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Access Challenge for Public Health Students

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Abstract

Health sciences students regularly engage in problem-based learning. This information literacy activity introduces a public health scenario and asks students to use published sources to determine the cause of a described disease and develop a treatment protocol. The activity design highlights different levels of information privilege and invites students to consider challenges to accessing public health information in a variety of settings. The exercise was initially created for undergraduate students in a 300-level global health course.

Keywords

open access, information privilege

Disciplines

Educational Methods | Library and Information Science | Scholarly Communication

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Access Challenge for Public Health Students

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NUTRITION INFORMATION

Health sciences students regularly engage in problem-based learning. This information literacy activity introduces a public health scenario and asks students to use published sources to determine the cause of a described disease and develop a treatment protocol. The activity design highlights different levels of information privilege and invites students to consider challenges to accessing public health information in a variety of settings. The exercise was initially created for undergraduate students in a 300-level global health course.

LEARNING OUTCOMES

Students will be able to discuss how access to information impacts the effectiveness of health care practitioners in order to understand their current information privilege and to anticipate their professional information needs after graduation.

NUMBER SERVED

15–20 students; recipe could be converted to serve more groups of 4–5 students each

COOKING TIME

Prep time:
- 30 minutes for the librarian to arrange technology (especially the computer

that will NOT be connected to campus Wi-Fi), customize handouts, and duplicate handouts
- 15 minutes for the professor to pre-assign students to groups
- More time would be required for the professor to select another disease and update the scenario.

Activity/class time: 75 minutes

DIETARY GUIDELINES

This activity invites students to consider what information is available to health practitioners in a variety of settings and how different levels of information access impact health professionals around the world.

ACRL *Framework* frames addressed: Information Has Value, Research as Inquiry, and Searching as Strategic Exploration

INGREDIENTS & EQUIPMENT

- Computer(s) connected to campus Wi-Fi (one per group is sufficient for groups of up to four people, but larger groups may want more)
- At least one computer with internet access through a mobile hotspot (NOT connected to campus Wi-Fi)
- Handouts containing activity scenario, group assignments, group resources,

and activity questions (see figure 1: Access Challenge Activity). Customize the group assignments with your students' names and adjust the return time to align with your class time.

PREPARATION

- Before class, assign students a short reading about how open/closed access affects patient care. (See Additional Resources for suggested readings.)
- Assign students to groups in advance. Screen for Spanish language skills when assigning to group 3. (See Chef's Note for a group 3 alternative.)
- Brief the reference librarian who is on duty during the class activity and ask them not to use the computer or online resources if asked for help by students in group 4.

COOKING METHOD

1. Introduction (10–15 minutes)
   a. Explain how the activity is designed to help students think about the role of information access will play in their future careers as health professionals.
   b. Distribute the class activity handout (see figure 1).
   c. Read the scenario out loud.
   d. Share group assignments and resource information with students.

"The Access Challenge" – Class Activity

Group 1: Gettysburg College [insert student names]

Group 2: U.S. non-profit organization [insert student names]

Group 3: Cuban health care group [insert student names]

Group 4: Urban India health care group [insert student names]

Scenario: You are friends with a physician working in an under-funded clinic in a rural area in India. She has observed several children presenting with symptoms, including severe wheezing, neurological symptoms, and acute flaccid paralysis. India has not observed a case of polio since 2011, so she is immediately concerned that polio has re-emerged in her area. However, polio vaccination rates are reported to be quite high in this area. Thus, herd immunity for polio should be keeping new polio cases at bay. Unfortunately, it will take days to get lab results back, given the lack of transportation available and that the nearest lab for polio testing is in New Delhi. She is concerned that this infection will become an epidemic before the lab results are confirmed. The physician decides to call some of her colleagues around the world to try to figure out what is causing this disease and how to stop it from spreading to the entire community.

With the resources you have available, your job is to help her discover the cause of the disease and figure out a plan for containment.

Resources:

1. **Gettysburg College:** You have full internet access and can use any materials you have access to as a Gettysburg College student or faculty member.
2. **U.S. non-profit:** You have full internet access, but you will not be able to access materials that are behind a paywall. Your institution does not have the resources for additional scholarly subscriptions. Please do not enter your Gettysburg College credentials if you are prompted to do so.
3. **Cuba:** The government of Cuba restricts access to materials on the internet. U.S. sources have been blocked. You may only access the Biblioteca Virtual en Salud de Cuba through the following website: http://bvscuba.sld.cu/.
4. **Urban India:** Electricity has been out today in New Delhi. Your computer's battery life has ended, but you have a small charge left on your phone. You have 5 minutes in which you may use your phone to answer the first question. You may go to the library to access information, but you may not use any electronics, as the library is also experiencing a power outage.

Questions:
1. Given the symptoms, what disease is the likely culprit? Check your answer with us before moving on.
2. How is this disease transmitted?
3. Where have outbreaks occurred globally in the past 2 years? Are the outbreaks associated with different strains? Is it possible that this disease has reached rural India?
4. Are there any detailed case studies from North America available to share with the physician?
5. How were patients in North America (2014) treated/managed? Be specific as you can, as the physician needs to know how to treat her patients and what equipment is necessary.
6. Under what conditions is isolation of patients in the clinic necessary?
7. Planning for future potential outbreaks of this disease, what tools should this physician ask for in her next request for funding from USAID?

For each question, please write down your source (full AMA citations are not necessary for this assignment). Also, write down whether you accessed full articles, or only had access to abstracts. Have one person in your group jot down *how* you searched for the information. We may ask you to replicate your search for the class.

For those who leave the classroom for this exercise, please return by 12:20 p.m.

Figure 1. Access Challenge Activity

Stress that it is important that students only use their assigned resources in order for the activity to work. Encourage students to complete as many questions as they can within the allotted time. Clearly communicate what time everyone should reconvene in the classroom.

2. Activity (35–40 minutes)
   a. Students work independently in groups. They may leave the classroom if needed to use the library or other resources.
   b. Both the instructor and librarian should check on groups throughout the activity.
3. Debrief (20 minutes)
   a. Ask each group to report their findings to question #1 ("Given the symptoms, what disease is the likely culprit?"), beginning with the lowest access group (group 4) and moving up.
   b. After all groups report, move on to question #2 ("How is this disease transmitted?").
   c. Continue through all seven questions. This reporting structure allows students to discern patterns and recognize how one's level of information access impacts the ability to serve patients in a professional setting.

ALLERGY WARNING
Students are resourceful and may act in ways you did not anticipate. One year, the group 4 students consulted every science professor with an open office door rather than going to the library. Those professors attempted to assist using only the books on their shelves!

If adapting this activity for other disciplines, consider the culture of research in that field and to what extent Google is an effective research tool.

CLEAN-UP
Plan to pose a reflection question for students to complete after this activity. Our instructor included this question on a take-home exam due a few days later: "How did your group's level of information privilege contribute to your ability to diagnose and treat the disease?"

CHEF'S NOTE
The disease described in this activity is Enterovirus D68. Your health sciences professor will be able to help customize the disease and scenario to fit current events and/or the topics discussed in class. The activity works best with a disease that is not currently in the news as publishers may lower paywalls to articles during global emergencies (such as COVID-19 in 2020).

We designed four groups with different levels of information privilege. Group 3 (located in Cuba) is the second-to-lowest privilege group. Cuba restricts internet traffic from the United States, so this scenario offers students more limited exposure to medical research journals, especially in English. It also exposes challenges that global public health workers often experience when conducting research in a non-native language. Thus far, we have always been able to construct a group in which some students have at least moderate fluency in Spanish (which, of course, is different from medical fluency).

If you wish to modify this recipe, consider directing group 3 to SciELO, the Scientific Electronic Library Online. SciELO includes open access journals from many developing countries, mainly in Latin America, and it has an English-language interface available at https://scielo.org/en/. Students can easily limit to English-language results as well.

ADDITIONAL RESOURCES

Dailey, A., & Wertzberger, J. (2015). *Open access challenge*. Retrieved from https://cupola.gettysburg.edu/oaweek/2015/oaschedule2015/5

Masnick, M. (2015, April 10). Don't think open access is important? It might have prevented much of the Ebola outbreak. *Techdirt*. Retrieved from https://www.techdirt.com/articles/20150409/17514230608/dont-think-open-access-is-important-it-might-have-prevented-much-ebola-outbreak.shtml