Container Collapse and the Information Remix: Students’ Evaluations of Scientific Research Recast in Scholarly vs. Popular Sources

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Scientific Communication Lifecycle

Informal Communication

Formal Communication

Popularization

1951
Watson & Crick begin research on the structure of DNA
Wilkins & Franklin begin research on the structure of DNA
Pauling begins research on the structure of DNA

1953
Short announcement article in Nature
2nd announcement article in Nature
Conference presentation
Short articles appear in the Science section of newspapers

1954
Journal article published in Proc. R. Soc. Lond. A
article is included in a database

1957
Information incorporated into genetics textbooks

1962
Watson & Crick win the Nobel prize
Front page articles appear in the NY Times & other magazines

1969
Watson publishes his memoir

Image from https://cms.uflib.ufl.edu/msl/Services/Tutorials/Finding_articles/Tutorial_3

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Today’s Scientific Communication Lifecycle


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“Marsh rabbit mortalities tie pythons to the precipitous decline of mammals in the Everglades”
Proceedings of the Royal Society B: Biological Sciences (RSPB)
“Snakes wipe out Everglades rabbits”

*Nature*
“Burmese Pythons are Taking Over the Everglades”

Time

Burmese Pythons Are Taking Over the Everglades

Bryan Walsh @bryanrwalsh | March 20, 2015

Burmese pythons aren’t your normal predators

True to their name, Burmese pythons are native to the tropics of southern and southeastern Asia, where the gigantic...
Methods

Welcome

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For This Presentation

Tasks
- Helpful
- Citable
- Credible

Participants
- 26 High School
- 30 Community College
- 30 University Undergraduate
- 30 University Graduate
Results
Percentage of Students Who Chose Each Resource as Helpful

Given the RSIC study design, the sample size varies across student groups, simulation tasks, and resources. Please refer the paper for more information:
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Given the RSIC study design, the sample size varies across student groups, simulation tasks, and resources. Please refer the paper for more information:
Role of Clicking and Time on Task

Clicking a Resource
- More likely to find it helpful & citable

More Time on Task
- Less likely to find Nature helpful
- Less likely to find Nature & Time citable
Discussion
Summary of Findings

• Ranking across the three tasks linked to resource characteristics
• Students may rely on source, when they should be evaluating the resource
• Clicking and Time on Task are related to student judgments in surprising ways
• Education level plays a role in students’ decisions
Framework for Information Literacy for Higher Education

Authority is Constructed and Contextual

Searching as Strategic Exploration

Information Creation as a Process

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Presentation Attendee Poll Responses

What is the biggest thing students struggle with when evaluating online resources?

- Evaluating the credibility of a resource: 26%
- Determining resource type: 30%
- Comprehending a resource: 10%
- Meeting instructor resource expectations: 6%
- Engaging critically with a resource: 28.0%
- Other: 0%

50 votes - 50 participants

Source: https://directpoll.com/?t7X3drPBD3xXqgg857aWzAaQzBFbQ518fNnaySGeC
Conversation

1. Based on these findings, how can we help students recognize and overcome some of these struggles?

2. How do we teach students to recognize and critically engage with recasted content?
Thank You & Questions

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