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Wicked information literacy
Program, course, and assignment design recommendations

In *Creating Wicked Students: Designing Courses for a Complex World*, Paul Hanstedt starts "with the assumption that what we all want for our students is for them to be capable of changing the world."[1] After graduation, students face a chaotic world full of "*wicked problems*," where "the parameters of the problem and the means available for solving them" are "changing constantly."[2] If we want students to be able to change the world, the goal should be to create "wicked graduates with wicked competencies."[3]

While not aimed at librarians, we believe that Hanstedt's ideas could be incorporated into our goals for information literacy, especially critical information literacy. In this essay, we outline Hanstedt's wicked approach and describe how it can be integrated by teaching librarians. Adapting Hanstedt's format, we provide ideas for program and course design, assignments, and teaching activities.

Wicked students and critical information literacy

For Hanstedt, wicked students have a sense of authority, that is, a belief that they have the ability to write or rewrite existing narratives and create change. The best way to ensure students develop these competencies, he argues, is putting them in situations where they have to assume authority.[4] This means students are invited to solve increasingly complex problems that allow them to sometimes fail, but also recognize their own capabilities to engage in the world.

Information literacy, and especially critical information literacy (CIL), requires engagement with a complex and messy information environment. According to Eamon Tewell, CIL aims for social change by empowering learners to "identify and act upon oppressive power structures."[5] CIL problematizes information production and dissemination and privileges student agency. In developing information-literate learners, librarians can create wicked classrooms where students learn to navigate the information environment and develop a voice to challenge the structures that create and provide access to information.

Designing wicked information literacy programs

Hanstedt's work is written with credit-bearing courses in mind, but a wicked teaching approach can inform how information literacy programs are structured. Librarians who do not teach credit-bearing courses have to make strategic, programmatic choices about where and when to teach information literacy within existing curricula. Courses using

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high-impact practices (HIPs) may provide librarians with a greater opportunity to embed wicked information literacy. Hanstedt writes that high-impact practices, including writing-intensive courses, undergraduate research, and capstones, provide a solid pedagogical foundation to develop wicked students because they require students to take on increasing levels of authority. For librarians, connecting information literacy efforts with the HIPs on one's campus is an opportunity to make a greater impact in support of wicked students.

As librarians consider where to integrate information literacy, it is also important to consider that a wicked teaching approach should begin with the first-year experience. Students do not need to wait until senior year to assume authority. Hanstedt writes, "Better to ask more of students than less, to push them further than they've ever gone rather than ask them to retread safe ground."[6] Information literacy programs should push new students, if not to the deep end, at least beyond a toe in the water. The key is to integrate *appropriately* complex goals so that students are always invited to engage as responsible information users.

Designing wicked information literacy courses

While a wicked approach can be incorporated into information literacy programs without credit courses, librarians who teach credit courses may have the most opportunity to apply Hanstedt's ideas. A good place to start thinking about wicked course design is course goals. Good course goals, Hanstedt states, require students to become engaged with the course content in ways that support their developing sense of authority. This requires careful selection of the verbs we use in our goals, so we are inviting students to perform actions that support deeper engagement and learning.

For example, consider this goal for a 100-level information literacy course: "Students will be able to *identify* multiple forms of misinformation." While it is important that students can identify misinformation, this goal does not require students to take responsibility for doing something to alleviate the problems caused by misinformation.

A revised course goal that is intended to develop students' authority could be, "Students will be able to *create* an awareness campaign to help other freshman learn about the dangers of misinformation." This goal requires students to identify misinformation, but they have to go beyond identification to make decisions about how to share their knowledge of misinformation clearly and concisely for the intended audience.

Additional examples of wicked course goals include the following:

- Students will be able to *describe* why information literacy matters and how it impacts their future.
- Students will be able to *apply* fact-checking strategies to sources when faced with unfamiliar or complex information needs.
- Students will be able to *author* a justification for why information access is vital for citizenship.

While there are many ways to frame course goals, Hanstedt emphasizes that goals should "require students to actively engage with course content in an authoritative manner."[7]

Structuring wicked information literacy courses

Another way to incorporate a wicked approach is to reconsider how we structure information literacy courses. We might be tempted to structure courses around the research process.

The first part of the course introduces students to research, then finding information, then evaluating information. The course ends with a focus on attribution and plagiarism. This structure can be successful but does not provide students much opportunity to face increasingly complex problems. Hanstedt writes that "we have to structure our courses in ways that ask [students] to do the kind of authoritative work we do in our own fields," and this work should integrate complex problems.[8]

What if an information literacy course asked students to repeat the research process a few times during the semester? Initially, students might develop simple research questions that require less complex searching or analysis. However, as the course develops, students would have opportunities to develop more complex research questions, ask deeper questions about the information sources that they find, and take on greater levels of authority as they disseminate their ideas.

Yet another way to incorporate a wicked approach could be to center the course around a specific theme, such as information inequality or citizenship, and have students apply research skills to solve a specific problem related to that theme. For example, students could be asked to identify an information inequality, such as textbook costs, and use what they are learning about searching for and evaluating information to devise a solution to provide students with textbook access. Students would be forced to confront complex issues related to intellectual property and copyright and would be addressing a problem that does not have a clear, right answer.

Designing wicked information literacy assignments

A well-designed course assignment flows from course goals while integrating complex and uncertain situations that allow students to assume expertise. To do this, Hanstedt urges instructors to shift the rhetorical focus.[9] Asking students to write a paper for a professor with expertise, while the student is a novice, leaves no room for a student to feel authoritative. However, ask students to assume they are involved in a student organization and need to produce a fact-checking report on a topic relevant to the organization, and the assignment takes on new meaning. The assignment provides space for the student to highlight their knowledge, and by shifting the audience, the student becomes the expert.

Scaffolding assignments is another way to allow students to assume expertise with different audiences and develop increasingly complex projects. A three-part assignment, spread across a semester, could focus on one overarching topic but integrate increasingly complex tasks and higher stakes. For example, you might ask students to describe why information literacy matters. The first assignment could ask students to write an op-ed for the campus newspaper. To do so, students would need to focus their argument and integrate a few sources. The second assignment might ask students to give a presentation to a peer group about the value of information literacy. More research and analysis could be required for the presentation. A final project could ask students to develop a poster on the value of information literacy. A poster session could be held with invited attendees, including campus administrators, faculty, and other students. The final poster would build on the presentations, requiring further research, and the student would need to distill information clearly and concisely for the audience. A scaffolded series of assignments allows students to build on their skills while demonstrating their expertise as it develops throughout the course.

Wicked teaching activities

Teaching activities should provide students the opportunity to assume authority and practice solving increasingly complex ideas, without the pressure of grades. Librarians can find ways to structure learning so that students have opportunities to "practice" information consumption and creation.

First-day pedagogy

A first-day pedagogy is one that challenges students to take on work they might not yet know how to accomplish. Success does not necessarily mean students solve the problem correctly, but it provides an opportunity for students to recognize they might already have some expertise, even if it is minimal. These types of activities provide a baseline for students and supports a growth mindset.

One example of a first-day pedagogy that could work in a course or one-shot is research question development. Students are provided with two or three articles and asked to develop five research questions related to the topic. From there, groups of students will review questions and select five for the group. In making selections, the groups will have to discuss the characteristics of effective research questions and make decisions based on prior knowledge and experiences. Students gain practice using the literature to guide their questions and can start to build some confidence in their abilities to learn more. Follow-up discussion or subsequent classes can use the questions as examples to reinforce or clarify student knowledge.

Think again

In a "think again" activity, the librarian starts by sharing a statement with students that requires them to make an interpretation and indicate whether they think the statement is true or false. According to Hanstedt, this activity works best when the statement is one that most students will probably get wrong. For example, "all information is free." The librarian shares the correct answer with students, without explaining why. Students then work together to determine why the correct answer was correct. While this could seem cruel at first, Hanstedt notes that this activity can help students determine "that they have and have had the capability to arrive at the correct answer all along."[10]

Generating rubrics

In this activity, rather than providing students with rubrics (or guidelines), students are encouraged to generate them. To teach source evaluation, the librarian could demonstrate two methods, one in which they focus on less relevant features, such as the domain or the appearance of the site, and a second in which the librarian uses a method such as lateral reading. Students could be asked to compare the two methods, determine what was most effective, and then create a list of guidelines for evaluating sources to apply to their own evaluation process.

Conclusion

Librarians consider information literacy to be vital, not just to students' academic and professional success, but to the functioning of our society. Yet it can be challenging to feel that we are making a difference, especially when our instruction is limited to one shot. While not all the ideas that Hanstedt shares will be new to librarians, his approach represents a

mindset that librarians can adopt that could help our students develop the sense of authority they will need to become wicked graduates prepared for our complex information world. ✍

Notes

1. Paul Hanstedt, *Creating Wicked Students: Designing Courses for a Complex World* (Sterling, VA: Stylus2018), 1.
2. Hanstedt, *Creating Wicked Students*, 3.
3. Hanstedt, *Creating Wicked Students*, 4.
4. Hanstedt, *Creating Wicked Students*, 6.
5. Eamon Tewell, "The Practice and Promise of Critical Information Literacy: Academic Librarians' Involvement in Critical Library Instruction," *College & Research Libraries* 79, no. 1 (January 2018): 11.
6. Hanstedt, *Creating Wicked Students*, 9.
7. Hanstedt, *Creating Wicked Students*, 34.
8. Hanstedt, *Creating Wicked Students*, 42.
9. Hanstedt, *Creating Wicked Students*, 74
10. Hanstedt, *Creating Wicked Students*, 123.