

# The Retweet of Academia:

## Using Twitter to Improve Information Literacy Instruction

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# Librarians as educators

# Information literacy

Mastery of the set of skills necessary to find, evaluate, use, and contribute information effectively and ethically

- Conceptual mastery is more widely applicable to an information-rich future than mastery of individual tasks
- As such, the Information Literacy Standards are undergoing revision to address “threshold concepts”

# Daunting, aren't they?

## Standards, Performance Indicators, and Outcomes

### Standard One

The information literate student determines the nature and extent of the information needed.

Performance Indicators:

1. The information literate student defines and articulates the need for information.

*Outcomes Include:*

- a. Confers with instructors and participates in class discussions, peer workgroups, and electronic discussions to identify a research topic, or other information need
  - b. Develops a thesis statement and formulates questions based on the information need
  - c. Explores general information sources to increase familiarity with the topic
  - d. Defines or modifies the information need to achieve a manageable focus
  - e. Identifies key concepts and terms that describe the information need
  - f. Recognizes that existing information can be combined with original thought, experimentation, and/or analysis to produce new information
2. The information literate student identifies a variety of types and formats of potential sources for information.

*Outcomes Include:*

- a. Knows how information is formally and informally produced, organized, and disseminated
- b. Recognizes that knowledge can be organized into disciplines that influence the way information is accessed

# Threshold concepts

- Concepts that challenge a student's previous understanding and perceptions of a topic
- A threshold concept is difficult to learn, but mastery fundamentally shifts a student's understanding of their discipline, their scholarship, and their worldview
- "Akin to passing through a portal" that opens up "previously inaccessible way[s] of thinking about something" (Meyer and Land)

# Educational goals

1. Present conceptual knowledge
2. Provide context for these concepts that is relevant for students
3. Model successful behavior based on these concepts
4. Provide time for guided practice of these concepts

**Due to the constraints of typically meeting with students once for 50 minutes, librarians often end up skipping steps 1 & 2**

# Addressing core concepts

Undergraduate students need more basic instruction on citation and plagiarism.

Lee, 2013, p. 55

Citation management systems . . . are becoming increasingly robust, and libraries are integrating these software applications into their service offerings.

Childress, 2011, p. 143



# Teaching “how to cite”

- Too often, plagiarism instruction focuses solely on the elements of adhering to citation styles
- Teaches students that the mechanisms of scholarship are more important than the intentions
- Students struggle with avoiding punishment, while never learning the “why”
- With the rise of citation managers, this knowledge is becoming largely irrelevant

# We have better things to do

Instead of spending valuable class time on task-based instruction, let's focus on the underlying concepts of **scholarly communication** and **attribution**

1. Scholarship is a conversation
2. Intellectual content has value
3. Attribution is the recognition of that content's value

Students, particularly undergraduates, are unfamiliar with the conventions of academic writing.

Thonny, 2011, p. 347

One of the primary conventions of scholarly communication is that “academic writers respond to what others have written about their topic.”

Thonny, 2011, p. 349

# Students' role in discourse

- Due to the nature of their assignments, students don't think of their work as participation in scholarly discourse
- For many of them, citing the work of others is how they ensure they have the "right answer"
- Research as a conversation is a completely foreign concept

# Research is slow

- Students encounter citations, bibliographies, and indexes in isolation, without seeing the idea stream they're a part of
- By the time someone publishes a counterargument, will your students be out of your class? Or out of college?
- How can we demonstrate a discourse and attribution process on a timescale more appropriate to a one-semester course?

Twitter and other social media tools are  
“platform[s] for social discourse.”

Brook, 2012, p. 120

Framing social media as platforms for discourse  
could enable libraries to leverage these tools in  
a variety of ways.

Brook, 2012, p. 120

# Twitter as a model for discourse

# What makes Twitter a good fit?

- Twitter is an established Internet sharing mechanism
- Twitter has community-established attribution conventions that parallel academic discourse
- Twitter has a shorter timescale than traditional academic publishing, so students can see discourse unfolding in real time



# Twitter attribution mechanisms

- @reply/mention – tweets that either respond to a previous tweet or are directed at another user
- favorite – used to tell an original poster that a user liked a tweet or to save tweets for later
- retweet (RT) – reposting of another user's tweet
- via – used to share content of another user while adding one's own thoughts
- modified tweet (MT) – used to share the content of another user's tweet while altering the wording
- hat tip (HT, h/t) – convention for crediting an original poster

## Nanotoxicology: An emerging discipline evolving from studies of ultrafine particles

Author(s): Oberdorster, G (Oberdorster, G); Oberdorster, E (Oberdorster, E); Oberdorster, J (Oberdorster, J)

Source: ENVIRONMENTAL HEALTH PERSPECTIVES Volume: 113 Issue: 7 Pages: 823-839 DOI: 10.1289/ehp.7339 Published: JUL 2005  
Times Cited: 2,194 (from Web of Science)

Cited References: 185 [view related records] [Citation Map]

**Abstract:** Although humans have been exposed to airborne nanosized particles (NSPs; < 100 nm) throughout their evolutionary stages, such exposure has increased dramatically over the last century due to anthropogenic sources. The rapidly developing field of nanotechnology is likely to become yet another source through inhalation, ingestion, skin uptake, and injection of engineered nanomaterials. Information about safety and potential hazards is urgently needed. Results of older bio-kinetic studies with NSPs and newer epidemiologic and toxicologic studies with airborne ultrafine particles can be viewed as the basis for the expanding field of nanotoxicology, which can be defined as safety evaluation of engineered nanostructures and nanodevices. Collectively, some emerging concepts of nanotoxicology can be identified from the results of these studies. When inhaled, specific sizes of NSPs are efficiently deposited by diffusional mechanisms in all regions of the respiratory tract. The small size facilitates uptake into cells and transcytosis across epithelial and endothelial cells into the blood and lymph circulation to reach potentially sensitive target sites such as bone marrow, lymph nodes, spleen, and heart. Access to the central nervous system and ganglia via translocation along axons and

### Cited References 1

- Title:** RAPID-TRANSPORT OF FOREIGN PARTICLES MICROINJECTED INTO CRAB AXONS  
Author(s): ADAMS, RJ; BRAY, D  
Source: NATURE Volume: 303 Issue: 5919 Pages: 718-720 DOI: 10.1038/303718a0 Published: 1983  
Times Cited: 74 (from Web of Science)  
[find it](#)
- Title:** Nanocrystal targeting in vivo  
Author(s): Akerman, ME; Chan, WCW; Laakkonen, P; et al.  
Source: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA Volume: 99 Issue: 20  
Pages: 12617-12621 DOI: 10.1073/pnas.152463399 Published: OCT 1 2002  
Times Cited: 825 (from Web of Science)  
[find it](#) [View abstract]
- Title:** The finishing touch: Robots may lend a hand in the making of Steinway pianos  
Author(s): Amato, I.  
Source: Science News Volume: 135 Pages: 108-109 DOI: 10.2307/3973729 Published: 1989  
Times Cited: 4 (from Web of Science)  
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- Title:** RESPIRATORY-TRACT DEPOSITION OF ULTRAFINE PARTICLES IN SUBJECTS WITH OBSTRUCTIVE OR RESTRICTIVE LUNG-DISEASE  
Author(s): ANDERSON, PJ; WILSON, JD; HILLER, FC  
Source: CHEST Volume: 97 Issue: 5 Pages: 1115-1120 DOI: 10.1378/chest.97.5.1115 Published: MAY 1990  
Times Cited: 61 (from Web of Science)  
[find it](#)
- Title:** A REVIEW OF AXONAL-TRANSPORT OF METALS  
Author(s): ARVIDSON, B  
Source: TOXICOLOGY Volume: 88 Issue: 1-3 Pages: 1-14 DOI: 10.1016/0300-483X(94)90107-4 Published: MAR 11 1994  
Times Cited: 36 (from Web of Science)  
[find it](#) [View abstract]

Times Cited: 2,318

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This article has been cited 2,318 times in Web of Knowledge.

Jin, Chengyu. Metabolic profiling reveals disorder of carbohydrate metabolism in mouse fibroblast cells induced by titanium dioxide nanoparticles. JOURNAL OF APPLIED TOXICOLOGY, DEC 2013.

Dekali, Samir. Cell cooperation and role of the P2X(7) receptor in pulmonary inflammation induced by nanoparticles. NANOTOXICOLOGY, DEC 2013.

Clift, Martin J. D. Can the Ames test provide an insight into nano-object mutagenicity? Investigating the interaction between nano-objects and bacteria. NANOTOXICOLOGY, DEC 2013.

[view all 2,318 citing articles]

Author

Publication Info

Cited References

Times Cited

Citation



**Dave Itzkoff** @ditzkoff

3 Nov

Tonight's chalkboard gag on @TheSimpsons in honor of Marcia Wallace, is a heartbreaker. [pic.twitter.com/8nY5mMQs0f](http://pic.twitter.com/8nY5mMQs0f)

Retweeted by Alex Carroll



5,816

RETWEETS

2,365

FAVORITES



8:01 PM - 3 Nov 13 - Details

Flag media

Collapse

Reply

Retweeted

Favorite

More

Reply to @ditzkoff @TheSimpsons



**Alan Sepinwall** @sepinwall

3 Nov

So sad. RT @ditzkoff: Tonight's chalkboard gag on @TheSimpsons in honor of Marcia Wallace, is a heartbreaker.

[pic.twitter.com/a4pdaDfpAX](http://pic.twitter.com/a4pdaDfpAX)

View photo

Reply

Retweet

Favorite

More

Username

Timestamp

Mention

No. of Retweets

Retweet

Attribution in action:  
the parable of @prodigalsam



**rob delaney**   
@robdelaney

 **Following**

guys calm down squirrels invented parkour

 Reply  Retweet  Favorite  More

**2,138** RETWEETS **884** FAVORITES 

8:40 AM - 29 Oct 11



**sammy rhodes**  
@prodigalsam



It's like squirrels have no idea how incredible they'd be at parkour.

 Reply  Retweet  Favorite  More

**391** RETWEETS **310** FAVORITES 

3:51 PM - 7 May 13



In spring 2013, popular Twitter user @prodigalsam was revealed as a tweet plagiarist




**Alec Sulkin**   
@thesulk

 **Follow**

Think I might take a job as Ray Davies' trainer. Still working out the kinks.

 Reply  Retweet  Favorite  More

**6** RETWEETS **11** FAVORITES 

5:51 PM - 2 Feb 10




**sammy rhodes**  
@prodigalsam

 **Blocked**


"I'm still working out The Kinks." - The Kinks' personal trainer

 Reply  Retweet  Favorite  More

**168** RETWEETS **212** FAVORITES 

4:19 PM - 25 Mar 13

As a result of the controversy surrounding his content, @prodigalsam deleted his Twitter account

**Damien Fahey**   
@DamienFahey

The Pizza Tracker is the Santa Tracker for the depressed.

← Reply ↻ Retweet ★ Favorite ⋮ More

91 RETWEETS 144 FAVORITES

12:31 AM - 21 Dec 12

**sammy rhodes**  
@prodigalsam

I bet the Domino's Pizza Tracker is pretty good at tracking depression too.

← Reply ↻ Retweet ★ Favorite ⋮ More

160 RETWEETS 225 FAVORITES

4:09 PM - 19 May 13

# Models complex integrity issues students actually face

- Paraphrase plagiarism – “Just change a couple words so it isn’t stealing”
- Self-plagiarism – “It’s cool. I did a paper on this last semester.”
- In a world where everything is sharable, why is prodigalsam controversial?

 **D'Brickshaw**  
@DragonflyJonez

I've become a master of dodging people from my past who i see at the grocery store. I turn into f████████████████████ Jason Bourne.

 Reply  Retweet  Favorite  More

**13** RETWEETS **4** FAVORITES 

12:09 PM - 7 Aug 11

 **sammy rhodes**  
@prodigalsam



I'm the Jason Bourne of avoiding people on Facebook chat.

 Reply  Retweet  Favorite  More

**113** RETWEETS **108** FAVORITES 


5:48 PM - 20 Sep 12

 **sammy rhodes**  
@prodigalsam



I'm the Jason Bourne of avoiding people I know at Starbucks.

 Reply  Retweet  Favorite  More

**124** RETWEETS **200** FAVORITES 

7:31 AM - 8 Nov 12

 **sammy rhodes**  
@prodigalsam

I'm the Jason Bourne of avoiding people I know in the grocery store.

 Reply  Retweet  Favorite  More

**598** RETWEETS **471** FAVORITES

11:56 AM - 30 Mar 13

So, Does This Work?



# So, Does This Work?

- Anecdotally, student responses to this method have been stronger than responses to typical instruction on citation.
  - Students have asked us questions about self-plagiarism, and how that relates to self-citation, and repurposing previous research
    - Brings to light some **gray areas** in scholarly discourse.
    - **Gray areas are opportunities to get students to think critically!**

# So, Does This Work?

- The initial response from other librarians has been overwhelmingly positive
  - We were invited to present a poster at the ALISE (Association for Library and Information Science Education) 2014 Annual Meeting
  - While there, other instruction librarians expressed excitement about this metaphor.

# So, Does This Work?

## ○ Why the positive reactions?

- Teaching concepts using interesting metaphors doesn't just engage the students – it engages the instructor.
- This technique makes this potentially dreadful topic more fun for the instructor.
- Twitter is more interesting than demonstrating how to look up information in a citation style guide, or admonishing students about the consequences that can accompany plagiarism.

# So, Does This Work?

- Anything besides anecdotes? We're working on that.
  - We introduced this content into library instruction sessions during a select number of Professional Writing Program courses during the Spring 2014 semester.
  - At the end of the class, students were asked to complete an assessment
  - 81 students completed our assessment

# So, Does This Work?

- Q: "When writing an academic paper, you are responding to the work done by previous researchers."
- Approximately 86% of respondents correctly answered "True"

# So, Does This Work?

- Q: “When writing a research paper, why should you cite the work of others?”
- Approximately 15% stated to avoid plagiarism and the bad consequences that follow it
- Remaining ~85% stated something along the lines of:
  - “Giving credit” to the original author
  - Strengthening your argument by letting your audience know who you’re “talking to”

# So, Does This Work?

- Going forward, to validate our initial results, more research is needed.
- Particularly, a larger sample size of students, and a control group for comparison.
- Something for consideration in Fall 2014.

Next Steps



# Next Steps

- We're convinced of the effectiveness of this method, and we have created some followers within the University Libraries.
- However, our actual impact on student instruction is limited.
- University Libraries "Liaison Librarian" Model
  - Responsible for library instruction to a select number of departments
  - Librarians for ENGR and AGNR
- One Shot Library Instruction Model
  - 50-75 minute meeting with a class, once a semester
  - Only meeting with a portion of the students within our college, much less the entire campus community

# Next Steps

- How can we disperse this instruction to the thousands of undergraduate and graduate students at UMD, College Park?

# Next Steps

- University Libraries is partnering with the Professional Writing Program to develop online tutorials through Canvas that can be embedded in courses through ELMS.
- We are involved in the creation of these tutorials, and have included our Twitter metaphor for scholarly attribution with them.

# Next Steps

## Information Literacy Concepts



- [Backing it Up: Using Evidence to Support a Rhetorical Argument](#)
- [What is a "Good" Source? Determining the Validity of Evidence](#)
- [Who Decides What Is Valid? The Peer Review Process](#)
- [So What Should I Write On? Researching and Developing a Topic You Like](#)
- [I Like It, But Will It Work? Developing a Feasible Topic](#)
- [What Is Wrong With My Search? Using Boolean Operators](#)
- [How Do I Even Read That? Understanding Scholarly Articles](#)
- [Why Do I Have To Do That? Scholarship, Attribution, Citation, and Plagiarism](#)
- [What Research Came Later? Cited Reference Searching](#)
- [Google Scholar](#)
- [Scopus](#)
- [Web of Science](#)
- [Who Is Going To Read This? Writing for a Specific Audience](#)

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## Why Do I Have To Do That? Scholarship, Attribution, Citation, and Plagiarism

Terms and concepts to know for this lesson:

**Scholarship** - academic study, work, or achievement. *What faculty and students in academia create or produce.*

**Discourse** - written or spoken communication or debate. *The process through which ideas are communicated, debated, and spread.*

**Attribution** - the act of crediting a work to its author, date, and place of creation. *Giving credit to the original creator of content.*

**Plagiarism** - taking the thoughts and words of others and representing them as one's own original thoughts.

In the previous lesson [How Do I Even Read That? Understanding Scholarly Articles](#), you learned strategies for how to approach scholarly articles that you find during your research. After reading some of the articles you find during your research, you'll inevitably find some to be useful enough that you'll want to use them as evidence when presenting your argument. One of the most important aspects of conducting research is keeping track of the citation information for all the sources that you consulted during your research. Why are citations such an important part of conducting research?

### How scholarship is made

No piece of scholarship is ever created in a vacuum. Scholars, including student researchers, rely on the work done by previous researchers in order to create new knowledge. As such, when creating a research assignment, you can think of yourself as responding to previous scholars in the field; previous discoveries and claims influence the directions of future research. Consequently, you can think of a scholarly article as a conversation between the author of the work, and the researchers who studied the topic previously. Collectively, we call this conversation *scholarly discourse*. Whenever you create a research assignment, you're joining into that discourse.

### But what does that have to do with citations?

Citations serve two primary purposes:

1. They give proper attribution to the original creator of a piece of content. In that way, citations are a recognition that ideas have value. By citing the author of a work, you are giving credit to that author.
2. They increase the cogency of your argument. Including citations demonstrates to your audience that you are not making your ideas up in a vacuum; rather, your ideas are the result of examining published information on the topic, and are corroborated by other experts in the field. By including the full citation information, you also allow your audience to locate the source and ascertain that it supports the argument you are advancing

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## About plagiarism, briefly

Including citations and a works cited page will help you avoid *plagiarism*, which is taking the thoughts and words of others and representing them as your own original thoughts. Here at UMD, we often talk about how plagiarism is bad, and the dire consequences that can face students who plagiarize. But that raises two important questions:

1. Why is plagiarism wrong?
  - It hurts the original creator of the content
  - It's dishonest
2. How can I avoid committing plagiarism?
  - Cite your sources

## What does plagiarism look like?

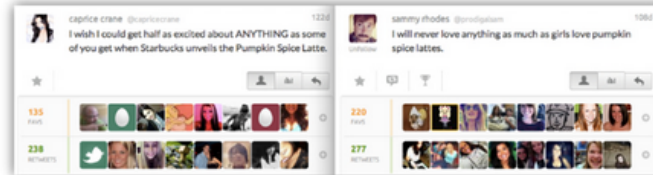
*Direct quote plagiarism* is when you take the work of another person word for word, without providing quotation marks and citing the source. This sort of plagiarism is generally pretty clear cut.

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.

**PLAGIARISM**

--Alex Carroll, 10/1/13

However, you don't have to copy a direct quote to commit plagiarism. You can alter the words and phrases used by the original work, but if don't give the original author credit, you are still committing *paraphrase plagiarism*. When it comes to plagiarism, it's not the words that matter – *it's the ideas*. What does paraphrase plagiarism look like? A recent example caused a stir on Twitter. The tumblr feed [Borrowing Sam](#) exposed user @prodigalsam, a popular figure on Twitter, as joke thief. @prodigalsam paraphrased content just enough that it would avoid quick Google searches, and then would wait several months before posting the plagiarized content.



This caused a huge controversy, because the Twitter community has conventions for reusing someone else content, such as Retweets (RT), Favorites, and Modified Tweets (MT). @prodigalsam willfully ignored those conventions in an attempt to make this content look like his own creation. This purposeful violation of the spirit of sharing content is the same reason why their are consequences for plagiarizing content in academic works, which is why citing the authors' whose ideas you use in your research is so important. You're recognizing the value of that author's work, and giving the author the credit her or she deserves.

It is also possible to commit *self plagiarism* if you re-use a work you have previously completed, without acknowledging that the work is being re-purposed. To avoid this unfortunate situation, if you are referencing previous work you have completed, cite yourself! @prodigalsam also was guilty of self plagiarism:



When questioned on the practice, @prodigalsam admitted that "...for years now I've been doing tweets that are pretty clearly inspired by the tweets of my twitter heros." After a peak of 130,000 followers, the @prodigalsam Twitter account has been deleted.

## Conclusion

Don't let your academic career turn out like @prodigalsam's Twitter career – be a responsible participant in scholarly discourse by giving proper attribution to the work of other scholars.

# Questions?

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