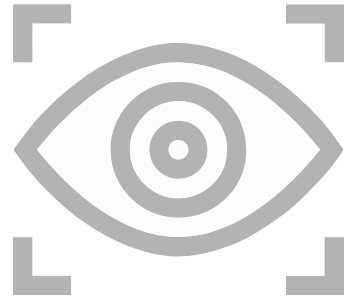




CHAPTER 11

TEACHING PRIVACY USING LEARNER- CENTERED PRACTICES IN A CREDIT-BEARING CONTEXT

Scott W. H. Young and Sara Mannheimer

INTRODUCTION

This chapter describes practices of teaching privacy to undergraduate students in a credit-bearing context. The chapter features a discussion of a semester-long course, Information Ethics and Privacy in the Age of Big Data. This chapter opens by briefly outlining three points of consideration for approaching a semester-long course. We then highlight three assignments from the course that we think are particularly useful and adaptable for teaching privacy. We include excerpts from course materials and student feedback to illustrate specific points. The chapter concludes with a self-reflective assessment of our experience as teachers.

We co-taught the course with a pedagogical viewpoint of learner-centered participation and trust, an approach that we have previously discussed in detail.¹

The course was built around reflective and co-creative activities that make space for students to bring their own experiences and perspectives into the classroom, including self-evaluation, student-led discussion sessions, small-group discussions, creative activities, and hands-on projects.

We intend for the assignments and topics of this chapter to be used beyond a credit-bearing context. Librarians teach in so many different contexts. With that in mind, we offer points of consideration for adapting our assignments for other settings, like workshops, one-shot instruction, or a sequence of course-embedded instruction to be completed over two or three class sessions.

APPROACHES

This chapter is focused on the practical aspects of teaching privacy. As such, this literature review is not presented as a scholarly analysis but rather as a set of practical considerations for approaching an instructional project, particularly from a credit-bearing perspective. We focus on presenting and discussing select resources that we found useful in designing and delivering our course. We focused on three main areas: librarian/teacher identity, learner-centered pedagogies, and assessment.

Librarians as Teachers

First, we confronted questions related to librarians assuming the role of teacher in a credit-bearing context. The professional duties of an academic librarian don't typically involve such teaching, yet the main teaching function on a university campus is credit-bearing instruction. The topic of librarians-as-teachers has been a part of our professional conversation for many years. Douglas, for instance, writing in 1999 about the many benefits of teaching semester-long courses, encourages librarians to move more toward the role of "librarian professor."² Loesch amplifies this message of the librarian as professor, writing of "innovative opportunities to teach beyond library instruction or information literacy."³ Such opportunities to teach in credit-bearing contexts exist as an expansion of or complement to traditional library instruction and should be approached with a consideration of any attendant challenges. One important challenge is that of professional identity and professional practice. In a study of librarian identity and teaching, Walter states, "Few professions are as sensitive to issues of professional identity and public perception as that of librarianship."⁴ Walter addresses a few key issues that complicate the identity of teacher-librarian: the importance of administrative support, stress of multiple job duties, professional education that doesn't include pedagogy, and

misconceptions based on stereotype. Despite these challenges, Walter ultimately sees the rise of the teacher-librarian to be a welcome response to broader efforts to expand instruction on college campuses—that is, more academic professionals of all stripes across campus are now engaging in credit-bearing instruction, librarians included. Importantly, Walter rejects the idea that librarians-as-teachers represent a grasping for higher status, as our professional literature has previously claimed.⁵ Pagowsky and DeFrain similarly discuss the librarian turn from service provider to educator, remarking in particular on stereotype and self-identity as leading issues.⁶ As Drabinski helps us understand, taking the time to engage with these questions of professional practice and identity is professional practice itself.⁷ We decided to take on the task of teaching this credit-bearing course as a pilot project, in a sense, as a way to discover for ourselves how teaching in this setting would change or advance our own professional practice.

Learner-centered Pedagogies

Next, we wanted to understand together as a teaching cohort how we would approach our classroom environment. We each had prior experience conducting privacy-oriented projects from a user-centered perspective.⁸ We wanted to further the values of user-centeredness in the classroom, and this took the form of a student-centered, or learner-driven, pedagogy. In the context of our course, we applied learner-driven pedagogy through the assignments and the assessments. To accomplish this, we offered semi-structured directions for students in completing their assignments, but we left the completion of the work open-ended so that the students could bring their own viewpoints and values into the assignment.⁹ Such an approach can lead to more engaged learning, greater trust among teachers and students, and a more empowering student experience.

Assessment

Finally, we needed to address grading. All courses must include a final letter grade, and faculty have discretion as to the means of arriving at the final grade. In keeping with our learner-centered pedagogical approach, we implemented a contract grading system.¹⁰ This approach makes clear the expectations for achieving certain grades and helps students chart their own way through the course.¹¹ To determine the final grade for the course, we asked students to complete a reflective self-evaluation.¹² We provided reflective prompts for the students, who then provide a narrative that includes a letter grade with justification. This approach critically addresses the power that teachers hold over students in unilaterally determining

grades. In approaching grading in this way, we were inspired by movements in education to critically address traditional grade paradigms, such as ungrading, minimal grading, and compassionate grading.¹³ In our experience, the grade that a student self-assigns is nearly always the grade that we ourselves would have assigned. In the few instances in which the grades are misaligned, it is the student who typically grades themselves more harshly than we would have. In these cases, we take the opportunity to boost the student up by reminding them of their performance in the course and the learning that was accomplished. This process fosters self-reflection, trust, and communication.

Student-centered self-evaluation is particularly apt for teaching about privacy, as the topic of privacy involves issues of trust and communication, especially involving information related to the self. In the self-evaluations—given at the midpoint and end of the semester—students are asked to consider how their thinking and practices related to technology use and privacy have changed over the course of the semester, what new skills or concepts particularly resonated with them, and to self-grade their participation and contributions. In providing our own feedback to the students, we offer dialogue-oriented narrative feedback that approaches students as learners empowered in their own grading and assessment. This models a vision of technology and privacy whereby users or citizens are empowered in their own use of technology and personal data.

COURSE OVERVIEW

This chapter focuses on a four-credit, upper-division seminar that was taught in the spring term of 2018, entitled Information Ethics and Privacy in the Age of Big Data. Course enrollment included eleven undergraduate juniors and seniors from the Honors College at Montana State University. The course was taught by the authors of this chapter. We are each faculty librarians at Montana State University. The syllabus is available online.¹⁴

The learning outcomes for the course included the following:

- Evaluate networked technologies, including algorithms, artificial intelligence, the web, and social media.
- Apply and critique strategies for personal privacy protection.
- Critically analyze and evaluate the contribution of networked technologies to societal structures of control, power, and oppression, especially for marginalized communities.
- Develop practical responses to ethical challenges relating to information and data from discrete disciplinary perspectives.

In the sections below, we describe three learner-centered assignments that support the learning outcomes above. Each section below is organized into three subsections: key points, description, and assessment.

COURSE ASSIGNMENTS

In the credit-bearing instructional context in which we were the primary instructors, we were in a position to design and deliver several learner-driven assignments that focused on privacy in both theory and practice. In this section, we describe three assignments: a diary study, value-sensitive design discussion, and a privacy awareness campaign. These three assignments can be remixed and reused in different contexts, including credit-bearing courses, but also other instructional environments such as workshops and traditional library instruction sessions.

Diary Study

Key points

Learning outcome

- Evaluate networked technologies, including algorithms, artificial intelligence, the web, and social media.

When to use

- Semester-long credited course instruction: It worked well for us to assign this project near the beginning of the semester to support the foundational ideas of the course.
- Course-embedded instruction. This assignment may work best if the librarian has the benefit of working with students over two sessions. The librarian can assign the diary in the first session and then discuss results in the second session.
- Virtual instruction. This assignment could be adapted for a virtual environment. Asynchronously, students could read and respond to each other's diary studies. Synchronously, students could meet in small virtual breakout rooms to discuss diary studies.

How to assess

- Students create a group report describing patterns and identifying key takeaways.

Description

A “diary study” is a research method in which participants create “logs (diaries) of daily activities as they occur [to] give contextual insights about real-time user behaviors and needs.”¹⁵ We adapted the diary study method as a way to record, demonstrate, and discuss daily technology usage among the students. For this assignment, students recorded daily logs that highlighted their own personal position within today’s networked technologies. This assignment aimed to support students in data-driven inquiry into how technology affects everyday life. Appendix A contains the full assignment for the diary study.

We provided students with a structured “diary” in which they recorded their daily activities relating to browsing the web, interacting on social media, and using apps on mobile devices. The diary took the form of a simple spreadsheet. We provided a set of typical technologies across different categories and asked the students to mark days in which a given technology was used. For example, we offered the following options for web browsers: Chrome, Firefox, Firefox Focus, Safari, and Edge. Students then marked their daily usage of each browser.

After students submitted their diaries, we aggregated the data and created some visualizations to prompt discussion in class. For example, figure 11.1 shows the aggregate results for web browsers.

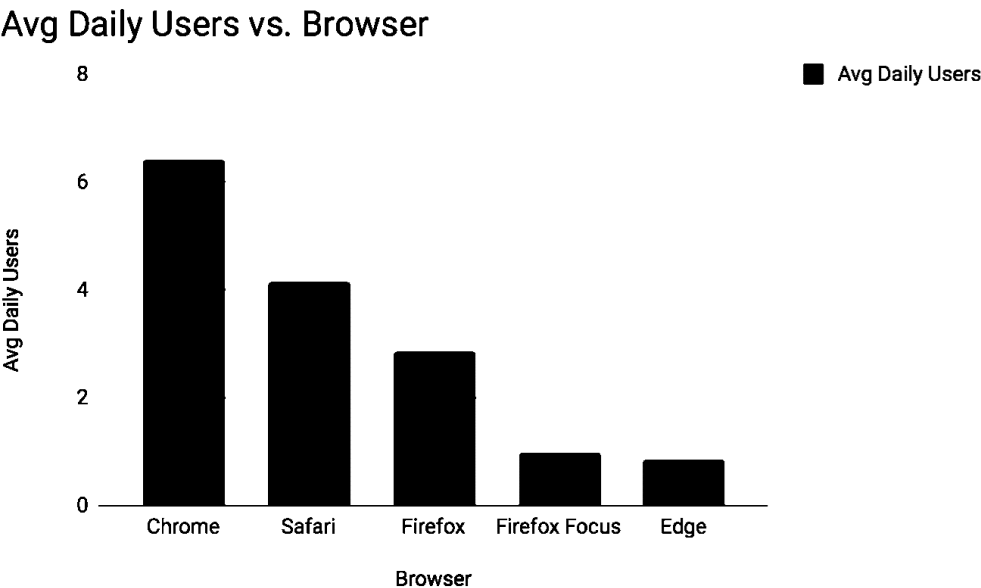


FIGURE 11.1
Average daily users of each web browser.

We can see from this chart that Chrome and Safari are the top two browsers in terms of daily usage. We used this data to discuss the different privacy settings and capabilities of each browser and the cost-benefit of each browser in terms of service and privacy. Students were able to offer their own perspectives as to why they choose one browser over another, or, in other cases, why they didn't really consider the choice. From this discussion, students became more informed and capable about their technology choices.

Students also recorded their emotional response to technology usage, using the Self-Assessment Manikin (SAM) framework, “a non-verbal pictorial assessment technique that directly measures the pleasure, arousal, and dominance associated with a person's affective reaction to a wide variety of stimuli.”¹⁶ The SAM scale, illustrated in figure 11.2, helps students assess their levels of “pleasantness” (top row), “frustration” (middle row), and “control” (bottom row).

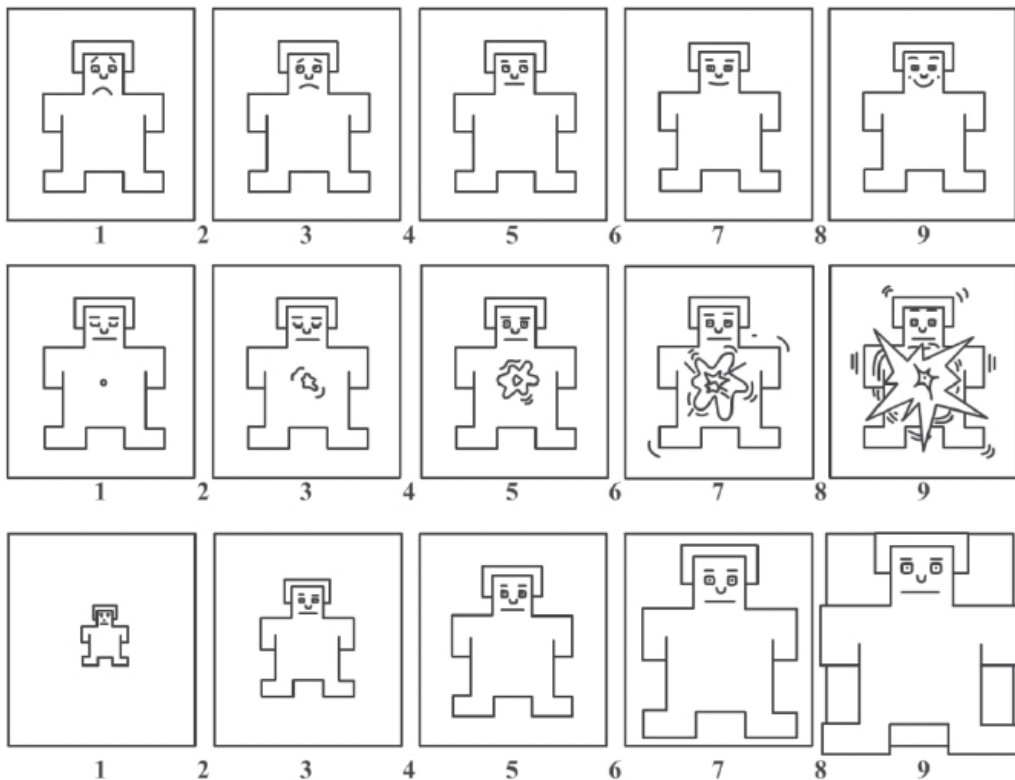


FIGURE 11.2

Self-Assessment Manikin.

This assignment happened relatively early in the semester, so many students reported that they didn't feel especially concerned about online tracking or privacy.

The emotional response patterns that students identified were that of pleasantness as it related to control—that is, when technology works as it should, they felt pleasantness and in control. When technology malfunctioned, their frustration rose. This assignment was an opportunity to set the stage for the remainder of the semester, as it established a baseline of technology usage, privacy thinking, and emotional response. When sharing the reports, we as librarians were able to highlight how pervasive technology and social media are in students’ lives and how the features and functions of these technologies can affect their well-being.

The diary study is particularly adaptable for course-embedded instruction. If a librarian has the benefit of working with students over two or three sessions, the librarian could assign the diary in the first session and then discuss results in the second session.

Assessment: How to Know That the Assignment Was Successful

We wanted this assignment to help students evaluate different technologies through a privacy lens. After completing the weeklong diary process, students were divided into groups of two or three to analyze their collective diaries and their diary reports, with a view toward detecting patterns and connections. In the reports, students discussed the similarities and differences between each of their experiences, including the technology they used, their emotional response, privacy considerations, and any patterns they identified.

These group reports were the main assessment strategy for the diary study assignment. Students submitted these reports alongside their diaries and diary reports, and these reports showed how the students had synthesized the information.

Value-sensitive Design Discussion

Key points

Learning outcome

- Critically analyze and evaluate the contribution of networked technologies to societal structures of control, power, and oppression, especially for marginalized communities.

When to use

- Semester-long credited course instruction. This activity is well-suited as a structured, small-group discussion occurring within a single class session.

- Course-embedded instruction. This assignment could be developed in collaboration with another faculty member, with the assignment completed by students during a single library instruction session.
- Virtual instruction. Breakout rooms would be well-suited as a way to organize students into small-group discussions.

How to assess

- During the class session, student observation and conversation can reveal engagement with the topic. Later in the semester, specific questions in self-evaluations can prompt students to think back and reflect on how this assignment has integrated into their overall learning.

Description

For this assignment, students worked in small groups to think ethically about the uses and possibilities of different technologies in their areas of study. We used the Envisioning Cards, a values-based design tool created by researchers at the University of Washington School of Information.¹⁷ Privacy can sometimes be a dense and abstract topic to explore. Tools like the Envisioning Cards help focus the conversation around one technology and one ethical point of consideration.

We introduced an activity using the Envisioning Cards as a way to prompt students' critical thinking around the potential consequences of a technology. This activity occurred toward the end of the first half of the course, while we were still building an understanding of technology ethics and society. The designers of the Envisioning Cards suggest the following use with students: "Have your students select a few Envisioning Cards to help guide them during a design project." Each Envisioning Card features a future-oriented consideration, such as "Crossing National Boundaries." For example, to complete this suggested activity, students consider a new technology that they might be designing, and then they imagine that the technology would cross national boundaries. Reflective prompts printed on each card help the students think through potential outcomes, as with the card dealing with national boundaries: "Nations have different rules, customs, and infrastructure that affect the use of a technology. What challenges will be encountered by your system if it is used in other countries?" Another Envisioning Card features the consideration of "Non-targeted Use," with the following reflective prompt: "Technologies are not always used in ways that the designers intended. Who might use the system for unplanned or nefarious purposes (e.g., frustrated stakeholders or an identity thief)? In what ways?" The Envisioning Cards contain thirty-two different considerations, including Diverse Geographies, Widespread Use, and Variation of Human Ability.

For our particular application of this ethical design tool, the students in our class showed an interest in image-based artificial intelligence (AI), so we built this assignment around that interest. We asked students to imagine a new “Image recognition AI system.” Students were grouped into groups of three, and we randomly distributed cards to each group. We spent thirty minutes in this small-group discussion activity, where students cycled through the cards and discussed this new technology in light of each ethical consideration. As instructors, we moved from group to group to observe the conversation and add our own thoughts when appropriate. Following the small-group activity, we re-convened together as a full class to share and discuss our insights.

This Envisioning Card activity can be replicated in a full-semester course, and it’s also especially suited to workshops and library instruction sessions focusing on privacy. The cards can be quickly understood and deployed to generate dialogue among students and faculty, and they are designed specifically to prompt values-based, ethical discussion around technology. In this context, privacy can be centerstage in the conversation. In a stand-alone workshop setting, for example, attendees can nominate an everyday technology to examine with the Envisioning Cards, such as Twitter and other social networking services, Face ID and other biometrics, or always-on location services that are active on many mobile phones. The Envisioning Cards can then structure a discussion of the potential uses and misuses of these technologies, which can then give rise to further discussions about how these technologies can be redesigned with ethics and privacy more in mind for the ultimate benefit of the real people who use the technologies.

Assessment: How to Know That the Assignment Was Successful

This assignment can be assessed both during the class session and later in the semester. As a formative assessment, the in-class assessment can take the shape of observations and conversations with students in their small groups. Interacting directly with the student discussions can reveal their engagement with the topic, including their personal insights and connections as well as any sticking points or questions that arise. In terms of an overall summative assessment, our course applied self-evaluation as a means of connecting all the dots of our class. If you are able to design and apply your own self-evaluation for the students, the self-evaluation questions can include prompts related to this assignment specifically to integrate the work of this assignment into the overall learning reflections of the students.

Privacy Awareness Campaign

Key points

Learning outcome

- Apply and critique strategies for personal privacy protection.

When to use

- Semester-long credited course instruction. For our course, this assignment was used as a closing assignment for the privacy unit. The assignment supports students' communicating the knowledge they had gained during the unit.
- Course-embedded instruction. This assignment may work best if the librarian has the benefit of working with students over two sessions. The librarian can assign the infographic in the first session and then guide the infographic presentations and peer review in the second session.
- Virtual instruction. For virtual instruction, the librarian could choose to keep the group aspect of this assignment or adapt the assignment so that each student creates their own infographic. Peer review could be completed asynchronously through written comments or synchronously via virtual breakout rooms or chat rooms.

How to assess

- We used peer review to assess this project. Students took notes during peer review sessions and then revised their infographics in response to the peer review.

Description

For this assignment, we asked students to design a privacy awareness campaign, with the goal of communicating about information privacy through an engaging and accessible campaign, in the form of an infographic. Students were paired into groups of two, and each pair was asked to provide an answer to the question, "How do you get your friends to care about privacy?" This assignment aimed to prompt students to apply and critique strategies for personal privacy protection and to communicate ideas using data visualization and infographics to build compelling, evidence-driven arguments. In class, we provided examples of relevant infographics and discussed what makes a compelling infographic—design, sources, and data visualization. Students had fun with this assignment and took it in many different directions. Some pairs focused on online tracking, others focused on specific social media platforms or technologies.

Appendix B contains the full assignment for the privacy awareness campaign.

Assessment: How to Know That the Assignment Was Successful

Once the infographics were finished, each pair of students presented their infographic in small groups (groups of four to six students, comprising two or three pairs). By presenting in pairs to a small group, we tried to ease the pressure on the students, while supporting peer feedback and sharing.

As preparatory reading, we provided students with resources on thoughtful peer review, and we asked students to respond with questions and comments after each infographic presentation. We suggested some prompts, such as:

- Is the information identified important and compelling?
- Is the infographic convincing? Does it provide information about the topic while piquing your interest to learn more?
- Does the infographic speak clearly to its intended audience (your friends and families)?
- Do the visual elements clearly and concisely communicate key concepts, essential information, and compelling knowledge?
- Are the sources credible and clearly cited?

Students took notes during their peer review sessions, and then each pair of students revised their infographic in response to the peer feedback.

INSTRUCTOR REFLECTIONS

We would like to close with a self-reflective assessment that looks back on our experience as teachers. We apply a version of self-reflective assessment previously discussed, involving dialogue and shared perspectives, with a view toward understanding and improving our experience as teachers.¹⁸ We focused our reflection on three thematic areas: the rewards of teaching, the relationship between credit-bearing teaching and library work, and student experiences. We offer these reflections as points of reference in planning credit-bearing courses or implementing privacy-focused assignments.

Rewards of Teaching

Academic librarianship affords the opportunity to develop meaningful pedagogical relationships with students. By teaching a semester-long course, we felt the reward of this opportunity. Our students brought a curiosity and creativity to the course topics, and we felt energized to work directly with students over a sustained

period. In addition to the in-class experience and connection with students, we also found curriculum development to be a rewarding challenge. We taught a new course of our own design, involving learning outcomes, assignments, assessments, readings, and syllabus design. As we developed and taught the course together, we also found co-teaching to be a rewarding experience. We co-created ideas for the course, collaborating with each other and the students to cultivate a shared classroom experience. We deployed a number of hands-on activities with the students that dovetailed with our library practice. As librarianship is a collaborative, practice-based profession, teaching a course in a similar way was a suitable and fulfilling extension of our expertise. The new pursuits of credit-based instruction were stimulating, but they also came with a set of barriers that should be acknowledged and addressed.

Credit-bearing Courses and Library Work

The main barrier we experienced was a tension between credit-bearing instruction and the practice of everyday library work. While some librarians regularly teach semester-long, credit-based courses, this type of work is not commonly represented in the job duties of most librarians. And librarian workdays are typically structured more according to the needs of library operations and less to the needs of course schedules. The five-day-a-week work structure that characterizes librarianship—comprising a steady flow of meetings, emails, projects, and collaborations—doesn't naturally lend itself to the work structure of credit-based courses, which center on short, intensive class sessions that occur every other day. In some important structural ways, our credit-based teaching was in tension with the duties and expectations of our ongoing and regular library projects. Most critically, the class necessarily became our top priority in terms of time and effort. The class sessions each week functioned as intense, high-stakes meetings that could not be missed. There was preparation and a debrief before and after each session, along with evaluation and feedback for the students. We needed to balance these new high-priority tasks with our ongoing library projects and collaborations, and this meant that projects were delayed so that we could accommodate the needs of the course and the students. We attempted to communicate early and clearly with our collaborators and supervisors about the shifting workload that teaching necessitates. But practically, we found it an ongoing challenge to balance the workloads of teaching and librarianship. When we next approach this work, we will follow a thorough and careful planning process that accommodates ongoing duties, workloads, and expectations before, during, and after the semester. In light of these questions around the integration and sustainability of credit-based teaching, we

were motivated in this chapter to reframe our assignments as stand-alone activities that can be applied in different settings more common to library teachers, such as workshops and course-embedded instruction.

We also reflected on how teaching this course affected perceptions of the library at our university. We found that teaching the course served to promote the library's interest and expertise in privacy. Credit-bearing courses are widely understood across campus, and our course was seen by many other faculty and administrators as it underwent the extensive review process for approving the course. But there is a double edge that we reflected upon. The library, as a unique entity on campus, can often be misunderstood. Our wide-ranging and diverse areas of responsibility—from collections to spaces to metadata to scholarly communication—do not conform to templates readily available to other degree-granting units whose faculty mainly teach courses. By presenting ourselves as teaching credit-based courses, we could lead others to assume that we in the library also mainly teach courses or that we should be teaching even more credit-bearing courses. In an environment where we wish to present the unique contributions of the library as a strength and a value that we uniquely provide to the university—indeed, no other campus unit does the work of the library—we were cognizant of the possibility that teaching credit-based courses could potentially confuse non-librarians as to the work of the library. With that in mind, a thoughtful outreach message could be crafted that positions credit-based courses as a complement to the full suite of library activities, thereby enriching the story of the library by expanding the ground on which we work.

Student Responses

Finally, we reflect on the student experience. Through student self-evaluations, we learned that students experienced a sense of community in the class. As we aimed for this outcome through our small-group, dialogue-based, interactive activities, we viewed this as a positive outcome. Students also shared that their privacy skills and know-how improved over the semester, an outcome that also met our teaching goals. A few students expressed a desire to learn more about the historical and legal issues of privacy. In the future, we may consider integrating more readings and discussions about court decisions and the cultural history of privacy in America and the West, drawing particularly from a recent volume on the subject.¹⁹

One aspect that we especially noted involved the emotional impact of learning about privacy. Many students were not aware of the extensive tracking, data sharing, and other privacy-violating practices that are built into everyday software and hardware. At a point early in the semester, after we had discussed the socially

harmful aspects of technology—thereby complicated existing ideas of technology as an inherent good—students found themselves in a valley of despair, unsure of how to proceed with this new knowledge about their favorite devices and websites. We realized that we needed to attend to this experience and carefully bring students back to a balanced place of using technology but with a more aware and responsible application. In retrospect, we could have provided a softer landing and further guidance for students as they came to a fuller realization of technology’s positive and negative aspects.

We’d like to close this reflection by sharing excerpts from student feedback that illustrate the student experience:

- “I learned plenty of privacy and ethics skills along the way in this class. Of course I learned the more practical skills, like downloading ad blockers, adjusting Facebook privacy settings. But the most interesting things to learn were the deeper principles behind privacy policies and technology ethics. When we discussed how privacy violations impacted populations differently, we were able to delve into how to define a right and where those rights come from.”
- “Building community with my classmates was a great joy. The class was full of interesting people with very cool input.”
- “As an emerging computer scientist ...to have this ethical discussion with me for the rest of my career will likely change the way I may view some of the code I have to write.”
- “Before taking this class, I had no idea how little control I had over my privacy or how at-risk my everyday actions put me.”
- “One of my biggest lightbulb moments this semester was learning about the information that big data corporations collect on the average citizen.”
- “This semester, I developed ethics and privacy skills that assist me in making informed decisions about my privacy and how I choose to treat the privacy of others.”

CONCLUSION

In this chapter we presented a brief discussion of key points of consideration for approaching a credit-bearing instructional context: librarian-teacher identity, student-centered pedagogies, and assessment. We also described three student assignments that can be remixed and reused in different settings for teaching about privacy. First, a diary study guides students through the evaluation of networked technologies, including algorithms, artificial intelligence, the web, and social

media. Second, a value-sensitive design discussion supports critical analysis and evaluation of the contribution of networked technologies to societal structures of control, power, and oppression, especially for marginalized communities. Third, a student-designed privacy awareness campaign gives students an opportunity to apply and critique strategies for personal privacy protection. Altogether, these assignments help encourage students to engage critically and practically with today's technologies from a viewpoint of privacy. The content of our course is applicable in many different instructional contexts, including credit-bearing courses, one-time instructional sessions or workshops, multi-session course-embedded instruction, and virtual settings. By designing assignments around a learner-centered pedagogy, students are able to engage deeply and think critically about the landscape of privacy. Assessment strategies are also focused on learner-centered outcomes; we suggest that instructors observe and converse with students, and we also suggest student self-evaluation and student peer review as key assessment measures. We concluded with a self-reflective assessment of our experience as teachers. The assignments described in this chapter can support students' individual privacy protection, as well as emphasize the complexities of privacy in our data-driven society, encouraging students to think beyond individual privacy protections toward bigger-picture, community-oriented privacy advocacy.

ACKNOWLEDGMENTS

We wish to express gratitude to MT Regan, an essential collaborator on library instruction and assessment. And we thank the students enrolled in our course for their interest and curiosity in privacy and ethics.

APPENDIX A

ASSIGNMENT INSTRUCTIONS FOR THE DIARY STUDY

Instructions for Students, Part 1

For a period of one week, please record your daily technology usage, using the diary template spreadsheet provided by the instructors (See Appendix X).

- There is a row for each technology and a column for each day, along with a set of rows that will record your emotional response to technology usage.
- We have created a list of some common technologies. Please add to the list as necessary by adding a row to the spreadsheet.
- At the end of each day, you will record two main entries:
 - Technology usage: make an X in the spreadsheet beside each technology that you used that day.
 - Emotional response: using the visual scale linked in the spreadsheet, record from 1–9 how you felt that day using technology.
 - Pleasantness: How pleasant was your technology usage that day?
 - Frustration: How frustrated did you feel when using technology that day?
 - Control: How in control did you feel when using technology that day?
 - Please feel free to take notes that provide further context for your responses.
- After you complete your diary study, we will share, analyze, and discuss your diaries in class—both in small groups and as a whole class. We will look for patterns and reflect on individual and collective technology usage.

Instructions for Students, Part 2

Overview

- What was your overall experience tracking your networked technology usage?
- How did your technology usage factor into your emotional responses each day?

Technology usage

- What did you learn from tracking your networked technology use?
- How prevalent are networked technologies in your life?
- Did the act of tracking your networked technology use affect your technology use?
- Are there technologies that you're more or less comfortable using?
- Are there technologies that caused more emotional response than others?
- How did your use of networked technologies compare to your partner and to that of your aggregated classmates?
- What algorithms did you encounter throughout the week? How did they shape or direct your behavior?

Emotional response

- What factors contributed to the feelings of pleasantness, frustration, and control when you were using technology?
- Were there some days that were outliers on the scale for pleasantness, frustration, and control (higher or lower emotional response to technology)? What caused these?
- How do your emotions surrounding technology affect your technology use—both immediately and over the course of the week?

Privacy

- How did some of (or all of) the networked technologies you use track your usage?
- Did you read privacy policies or terms of service agreements to fully understand and consent to data collection?

- How do you feel about your privacy as related to each of the networked technologies that you used this week?
- Why do you or don't you use privacy-protecting technologies?

Patterns

- Technology usage: Describe the key patterns that appear in your technology usage, both in relation to your partner and to the class. Describe why you used or didn't use each technology.
- Emotional response: Describe key patterns that appear in your emotional response, both in relation to your partner and to the class. Describe why you felt pleasantness, frustration, or control on each day.
- Privacy protection: Describe key patterns that appear in your privacy practice. How do you or don't you achieve privacy? What are the key drivers of your behavior?
- What patterns do you see in the data as a whole, both in your diary and in the aggregated class data?
- What patterns do you see within each category of technology?

APPENDIX B

ASSIGNMENT INSTRUCTIONS FOR THE PRIVACY AWARENESS CAMPAIGN

1. Research

- Familiarize yourself with the infographics genre. Explore other infographics related to topics we've discussed in class to better understand which elements and layouts are important for creating a visually appealing, compelling, and clear message.
- Explore the topic by reading a variety of sources regarding networked technologies, big data, and privacy.
- Include references to at least 5 sources. These sources should include:
 - o 2 peer-reviewed articles
 - Library guide about finding sources: Search for Articles, Books, & More - MSU Library Research Guide (<https://guides.lib.montana.edu/libraryresearch/findsources>)
 - When using CatSearch (the main search on <https://www.lib.montana.edu/>), use the options on the right to select only Peer Reviewed Journals.
 - Academic Search Complete is a good all-purpose database, and it has a box you can check to limit your results to only peer-reviewed articles (<https://guides.lib.montana.edu/asc>).
 - o 3 other sources such as news articles, reports, podcasts, and videos

2. Synthesis

- What essential information about the topic do you want your audience to understand? What are the most compelling pieces of knowledge about your topic? Write down the key concepts and compelling information about your selected topic. Your infographic will include visual elements to clearly and concisely communicate key concepts, essential information, and compelling knowledge to your audience of friends and family—make sure that the information you identify is the most important and most compelling.

3. Sketch

- Before you begin creating your infographic with the infographic software of your choice (see 4. Design for some options), it is a useful conceptual exercise to sketch your infographic. What is the story you are going to tell? Grab a pen, pencil, crayons, or other writing implements and visually organize your key concepts on paper. Draw a flowchart that shows what order the data should be presented.
 - o Begin with a compelling title that tells your story or conveys your message.
 - o Identify the main issue.
 - o Present persuasive facts and figures.

Discuss strategies to address the issue. 4. Design

- Log into your infographics app and familiarize yourself with the tool.
 - o Some app options (but feel free to choose a different app if there's one you like better)
 - Canva (<https://www.canva.com/create/infographics/>)
 - Piktochart (<https://piktochart.com/formats/infographics/>)
 - Visme (<https://www.visme.co/make-infographics/>)
- Modify an existing template or begin with a blank canvas.
- Search for new graphical elements to include (e.g., charts, maps, icons, pictures, tables) that are well-matched with the information you've researched and synthesized about the topic.
- Design constraints: 3–5 visual elements and less than 250 words. All of your visual elements should not just be images; instead, please create at least 1–2 data visualizations such as charts, graphs, word clouds, or other figures. These visuals should provide evidence that supports the ideas of the infographic.

5. Submit and share

- Please submit a PDF version of your infographic.
- We will print your infographics for sharing and discussing in class.

NOTES

1. Matthew T. Regan, Scott W. H. Young, and Sara Mannheimer, "Improving Learner-Driven Teaching Practices through Reflective Assessment," *Evidence Based Library and Information Practice* 15, no. 3 (September 15, 2020): 59–77.
2. Gretchen V. Douglas, "Professor Librarian: A Model of the Teaching Librarian of the Future," *Computers in Libraries; Westport* 19, no. 10 (December 1999): 24–30.
3. Martha Fallahay Loesch, "Librarian as Professor: A Dynamic New Role Model," *Education Libraries* 33, no. 1 (2010): 31–37.
4. Scott Walter, "Librarians as Teachers: A Qualitative Inquiry into Professional Identity," *College & Research Libraries* 69, no. 1 (January 1, 2008): 51–71.
5. Pauline Wilson, "Librarians as Teachers: The Study of an Organization Fiction," *The Library Quarterly* 49, no. 2 (1979): 146–62.
6. Nicole Pagowsky and Erica DeFrain, "Ice Ice Baby: Are Librarian Stereotypes Freezing Us out of Instruction?," *In The Library With The Lead Pipe* (June 2014).
7. Emily Drabinski, "Becoming Librarians, Becoming Teachers: Kairos and Professional Identity / Devenir Bibliothécaire, Devenir Enseignant : Le Kairos et l'identité Professionnelle," *Canadian Journal of Information and Library Science* 40, no. 1 (2016): 27–36.
8. Scott W. H. Young, Paige Walker, Shea Swauger, Michelle J. Gibeault, Sara Mannheimer, and Jason A. Clark, "Participatory Approaches for Designing and Sustaining Privacy-Oriented Library Services," *Journal of Intellectual Freedom & Privacy* 4, no. 4 (July 31, 2020): 3–18.
9. Regan, Young, and Mannheimer, "Improving Learner-Driven Teaching Practices."
10. Jane Danielewicz and Peter Elbow, "A Unilateral Grading Contract to Improve Learning and Teaching," *College Composition and Communication* 61, no. 2 (2009): 244–68.
11. Miriam Posner, "Contract Grading," *Miriam Posner's Blog: Digital Humanities, Data, Labor, and Information* (blog), 2015.
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13. Jesse Stommel, "Compassionate Grading Policies," *Jesse Stommel* (blog), January 3, 2022.
14. Scott W. H. Young and Sara Mannheimer, "Information Ethics and Privacy in the Age of Big Data – Syllabus," Montana State University, 2018.
15. Kim Salazar, "Diary Studies: Understanding Long-Term User Behavior and Experiences," Nielsen Norman Group, June 5, 2016.
16. Margaret M. Bradley and Peter J. Lang, "Measuring Emotion: The Self-Assessment Manikin and the Semantic Differential," *Journal of Behavior Therapy and Experimental Psychiatry* 25, no. 1 (March 1994): 49–59.
17. Batya Friedman, Lisa Nathan, Shaun Kane, and John Lin, "Envisioning Cards," Value Sensitive Design Research Lab at the Information School at the University of Washington, 2011.
18. Regan, Young, and Mannheimer, "Improving Learner-Driven Teaching Practices."
19. Sarah E. Igo, *The Known Citizen: A History of Privacy in Modern America* (Harvard University Press, 2018).

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