

WML Information Literacy Instruction Assessment 2017-18
Classroom Activity Report

Faculty Librarian: Donna Witek

Semester: Fall 2017

Course Number and Name: ENGR/PHYS 150: Foundations of Physics and Engineering (EP)

Course Instructor (Last Name): Truncale

Date(s) of Guest Information Literacy Instruction: 9/14/2017

Time(s) of Guest Information Literacy Instruction: 10:00-11:15am and 2:30-3:45pm

Location: WML 306

Number of Students Registered in Course: 13 and 18

Summary of research assignment or task

This information literacy workshop supported an assignment called the Science Literacy Presentation. This is a First-Year Digital Technology (FYDT) and First-Year Oral Communication (FYOC) course within the EP Level I curricular component of the General Education Program.

For this assignment students are tasked with finding one full-text scientific article on a topic of their choosing, which must come from a list of PHYS/ENGR journals curated in advance by the course instructor. This list of possible journals is provided to the students on the assignment sheet.

To teach the skills and techniques needed to accomplish this task, I created an in-class activity called the “Strategically Searching Journals Game” (attached) which students completed during the workshop/class period. The game results in students creating a search activity log in a Word document, which students printed at the end of class and handed in to me as part of my assessment data for the workshop. The initial research task of the assignment also required students to email Prof. Truncale their full-text journal article after our workshop and before their next class.

Note that Prof. Truncale was not in attendance for either workshop, but this was arranged with me and approved in advance; he did provide me well in advance with all of the assignment materials, and he asked me to circulate a sign-in sheet which I sent along to him after the instruction took place.

Student learning outcomes for the guest information literacy instruction (at least one, no more than three)

As a result of this information literacy workshop, students will:

- 1) Strategically explore journals in the disciplines of physics and engineering.
- 2) Practice gathering citation information for articles they may use in their Science Literacy Presentation assignment.
- 3) Identify a full-text downloadable article from the provided list of journals appropriate for the Science Literacy Presentation assignment.

How will you know how students are doing as they work toward meeting these outcomes?

Classroom SLO 1): Evidence found in their search activity log Word document printed for me at the end of the “Strategically Searching Journals Game”

Classroom SLO 2): Same as SLO 1

Classroom SLO 3): Successful completion of Science Literacy Presentation assignment, including emailing Prof. Truncala an appropriate full-text downloadable journal article by their next class meeting

Based on your experience teaching this session and any assessment of student work you were able to do, what can you change next time to improve how you teach it? Or, what was successful that you want to be sure to do again the next time you teach it?

Assessment data for Classroom SLOs 1) and 2) consisted of the following:

10:00 am section = 12 search activity logs submitted

2:30 pm section = 14 search activity logs submitted (Note: one log was completed collaboratively with permission by two students)

26 search activity logs total available across two course sections as sources of evidence of student learning

→ **15 out of 26 search activity logs submitted** provide evidence that students understood that collecting and recording new keywords related to their topics was part of the strategic search process outlined in the “Strategically Searching Journals Game.”

→ **5 out of 15 of these submissions** were exceptional in the level of detail the student researchers recorded about their search process.

→ **10 out of 26 search activity logs submitted** provide evidence that students *did not* understand the importance of recording new keywords related to their topics as they strategically

searched the science journals; these submissions only included citations found, not keywords used to find them.

→ **25 out of 26 search activity logs submitted** provide evidence that students practiced gathering citation information for articles they may use in their Science Literacy Presentation assignment, i.e., Classroom SLO 2).

Given the above data, it is clear that students had no problem finding citation information for articles they were exploring about their topics, but that not all students had a full understanding of the importance of recording new keywords discovered about their topics during the strategic search process.

Assessment data for Classroom SLO 3) consisted of the following:

Student Scores

Student scores on their Science Literacy Presentation assignment were sent to me by the course instructor.

Students could earn up to 100 points on the Science Literacy Presentation.

Number of students across two course sections to completed this assignment = 25

Mean score (points).....86.96 / 100 points	Median score (points).....88 / 100 points
Mean score (percentage)....86.96%	Median score (percentage)...88%

The highest score earned was 98 points / 98% (n=1 student) and the lowest score earned was 71 points / 71% (n=1 student).

19 students out of 25 received a score of 85 points / 85% or higher on the Science Literacy Presentation assignment.

From this data it is clear that the majority of students succeeded at my third classroom SLO— i.e., they identified a full-text downloadable article from the provided list of journals appropriate for the Science Literacy Presentation assignment—since successfully finding an approved article was a required component of the Science Literacy Presentation as a whole and without it students would not have performed well as reflected in their assignment scores.

Other relevant assessment data:

The “Strategically Searching Journals Game” asked students to record observations about the activity at the end of their logs. Some relevant quotes touching on important research concepts are shared below:

Strategically searching takes time:

“I can also conclude that the searches for specific articles [are] going to be [a] much lengthier and tedious process than what I had anticipated.”

“Finding the citations for some articles and trying to download them took longer than I thought it would.”

“The activity was fine and I found an article which interested me. The problem with it was that there was not enough time to complete it. To go through all the journals and finding an article we are interested in takes more time than we had available to work on it today.”

Being flexible when researching:

“Not all journals have topics you are searching for. You need to be open to looking for other interesting topics.”

“Look at other databases whenever you don’t find anything interesting in one of them.”

“Also I noticed that a sizeable amount of the sources gives you information on something you might not have thought of.”

Becoming familiar with search systems:

“Exercise was helpful in getting used to the database system.”

“One thing that I recognized is that not all of the websites are the same, meaning that there are different methods needed to be used in order to find something such as the citation of the article.”

“Filters helped a bunch.”

Importance of beginning with a research focus or interest:

“It is a little more difficult to find an article if you don’t really have a topic of interest in mind because there are so many different things you can search for.”

CLOSING THE LOOP—Planned changes for next time I teach the class:

I created the “Strategically Searching Journals Game” under the assumption that students would have topics in mind at the start of the exercise; the vast majority in both sections of the course did not. I did have a back-up set of instructions to adapt the game should they not yet have topics, but next time I will revise the game to assume that they will not have topics in mind at the start of the class session to better set us up for success.

The next time I teach this class I will also revise the “Strategically Searching Journals Game” to accomplish two things: 1) to better emphasize the importance of recording the new keywords

they encounter about their topics as they explore the science journals using the online search systems provided by the Library; and, 2) to use the class time more efficiently to give students more time to practice the strategic searching process I model for them.

WML Information Literacy Program Student Learning Outcomes this information literacy instruction supports

SLO2: Students will gain insight and understanding about diverse sources of information in order to evaluate and use resources appropriately for their information needs.

SLO4: Students will articulate the key elements in their research questions in order to develop and execute a search strategy.

Strategically Searching Journals Game

Collaboration vs. Collusion

C. Collusion

"Ordinary consultation of faculty, library staff, tutors or others is legitimate unless the instructor has imposed stricter limits for a particular assignment. Any cooperative effort is forbidden which results in the work or ideas of others being presented as one's own."

The University of Scranton
Academic Code of Honesty

Strategically Searching Journals Game

Start by opening a Word document and typing your name at the top...

Strategically Searching Journals Game

1. Search first journal in list by name – RECORD
2. Search in journal for your topic – RECORD
3. Browse results for an interesting-sounding article – RECORD
4. Open article and skim article title, abstract, and/or section headings for new keywords – RECORD
5. Search second journal in list by name – RECORD
6. Search in journal for your topic using new keywords – RECORD
7. Browse results for an interesting-sounding article – RECORD
8. Open article and skim article title, abstract, and/or section headings for new keywords – RECORD
9. Search third journal in list by name – RECORD ...etc. etc. etc.
10. Go through entire list of journals and let me know when you're done 😊

Strategically Searching Journals Game

After you're done:

Spend two minutes recording observations from exercise at bottom of Word document, even if they seem obvious.

At the end of the class:

Print two copies of your Word document (and save/email it to yourself if you'd like): one for me and one for you.

Bonus:

If you think you found the article you want to use for your Science Literacy Presentation Assignment, save it for yourself and email it to Prof. Truncale.