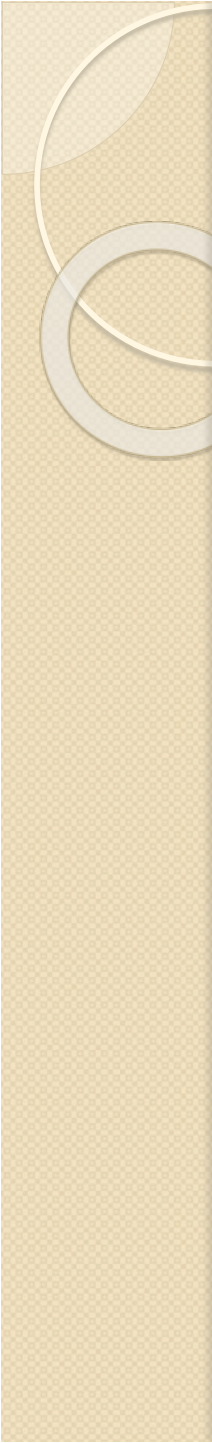
- We need to try to engage you in reflection regarding your own self-communication (cognition) that relates to your citing and use of citations, to become aware of your own metacognitive knowledge.
- We then need to ask you to compare your own metacognitive knowledge with that of others who might be more experienced & differently knowledgeable about such matters.

- 
- This is the essence of trying to stimulate within you a metacognitive experience regarding citing and the use of citations.
  - We are doing this through (a) my class tonight, in which I provide one perspective, (b) through the provision of podcasts available at [https://era-av.library.ualberta.ca/media\\_objects/4x51hj87d](https://era-av.library.ualberta.ca/media_objects/4x51hj87d) (please cut and past into your browser) in which two other professors provide their perspectives, (c) through a suggested self-reflection exercise designed to facilitate the comparison of your metacognitive knowledge with that of others. This can be found at **XXXX**



# The Logic of My Perspective

- My perspective considers two primary elements: (a) cognitive & (b) algorithmic.
- The cognitive element can be related more to metacognition ... it is a self-communication process that is less prescribed & open to variations between individuals.
- The algorithmic element relates to respecting & employing conventions.

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- Inevitably I consider that citing and the use of citations in relation to both (a) and (b) is inextricably linked to scholarly activity and, in particular, writing.
  - However, while they might both be important, I consider that (a), the cognitive, takes precedent over (b) the algorithmic...at least at the start of, and well into, a scholarly activity.



## My thought (self-communication) processes.

- I propose that we establish some agreed-upon purposes for citing and using citations and then set questions to answer, to guide our self-communication.
- In other words, “What questions am I asking myself (and trying to answer) as I engage with literature, ideas, and other sources of information relevant to my scholarly activities/tasks/endeavours?”



# Purpose 1: Acknowledgement

- To acknowledge, with respect, the views, ideas, and contributions of others within the field we are engaged in or are exploring for future reference.
- (This is an important scholarly activity and one on which all respectable scholarship is built on.)



# Questions for Purpose 1

- Am I fairly and accurately representing the views, ideas, and contributions of others within the field in my citing and citations?
- Am I privileging my own view over that of others?
- Do I recognize any biases that might be influencing my representations of the views, ideas, and contributions of others?

## Purpose 2: Evidence of Exploration

- To provide evidence of our thorough exploration of the existing literature, for example.



Dr. Robert Runte

@Runte

Definitions when citing research:

"Recent" refers to any research article published after I was in grad school...since, news to me.

"Current" refers to any articles still in my "to-be-read" in-basket.

"Seminal" refers to any article my profs made me read in grad school.

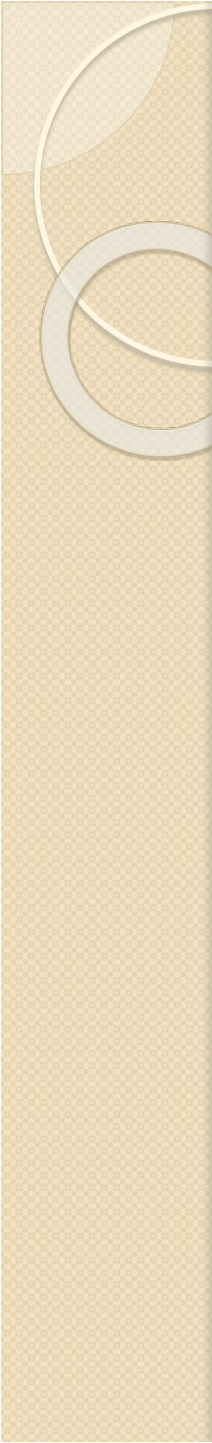
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## Questions for Purpose 2

- Have I gone back into the literature far enough in years?
- Where did these ideas I am reviewing originate?
- Have I gone to original sources?
- Have I scoured the reference lists of the material I am examining?

- 
- Would it seem to others that I know the field I am working in?
  - How am I ascertaining/judging the authenticity and quality of my citation sources?
  - ‘Predatory’ Publishers: Are they real? You decide! (please cut and past into your browser if interested)
  - <https://beallslist.weebly.com/>
  - [https://en.wikipedia.org/wiki/Beall%27s\\_List](https://en.wikipedia.org/wiki/Beall%27s_List)



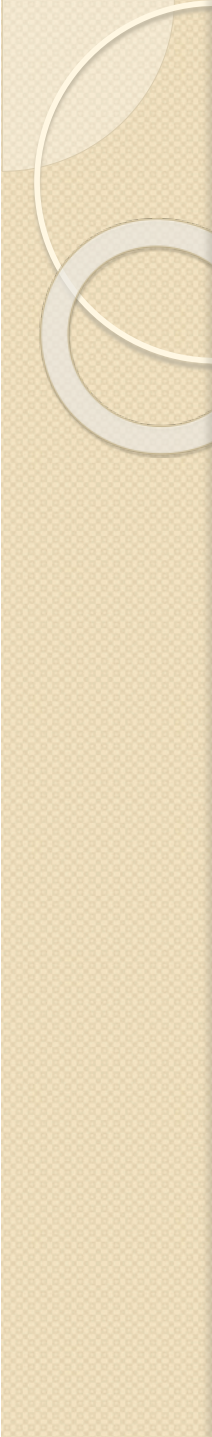
## Purpose 3: Persuasion

- Typically, when we cite and use citations we are trying to justify/argue for some position; to persuade a reader to agree with us or to acknowledge, even if they don't agree, that our justification/argument is viable and reasonable.



## Questions for Purpose 3

- Have I presented multiple positions/views in relation to field/area I am working in or the ideas I am exploring? (Subject to space/word restrictions)
- Am I over-citing a particular position (maybe with multiple authors who all cite each other) and ignoring other positions that should be considered?

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- Is the argument/position I am taking well justified? Have I clearly articulated, using my citations) why I favour a particular position over others?
  - Is the support for my position defensible in relation to the quality of the scholarship that I am citing to support it? (e.g., would you use questionable sources to justify a position?)



# The Ethical Use of Citations

- To seek honest answers to these ‘self-communication’ questions requires an ethical disposition to scholarship.
- This is not always evident. Often we only get one side of a many-sided issue or idea.
- Too often I see writers bending the intent of those they cite or not understanding their intent in the first place.
- Commitment and time are required.

# Plagiarism: Don't do it!

- <https://www.ualberta.ca/current-students/academic-resources/academic-integrity/plagiarism>
- On this site there are numerous links to considerations regarding the Algorithmic element of citing and citation use.



## Who Evaluates the quality of our Self-Communication and Reflection on Such?

- Ultimately, it is our instructors, supervisors, article/chapter reviewers, editors, and academic colleagues who evaluate the quality of the cognition we employ when citing and using citations... they are the arbiters.
- This ‘peer review’ is an important, essential element of quality scholarship.





## What about the Algorithmic element?

- This element often consumes people, especially beginning scholars & students.
- It need not be so anxiety inducing.
- It is important because it is about scholarly conventions and communication, just as in other spheres of human activity.

## There's already help for this at UAlberta

- <https://guides.library.ualberta.ca/research-writing/home>
- If you explore this site you will see that there is a healthy level of reference and assistance in relation to what I've suggested regarding the cognitive elements of citation and citation use?
- “Have I (that means you) looked at this site?”

# My Experience

- Databases were not evident when I did my BEd (completed 1987), or MEdSt, ending in the early 90s, or PhD (1999)···microfiche, ERIC, library shelves, paper journals, books, conference papers.
- There was a need for the same things as today, even more so, because the information was not as readily accessible.
- The algorithmic element is about knowledge, organisation, precision, and practice.



## Hints: Knowledge

- Irrespective of the stage of your program, take the time to develop your knowledge of the mechanics and expectations of citing and citation use.
- Use the library resources.
- Buy your own APA Manual.
- Look at how those authors you are reading cite and use citations (look for errors).

# Hints: Organisation

- Keep close records of what you read (complete reference), when you read it, what direct quotes might be useful.
- I've always found hard-copies useful... sometimes articles, especially conference or working papers, disappear.
- Use technology, e.g. RefWorks, Endnote.
- Be conscientious about keeping your material organised. Plan to expand.



## Hints: Precision

- If your knowledge is adequate, or you can source information regarding ‘style’ quickly, learn to be ‘first-time’ precise... you should not need to correct citations in text or in your reference lists. Expect that you will need to do them only one time.
- If your references are not precise, work will often be marked down or returned to you in the case of manuscripts.

## Hints: Practice

- I don't leave all of my 'algorithmic' citing until the end...I tend to do it as I go. This helps familiarize me with non-APA style/s I might not be familiar with.
- Write regularly, and consider your citation practice at every opportunity, while at the same time knowing that your work is 'a work in progress' until it is done.
- Perfect practice makes perfect.



# Final Thoughts

- For me, it is evident that both the cognitive and algorithmic elements of citing and citation use are important and intertwined.
- However, you can have a beautifully ‘styled’ paper (algorithmic) that is of little substance because of its less than wonderful use of the literature & citations.
- Where will your emphasis lay?





# Thank You!

## References

Runte. (2019, September, 2019). Definitions when citing research: "Recent" refers to any research article published after I was in grad school...since, news to me. "Current" refers to any articles still in my "to-be-read" in-basket. "Seminal" refers to any article my profs made me read in grad school. [Tweet]. Retrieved from <https://twitter.com/Runte/status/1176633674453794816>

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