

CSM 101

Collegiate Research: More than Google

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Learning Outcomes:

In college, students should develop an understanding of the ever-evolving nature of scholarly knowledge and the roles of various communication methods related to scholarly output. This is essential not only for successfully completing “researched essay” assignments and other research-related projects in college, but also for mastering the skills that employers seek: critical thinking and problem solving with reliable, researched information.

After this session, students will be able to:

- Recognize that scholarship is a conversation
- Recognize that research does not consist of merely “looking up the right answer,” but requires negotiating the conclusions of various pieces of scholarly work and contributing one’s own work to the scholarly conversation
- Explain why gaining familiarity with previous literature on a topic is an important step in engaging in one’s own research, scholarship or design project
- Understand that information is presented in various formats and contexts, which may affect its quality, authoritativeness, or usefulness

Activity:

- For homework, students will read one short article reporting on the topic or research.
- Students will divide into small groups (roughly 5 groups of 5). Each group will be presented with another piece of writing on the same topic or research (more news reporting, opinion piece, original or related scholarly work, personal blog response, e.g.). Mentors are welcome to prepare these materials based on a topic of their choosing; several samples are provided in the Supplementary Materials accompanying the lesson plan. Mentors will decide in advance whether to provide students with paper copies of the materials, or have the students use computers to view them online.
- As a group, students will scan or read this new piece and compare/contrast it to the homework article using the chart provided (see Supplementary Materials).
- After reuniting as a class, each group will spend 1-2 minutes summarizing the work they reviewed.
- The mentor will then lead a discussion about the nature of the information the students have examined.

Discussion questions may include:

- Were there any factual differences between the two sources you looked at? If so, did you believe one source over the other? Why or why not?
- What else would you like to know after looking at these two sources?

- Would either of these sources be okay to cite in a research paper? Why or why not?
- How do these sources contribute to your understanding of this topic?
- How do these sources contribute to human knowledge?
- What is difficult about research for you?
- What successes have you had in researching a topic? Do you have tips or tricks for managing a large research project?

Notes for students:

--**Use Library tools to find scholarly publications.** The set of materials you looked at include one or two **scholarly articles** and related **non-scholarly** articles. When searching for information on the web with Google or another search engine, it's typical to find all or mostly non-scholarly information sources (though depending on your search terms, it is possible to get some "hits" from scholarly publications).

--**Consult with librarians and faculty during the research process.** Research is a skill that takes **practice, practice, practice!** Librarians and faculty are here to help students through the process.



**The Purpose and Process of Research**

<b>Source</b>	<b>Whose ideas?</b>	<b>For what audience?</b>	<b>Is there a review process involved? If not, should there be?</b>	<b>What is omitted? What else are you wondering?</b>	<b>What is the value of the source?</b>



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Sample List of Sources 1

**TOPIC: How does exposure to crude oil affect fish development?**

**All students read for homework:**

National Oceanic and Atmospheric Administration. (2014, March 24). Crude oil causes developmental abnormalities in large marine fish: Deepwater Horizon oil disrupts heart development in tunas. ScienceDaily. Retrieved July 17, 2014, from [www.sciencedaily.com/releases/2014/03/140324154017.htm](http://www.sciencedaily.com/releases/2014/03/140324154017.htm)

**Each small group looks at one additional source:**

Alexander, C. (2014). Scientists discover the mechanism of heart failure in fish exposed to oil spills. *Constantine Alexander's blog*. Retrieved July 16, 2014, from <http://www.constantinealexander.net/2014/02/scientists-discover-the-mechanism-of-heart-failure-in-fish-exposed-to-oil-spills.html>

Dlouhy, J. A. (2014a). BP Oil Spill Caused Fish Heart Defects, Study Suggests. *Huffington Post*. Retrieved July 10, 2014, from [http://www.huffingtonpost.com/2014/03/26/bp-oil-spill-fish-defects\\_n\\_5034577.html](http://www.huffingtonpost.com/2014/03/26/bp-oil-spill-fish-defects_n_5034577.html)

Dlouhy, J. A. (2014b). Scientists: Gulf oil spill hurt fish hearts. *Fuel Fix*. Retrieved July 10, 2014, from <http://fuelfix.com/blog/2014/03/24/scientists-gulf-oil-spill-hurt-fish-hearts/>

Heart of the Oil Spill. (2014). *Pensacola News Journal*. Pensacola, Florida. Retrieved from <http://on.pnj.com/1mxCFTe>

Incardona, J. P., Gardner, L. D., Linbo, T. L., Brown, T. L., Esbaugh, A. J., Mager, E. M., ... Scholz, N. L. (2014). Deepwater Horizon crude oil impacts the developing hearts of large predatory pelagic fish. *Proceedings of the National Academy of Sciences of the United States of America*, 111(15), E1510–8. <http://dx.doi.org/10.1073/pnas.1320950111> [original research article]

Ou, S. (2014). BP Deepwater Horizon Spill Damages Heart Development in Fish | The Beacon: Oceana's Blog. *The Beacon*. Retrieved July 10, 2014, from <http://oceana.org/en/blog/2014/03/bp-deepwater-horizon-spill-damages-heart-development-in-fish>



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Sample List of Sources 2

**TOPIC: Is higher education effective?**

All students read for homework

Jaschik, S. (2011, January). "Academically Adrift." Inside Higher Ed. Retrieved from [http://www.insidehighered.com/news/2011/01/18/study\\_finds\\_large\\_numbers\\_of\\_college\\_students\\_don\\_t\\_learn\\_much](http://www.insidehighered.com/news/2011/01/18/study_finds_large_numbers_of_college_students_don_t_learn_much)

Each small group looks at one additional source—choose from these:

Arum, R., & Roksa, J. (2011a). *Academically Adrift*. Chicago: University of Chicago Press.  
**[original research work]**

Arum, R., & Roksa, J. (2011b, May 11). Your So-Called Education. *New York Times*. New York. Retrieved from <http://www.nytimes.com/2011/05/15/opinion/15arum.html>

Berrett, D. (2013, May 20). Students Might Not Be "Academically Adrift" After All, Study Finds. *The Chronicle of Higher Education*. Washington, D.C. Retrieved from <http://chronicle.com/article/Students-Might-Not-Be/139395/?cid=at>

Carey, K. (2012, February 12). "Academically Adrift": the News Gets Worse and Worse. *The Chronicle of Higher Education*. Washington, D.C. Retrieved from <http://chronicle.com/article/Academically-Adrift-The/130743/>

Pascarella, E. T., Blaich, C., Martin, G. L., & Hanson, J. M. (2011). How Robust Are the Findings of Academically Adrift? *Change: The Magazine of Higher Learning*, 43(3), 20–24. <http://dx.doi:10.1080/00091383.2011.568898>

Vedder, R. (2011). Academically Adrift: A Must-Read. *Innovations: Insights and Commentary on Higher Education*. Chronicle of Higher Education. Retrieved from <http://chronicle.com/blogs/innovations/academically-adrift-a-must-read/28423>