



## Information Literate Engineer: Assignment #2: Scientific research in popular sources: Comparing and contrasting delivery of information

Your name: \_\_\_\_\_

Your e-mail address: \_\_\_\_\_

Programme: \_\_\_\_\_

Course Name: \_\_\_\_\_

Semester: \_\_\_\_\_

### Short Description:

This think-pair-share activity in which students compare a popular and scholarly source will help them progress from answering observable questions (type of language and format) to analytical questions (intended audience). As a class, students will discuss their answers and talk about whether the popular source accurately represented the scholarly source.

### Learning outcomes

- Students will...
  - Describe the information creation process for popular and scholarly sources
  - Compare and contrast the type of information disseminated by each
  - Explain the ways in which authority and accuracy are contingent upon information need
- Therefore, students will...
  - Evaluate the accuracy and authority of a source based on discipline and information need
  - Recognize and select appropriate resources for academic research

### Activity

#### 1. Materials needed

- 1 scholarly article
- 1 news article reporting on the same research
- Attached worksheet – [scroll to the bottom of the page](#)
- Post-it notes or an online “bulletin board” program like Google Sticky notes  
[\[students will lead in helping each other how to use this technology – learn as you do 😊 – visit the online guide for support\]](#)
- (A must do just in case you cannot find what you need) use the Ask a Librarian service on the library website

#### 2. Set-up

- Print 1 copy of each article -OR-
  - Link/embed articles in the Google Sticky notes application/ workspacer
  - Print a copy of the worksheet
3. Process
- **Think—Pair—Share**
  - Each student reads/skims both articles
  - Could be done in advance
  - Students get started on worksheet alone, answering 'a' questions
  - With partner/neighbor, work on 'b' questions
  - Students share answers using Google Post-its
  - Class discussion
4. Conclusion
- Class discusses how observable answers ('a' questions) helped them think critically to discover answers to more complex questions ('b' questions)
  - Class debates answers to 'b' questions and defends their decisions
  - Class analyzes whether popular article was accurate representation and why this may be
  - Prompt students to think/talk about how this will affect their own research

#### **Work in groups [as will be paired in class]**

- Focus on the privilege of accessing scholarly research:
  - Find a scholarly article only available behind a paywall/in a library database and an open access scholarly article
  - Discuss these creation processes and the effect they have
  - What happens to those who lack this privilege?
  - What does this mean for authority/credibility?
- Example:
  - Whale article ([Royal Society Open Science](#))
  - Water vapor on planet:
    - Water detected in atmosphere of potentially habitable super-Earth ([CNN](#))
    - Water vapour in the atmosphere of the habitable-zone eight-Earth-mass planet K2-18 b ([Nature Astronomy](#))
- Focus on exaggerated language in popular articles:
  - Find an article whose non-expert language grabs readers' attention
  - Discuss why this may be done and the effect it has
  - What does the "value" of information mean in different contexts?
  - Confirmation bias—seeking out info that agrees with your worldview
- Examples:
  - Planetary discovery

- Giant exoplanet found around tiny star shouldn't even exist, astronomers say ([CNN](#))
- A giant exoplanet orbiting a very-low-mass star challenges planet formation models ([Science](#))
  - Origins of life
    - Building blocks of life may have come from deep space: 'Key to unraveling fundamental questions for humankind' ([Fox News](#))
    - Nucleobase synthesis in interstellar ices ([Nature Communications](#))
- Focus on the process of research
  - Students must find articles used for discussion or must find scholarly article given news article (could be done in advance)
  - Discuss different techniques needed for each (location, keywords, planning/effort)
  - Were scholarly articles always linked from news article?
  - What challenges did you face?
- Example:
  - Decline in wild bird population
    - Where Have the Wild Birds Gone? 3 Billion Fewer Than 1970 ([AP/US News](#))
    - Decline of the North American avifauna ([Science](#))

### **Final Paper – Individual**

Write a 2-page paper discussing your experiences in this class – the details of what you will write shall be discussed on the first day of the information literacy class. You will keep working on this assignment as you advance through the semester – capturing your experiences of the class and sharing those with your students. The papers should be posted on the class Moodle at least 1 day before the official exams begin.

### Scientific Research in Popular Sources

**'a' questions can be answered by reading the article or with a quick Internet search**

**'b' questions require analysis of the article based on your experiences and knowledge**

	Popular article	Scholarly article
a) Author info  b) How do we know this author is authoritative?		
a) Publisher info  b) How do we know this publication is authoritative?		
a) Citations/references (can be formal or informal)  b) How is accuracy demonstrated for this type of source?		
a) Main point/ research question  b) What is the purpose of this type of source?		
a) Content (language, images, format)  b) Who is the intended audience of this type of source?		

a) Date of publication  b) How long does it take to create this type of source (research, writing, editing)?	*Hint: How long after scholarly article was this one published?	*Hint: Look for hints about time periods or dates in the article.
--	---	---

**(Did the popular article accurately represent the scholarly article? Why do you think this is?)**