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Gamifying a First Year Biology Lab Library Session

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Gamifying a First Year Biology Lab Library Session

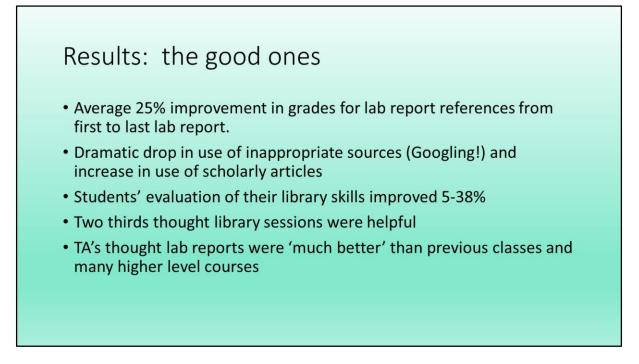
Lisa Rose-Wiles, Science Librarian Veronica Amour, Instructional Designer Seton Hall University

18th annual VALE / NJ ACRL / NJLA CUS Users' Conference, January 6, 2017, Rutgers University, Piscataway, NJ.

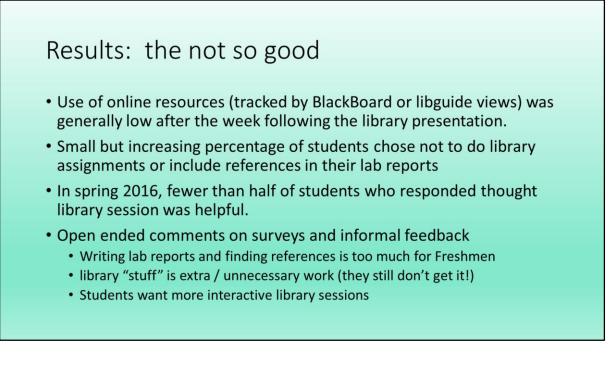
The Backstory ...

Three years "embedded librarian" in the labs of a first year "reading & writing infused" Biology Course (spring 2014-2016) included:

- 30-45 minute library skills session in 3-18 lab sections
- Additional resources on BlackBoard and Course Libguides
- Grading referencing component in 3-5 formal lab reports
- Developing and grading library exercises and annotated bibliography assignments
- Students self assessment of library skills pre-test and post-test
- Analyzing results (and other feedback)



Acknowledging that students may simply improve on their own or with practice; but noting that I tend to "grade harder" in subsequent assignments, especially in terms of citation errors.



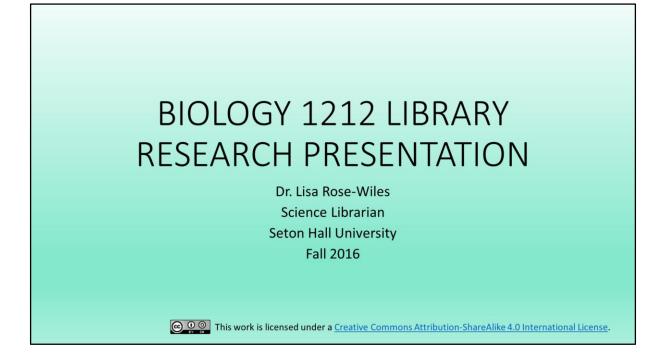
It seems students are increasingly making strategic choices to "blow off" assignments that are worth only a few points and spend time on more "valuable" assignments.

Many see online resources as "extra work" and will not read them unless there is a grade attached

In spring 2016, 22% of students failed to submit at least one lab report

Changes in fall 2016

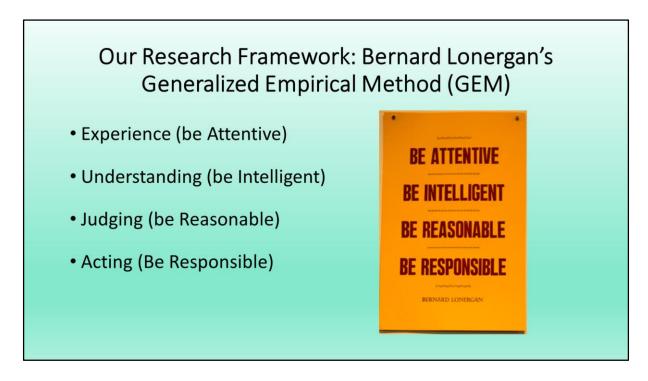
- The formal lab reports were eliminated
- Library exercises eliminated and online materials reduced
- Librarian focused on two annotated bibliographies (for student presentations)
- Library presentations focused more on research process
- Emphasized Lonergan's Generalized Empirical Method as framework
- More questions and less presentation during library session
- Integrated gamification in the library session



Here (in part) is the presentation ...



You may have already done a Google search on your topic, but for your Recitation you will need to delve below the surface into the scientific literature, which means using the scholarly resources provided by your library. [analogy: you can see the surface of the ocean from onboard the ship but to experience and understand what's going on you need to put on your scuba gear, dive down and spend time in the underwater world).



I know you have already seen this, but it is an important framework for all coursework (and life) so I will reinforce it here ...

EXPERIENCE <> be ATTENTIVE



The first step is to find information sources that will help you to research your topic and answer or refine your questions.

.... Reading your sources [= EXPERIENCE] will probably lead to additional questions and may even change your original questions – but that's fine. That's how research is supposed to work.

Aim to compile 6-10 sources that look interesting in a folder (I will show you how to do that).

UNDERSTANDING <> be INTELLIGENT

So far you've probably just looked at the abstracts of the articles you have chosen, but for your recitation you need a deeper understanding of the material you will be presenting. So dive in to the full text, read the discussion and/or conclusion, note interesting points and look for tables or figures that you can use

to illustrate your presentation.



JUDGING <> be REASONABLE



Now you need to evaluate the sources you have gathered.

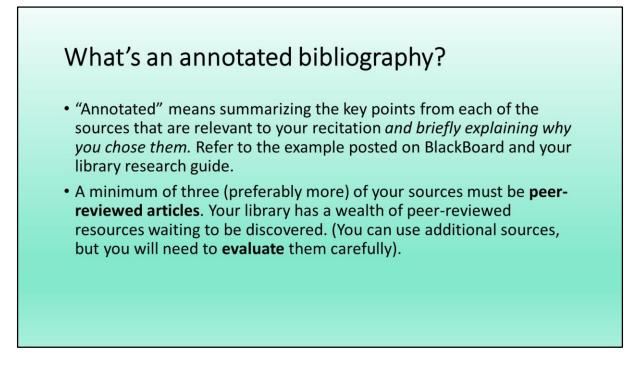
Which will work best for your recitation?

- Which are the most relevant to your questions??
- Are your sources authentic?
- Is the information up to date?

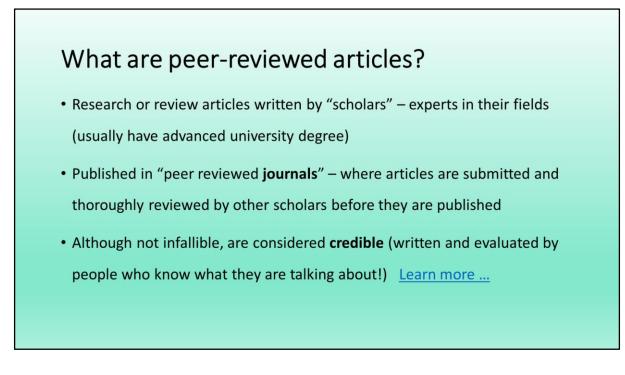
Did you include at least 3 peer-reviewed sources? (we'll talk about that shortly).



Ethical use of information includes acknowledging and citing your sources as well as not plagiarizing.



Explaining: Don't just say "because it fits my topic" - be specific; e.g. this recent peerreviewed article directly addresses the question of; this current article gives an overview of my topic and discusses previous research that has been done; this website has excellent photographs of XXX as well as current information that I will use in my recitation).



And what are journals and databases?

Students please take out your laptops or phones and sign in to tophat – a question is coming your way

Live Library Research Demonstration

- Library Resources (tutorials, libguides, Ask a Librarian, Chat)
- SHUsearch (EBSCO Discovery Service)
- Advanced Search
- Limits (discipline, peer-reviewed, full-text, date, language)
- Creating account and saving results to folder
- Citing
- Individual Databases
- TOP HAT GAMES

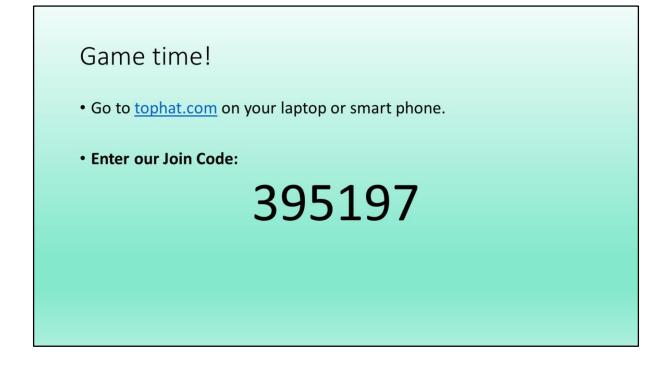
So what's this gamification stuff?

- A librarian-instructional designer collaboration
- A way to engage students (especially Millennials)
- · An easy way to assess students' understanding
- And see where they struggle (and you need to focus)
- Not your grandmother's library session it can be a lot of fun!

Librarians and Instructional Designers: Collaboration and Innovation. Joe Eshleman, Richard Moniz, Karen Mann, and Kristen Eshleman. Chicago, IL: ALA Editions, 2016. Pp. 240. \$65.00 (paperback). ISBN 978-0-8389-1455-7.

Why collaborate with your Instructional Designer (ID) on digital learning?

- ID's balance teaching and learning methodologies with the integration of technology
- ID's develop relationships across all disciplines that allow us to help Professors think differently
- TopHat is an online presentation and student engagement application that allows instructors
 - take attendance,
 - poll students to gauge understanding, and
 - spark discussions.





Top Hat Question for each one.

Then return to slide and Top Hat question: which one could you NOT use on your annotated bibliography.

Why Not?

Identifying citation errors game Anon. (2015). Deadly jellyfish. *Men's Health*, *30*(3), 134-143. Fang, S., Chang, I., & Yu, T. (n.d.). Analysis of Spatial Features of Coastal Oil Pollution Using Multivariate Methods. *Journal of Coastal Research*, 181(6): 1183-1192. Korb, John James., Poulsen, M., Haofu, H., Cai, L., Boomsma, J. J., Guojie, Z., & Liebig, J. (2015). A genomic comparison of two termites with different social complexity. 61: 57-65. <u>doi:10.3389/fgene.2015.00009</u> Singh, M.D. (2012). The behavioral ecology of black rats, Rattus rattus.

1. Missing author (Anon means "anonymous", no one takes responsibility for authorship (a major error)

2. Missing date ("n.d" means no date) – a major error. Also Capitalized All Words in Title (minor error)

3. No journal title (major error). Includes author first names (minor error).

4. No place of publication or name of publisher (major error). Rattus rattus not italicized (minor error).

Outcomes

Question	answered	participation	% correct
Newspapers & Magazines	222	87%	78%
Books	234	92%	88%
Why peer-reviewed articles	232	91%	96%
Advanced search	186	73%	92%
Understanding source types - article	214	84%	92%
Source type - website	224	88%	94%
Source type - magazine	222	87%	77%
Soure type - book	222	87%	82%
Evaluating Sources	121	48%	96%

What did you learn in this session?responsespercentageA lot9553%
A lot 95 53%
A little 66 37%
Nothing new 19 11%

This was at the end and we did not have time for it in all sections

