

CHAPTER 8

DEVELOPING AGENCY IN METALITERATE LEARNERS

EMPOWERMENT THROUGH DIGITAL IDENTITY AND PARTICIPATION

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Trends in higher education have been moving toward pedagogical practices that encourage student agency by trading lectures for discussions, flipping classes, and decentralizing the classroom through collaborative learning models. In academic libraries, the movement toward metaliteracy mirrors this transformation. According to Thomas Mackey and Trudi Jacobson's seminal article "Reframing Information Literacy as a Metaliteracy," the concept of metaliteracy "promotes active engagement with emerging technologies and learner-centered production of information."¹ In addition to collaborative information production, metaliteracy emphasizes student empowerment and agency by decentralizing the class and reaching out beyond the classroom into online communities.

Although library faculty at Keene State College lead one-shot and two-shot sessions, as do most academic librarians, we also have the benefit of teaching full courses. Highly influenced by the scholarship on metaliteracy and participatory models of pedagogy, two library instructors, Irene McGarrity and Jennifer Ditkoff, designed and taught the four-credit course II 399: Digital Identity and Participatory Culture. In designing the course, the instructors decided that students would lead the content and create the assignments. Students would also engage with participatory communities and social networks outside of the classroom. In this chapter, I provide background on student-centered learning, collaborative learning, participatory culture, and metaliteracy

in higher education. I discuss the challenges and implications of II 399: Digital Identity and Participatory Culture and suggest ways that academic librarians and disciplinary faculty might experiment with student-led content and student-created assignments in their attempt to empower and instill a sense of agency in metaliterate learners.

STUDENT-CENTERED LEARNING

Student-centered or learner-centered education has become a dominant mode of pedagogy over the past twenty years. In their 1995 article “From Teaching to Learning—A New Paradigm for Undergraduate Education,” Barr and Tagg state, “A paradigm shift is taking hold in American Higher Education.”² The *Greenwood Dictionary of Education* defines student-centered instruction as a model in which students influence the “contents, activities, materials, and pace of learning. This pedagogical model places the learner in the center of the learning process.”³ Student-centered learning is rooted in a constructivist philosophy of education founded by developmental psychologist Jean Piaget.⁴ According to constructivism, knowledge is created through an interaction between a learner’s previous experiences and new information. The learner is active rather than passive, constructing meaning rather than accepting it. Although much constructivist scholarship is focused on early education, constructivism is applied widely to college teaching as well. Barr and Tagg make the important distinction between “providing instruction,” a traditional role of higher education institutions, and “producing learning,” a new and preferred role; the traditional approach is the “Instruction Paradigm” and the new approach is the “Learning Paradigm.” Barr and Tagg state:

For many of us, the Learning Paradigm has always lived in our hearts. As teachers, we want above all else for our students to learn and succeed. But the heart’s feeling has not lived clearly and

powerfully in our heads. Now, as the elements of the Learning Paradigm permeate the air, our heads are beginning to understand what our hearts have known.⁵

In the Learning Paradigm, rather than charging instructors with transferring their knowledge to students, a college's role is to "create environments and experiences that bring students to discover and construct knowledge for themselves, to make students members of communities of learners that make discoveries and solve problems."⁶ This represents a radical departure from traditional lecture-style, content-focused college learning experiences.

In his book *Becoming a Critically Reflective Teacher*, Stephen Brookfield emphasizes the importance of challenging assumptions that we, as teachers, carry into the classroom and into our interactions with students. What we take for granted as best practice or in the best interest of the student may simply be an assumption that serves neither the student nor the teacher.⁷ In her text *Learner-Centered Teaching: Five Key Changes to Practice*, Maryellen Weimer identifies five areas in which traditional pedagogical practice needs to change: the balance of power, the function of content, the role of the teacher, the responsibility for learning, and the purpose and process of evaluation.⁸ In her discussion about the balance of power, Weimer reflects on the political implications of a learner-centered versus teacher-centered classroom. The connection between education and politics was primarily initiated by Paulo Freire's seminal work *Pedagogy of the Oppressed*, first published in 1968, which brought attention to the power dynamics at play in the classroom.⁹ Freire pointed out that the "banking model of education" treats students as empty receptacles to be filled by the all-knowing instructor. The banking model of education does not treat the learner as an agent, but as a passive recipient of facts, information, assignments, directions, and,

finally, grades. Learner-centered approaches treat students as co-creators of knowledge. Freire challenged a method of pedagogy in which “knowledge is a gift bestowed by those who consider themselves knowledgeable upon those who [sic] they consider to know nothing.”¹⁰

About power dynamics in the classroom, Weimer suggests that “to be truly learner-centered, we must begin with greater insight into the role of power in our classrooms: who exerts it, why, and with what effects and what benefits.”¹¹ Weimer notes that although students do need a certain amount of structure and direction from teachers, the particular ways in which teachers control the classroom often benefit the teacher, not the learner. As an alternative power structure, Weimer offers a shared model: “When teaching is learner-centered, power is shared rather than transferred wholesale. Faculty still make key decisions about learning, but they no longer make all decisions and not always without student input.”¹²

In learner-centered practices, the instructor is recast as a facilitator rather than as an all-knowing professor. In her article “Sage on the Stage to Guide on the Side,” Alison King describes the shift from instructor to facilitator: “The professor is still responsible for presenting the course material, but he or she presents that material in ways that make the student do something with the information—interact with it—manipulate the ideas and relate them to what they already know.”¹³ Students’ knowledge, insight, and experience should be central to the learning situation rather than peripheral or left out altogether. Weimer notes that despite our best efforts, instructors are still often disseminating rather than facilitating. This is most easily observed in the kinds of questions students often ask us: What do you want in this assignment? How do you want

me to do this? After a K–12 experience in which students’ own experiences, insights, and judgments were often not part of the educational process, they have difficulty making the shift to an environment in which success hinges upon those very experiences, insights, and judgments.

Another shift in learner-centered pedagogy is reflected in the changing role of a student’s peers or classmates. Rather than being fellow passive recipients of knowledge instilled by the professor, peers have become cocreators of knowledge and, potentially, teachers. In Lev Vygotsky’s social constructivism, there is an inherent social nature to learning. Meaning is constructed through a process of collaborative inquiry.¹⁴ People in a collaborative learning situation are accountable to, and responsible for, one another. The collaboration can take place between two students or between a student and an instructor. Connectivism, a learning theory developed by George Siemens, recognizes that “technology has reorganized how we live, how we communicate, and how we learn.”¹⁵ The Internet is inherently a collaborative space where people can meet virtually and participate in activities, conversations, and knowledge creation synchronously or asynchronously. The static roles of creator and consumer, expert and novice have become more fluid. The learning environment has expanded well beyond the classroom. In connectivism, the individual is just the starting point for learning. Networks and communities are integral to the learning process. Similarly, participatory culture, a concept that has grown out of new media scholarship, “shifts the focus of literacy from one of individual expression to community involvement”¹⁶; participatory culture scholars aim to take an “ecological approach, thinking about the interrelationship among all these different communication technologies, the cultural communities that grow up around

them, and the activities they support.”¹⁷ Henry Jenkins defines a participatory culture as one with low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and a process of informal membership whereby knowledge is passed from the most experienced to novices. Members should also believe that their contributions matter and they should care, at least somewhat, what others in the group think about their contributions.¹⁸ Applying these criteria to a classroom setting facilitates an environment that is supportive of all members and relatively flat in terms of power structure. The instructors who designed and taught II 399: Digital Identity and Participatory Culture were greatly influenced by participatory culture, connectivism, and social constructivism in the conception of the course.

INFORMATION LITERACY TO METALITERACY

The shift from information literacy to metaliteracy in academic libraries runs parallel to the evolution of learner-centered, collaborative, and participatory models of education. The concept of information literacy has undergone much revision and evolution in the past forty years due largely to the drastic changes in the information and technology landscape. New technologies that make it possible to transmit data to millions of people with the click of a button, along with the ease with which people are able to connect, collaborate, and publish online, have caused scholars and theorists from all disciplines to rethink the concept of information literacy and identify a multiplicity of other literacy types—media literacy, visual literacy, and cyberliteracy are just a few examples.

Greg Bobish’s constructivist approach to integrating information literacy and Web 2.0 tools shows the connection between learner-centered and participatory pedagogy.¹⁹ Bobish notes that Web 2.0 tools, “if used thoughtfully in information literacy

instruction, are not simply the latest flashy trend, but can have a solid pedagogical basis that enhances student learning while at the same time making connections with technologies that are already being used for research purposes and in daily life outside of the classroom.”²⁰ Bobish’s and other approaches to information literacy instruction that acknowledge and make use of online networks mark a clear paradigm shift. Although traditional information literacy instruction certainly acknowledges the Web, for example, in a website evaluation session or in a session that explores the authority of online sources, the instruction is still based heavily on the values of print culture. Students are either implicitly or explicitly told not to use *Wikipedia*, not to trust Web sources, and to privilege traditionally published academic books and peer-reviewed articles over all other types of sources. The importance of collaboration and shared responsibility for the end product is also a notable departure from information literacy sessions centered around individual students’ research papers.

When Mackey and Jacobson published “Reframing Information Literacy as a Metaliteracy,” academic librarians found a language, and a framework, with which to understand the shift in thinking about instruction and social technologies. In addition to using learner-centered pedagogy and asking instructors to facilitate rather than teach, metaliteracy incorporates the emergence of social media and social models of knowledge creation: “Within this context, information is not a static object that is simply accessed and retrieved. It is a dynamic entity that is produced and shared collaboratively.”²¹ Metaliteracy considers information literacy in a collaborative, participatory, digital environment. Metaliteracy also moves beyond the skills-based approach of information literacy and encourages an inquiry-based model of learning. In this context, learners can

“take control of their lives and their own learning to become active agents, asking and answering questions that matter to them and to the world around them.”²²

The paradigm shift from information literacy to metaliteracy has inspired librarians to make changes at the macro level in their information literacy programs and on the micro level in their lesson plans and classroom activities. The librarians at Keene State College have transformed how we work with disciplinary faculty and our role on campus as a whole. The movement toward metaliteracy has been the primary inspiration for these changes.

INSTITUTIONAL CONTEXT

The approach to information literacy instruction at academic libraries has undergone a tremendous transformation over the past several years, and the library at Keene State College is no exception. Like many other academic librarians, the library faculty at Keene State College decided to move toward a train-the-trainer model of information literacy instruction. Hartman, Newhouse, and Perry describe the process of transitioning to this model in their work with an introductory biology lab.²³ The librarians in this study found that a model of one-shots was not sustainable, which is similar to the predicament that many other academic librarians face. There is a growing sense among librarians that they do not need to, and indeed should not, own information literacy instruction. Mackey and Jacobson note that the transition from information literacy to metaliteracy “challenges us to think beyond the library as the sole provider for information literacy instruction and instead to envision metaliteracy as embedded through the curriculum and supported by the entire institution.”²⁴

This is a difficult shift, particularly for academic librarians who only five or ten years ago pushed for required one-shots, two-shots, or embedded models of information literacy in their institutions. The work those librarians did to institute programs is valuable in that it brought to light the necessity of information literacy and made it an integral part of instruction. Nonetheless, continuing to function in that model does a disservice both to students and to librarians. Librarians often cannot sustain teaching so many one- or two-shot sessions, and the pedagogical implications of teaching the same session twenty or even forty times in one semester are dire. Functioning under the requests of faculty members who may want only skills-based information sessions that provide students with basic database demos and information about the library is stifling to many librarians. Just as students need to be empowered, so do librarians. Furthermore, continuing in this model enforces the idea that information literacy is a skill that can be taught in one or two sessions. Exposing students to repeated library sessions conflates research skills and information literacy. It can also turn students against the library because of the seemingly needless repetition of sessions. A colleague of mine once received a student evaluation from an information literacy session with the comment “I’m so sick of these database sessions. I HATE the library!”

Our attempts at Keene State College to move to a train-the-trainer model and to shift from teaching information literacy skills to integrating metaliteracy across campus have taken several different forms. Library faculty discontinued required, course-integrated information literacy sessions within the Integrative Thinking and Writing (ITW) program. Before that change, library faculty conducted two or three sessions in each ITW class. Those sessions focused on concept mapping, identifying scholarly

sources, and database search strategy. The overall impression from several years of doing these course-integrated sessions is that they were ineffectual. Because research is a recursive process requiring metacognition, it cannot be addressed in a few compartmentalized library sessions. The timing of the sessions would often be inadequately aligned with course assignments to actually benefit the student.

Collaborating with disciplinary faculty was often challenging for a variety of reasons. Some faculty members were resistant to working with the library at all because they didn't want to relinquish valuable time in their classes. Others wanted to limit their class's interactions with the library to basic database tutorials, rather than allowing for lessons that created opportunity for critical thinking about information. Some faculty wanted information sessions about the library itself, focusing on services like interlibrary loan, logging in from off campus, checking out laptops, and hours of operation, rather than cognitive and affective aspects of researching and interacting with information. The timing of the sessions was often an issue. Faculty would schedule sessions too early or too late in the research process, making the content of the sessions not applicable or beside the point. Finally, and most importantly, these sessions often did not result in the desired outcome, namely, for students to use more scholarly, in-depth sources for their research papers.

This embedded model used too much of the library faculty's time and energy without benefiting the students, the faculty, or the institution. Currently, the information literacy librarian provides instructional consultations and workshops for ITW faculty so that they can incorporate lesson plans related to information evaluation and database search strategy into their own courses. In addition, we maintain a "Faculty DIY" page of

resources on the Keene Info Lit Bank that instructors can mine for activities that support research skills acquisition and higher level abilities to evaluate and contextualize information.²⁵ Instead of conducting sessions in ITW, library faculty now teach sections of the credit course. This gives library faculty time and space to develop metaliteracy with students throughout the semester.

Other collaborative ventures are also attempting to address the changed model. Two library faculty members recently started a Research and Technology Fellows program in which students are intensively trained to provide in-class research assistance and basic database demonstrations. We have also begun to design online modules in the Canvas course management system that are based on the new ACRL (Association of College and Research Libraries) *Framework for Information Literacy for Higher Education* as well as basic research skills outcomes.²⁶ The goal is to eventually replace one-shots with the online modules. We also hope to use the modules in conjunction with face-to-face teaching in a blended or flipped model.

Another exciting initiative is the development of the Information Studies minor, which is slated to begin in fall 2015. Because Keene State College allows faculty to design and teach experimental courses for one semester before the course is required to be officially approved, we were able to offer II 399: Digital Identity and Participatory Culture, one of the courses in our Information Studies minor, in the fall of 2014 as an upper-level, experimental, interdisciplinary course.

METALITERACY CASE STUDY

The instructors planned II 399: Digital Identity and Participatory Culture to focus students' attention on digital identity creation along with social and ethical implications

of living and interacting online. The instructors wanted to encourage students to critically analyze the online worlds where they interact daily. From a pedagogical perspective, we determined to embody the core components of metaliteracy: collaboration, technology-enhanced learning environments, and learner-centered teaching. We wanted students not only to think about and consume technology but also to engage and create with it.

Finally, we wanted to facilitate a sense of agency in students by giving them more control and decision-making power over course content and assignments. Mackey and Jacobson note, “This shift from a linear instruction mode to a decentered learning style focuses on the choices made by the student and reflects the nonlinear format of online spaces.”²⁷

The idea to experiment with student-led content and student-created assignments evolved as we conceptualized the class. The two instructors had attended a campus event in which a graphic design professor described his experience teaching a student-run course. At the beginning of the semester, the students generated a series of projects that required the utilization of technology like Vine, a video-making platform that creates six-second videos, and mapping apps that would track their route through the town of Keene. In addition to experimenting with technology, students reflected upon their experiences using the technology and the self-directed nature of the course. One of the library faculty members, Jennifer Ditkoff, had also been previously inspired by Jim Groom’s DS106 Digital Storytelling course, which he describes as “part storytelling workshop, part technology training, and, most importantly, part critical interrogation of the digital landscape that is ever increasingly mediating how we communicate with one another.”²⁸ Metaliteracy scholarship along with collaborative models of learning, such as team-based and inquiry-based learning, motivated the other library faculty member, Irene McGarrity,

to envision a new approach to the course. Influenced and inspired in multiple ways, these two instructors embarked upon the course.

In 2009, Tyma described his experience leading a media literacy course that provided insight into the process of seeking student input while maintaining some control in the class.²⁹ He notes that one of the challenges with trying to change from a top-down to a shared power structure is that grades are due at the end of the semester, and the instructor is the one responsible for determining those grades. Because of this, “the truly egalitarian classroom . . . may not be possible, at least not until a cultural shift occurs within the educational structure as a whole.”³⁰ This tension between student-led content and assignments and instructor-determined grades was one of the major challenges the two instructors faced with designing and teaching this course.

Another challenge of implementing a learner-centered pedagogy is student resistance. The two instructors were both well aware that students may not easily embrace learner-centered approaches. Maryellen Weimer describes how students’ lack of confidence can create an obstacle to learner-centered practices:

The [students] in my classes are hopeful but generally anxious and tentative. They want all classes to be easy but expect that most will be hard. They wish their major (whatever it might be) did not require math, science, or English courses. A good number will not speak in class unless called on. Most like, want, indeed need, teachers who tell them exactly what to do. Education is something done unto them. It frequently involves stress, anxiety, and other forms of discomfort.³¹

Agency is about empowerment, but it’s also about responsibility. For those students who are trained as passive recipients of knowledge and learning, the prospect of making decisions about their learning can be paralyzing. The instructors believed that facilitating

students' ability to transcend these fears and become more self-directed was one of the most important outcomes of the course.

After reflecting on how best to facilitate the student task creation, the instructors developed an assignment to create an assignment. It included two sample rubrics to encourage students to design their own. The instructors wanted students to become more aware of their own learning through the construction of the activities, rather than rote completion of activities as in a traditional class. The instructors felt it was important that students take responsibility for how assignments would be evaluated, which would address some of the top-down power dynamics inherent in the traditional instructor-generated grading system. Once the students had submitted their assignments, the instructors taped them up around the classroom. Students reviewed each assignment and voted on their favorites with sticky notes. This process gave students insight into the thought processes and creativity of their peers. The instructors selected the assignments with the highest number of votes and built those into the rest of the course. Before the voting took place, students assumed that everyone would vote for their own assignment, but because students were so engaged in the work of their peers, they ultimately voted for the assignment that they found most interesting. The assignments that students created were quite diverse. Four are described here:

- A Vine contest: Vine is a short-form video-sharing service. Videos are six seconds long and they loop, displaying the same six-second clip repeatedly. In groups, students create vines based on the theme "Man I'm glad I went to Keene State." The group responsible for the vine voted best in the class would be exempt from one assignment.

- Spotify playlists: Spotify is a streaming music service that allows users to create playlists. Students created Spotify playlists that represented different aspects of their digital identities and shared them on their blogs. Students were instructed to comment on one another's playlists.
- Meaningful blog post: Students all kept blogs as part of the Digital Identity and Participatory Cultures course. Some used Tumblr and others used WordPress. For this assignment, students wrote a post about a particular cause or social movement that they were passionate about and that has been widely discussed on social media.
- Social media friend analysis: In this assignment, students looked at their social media accounts and analyzed the virtual friendships in comparison to their analog friendships. The assignment required them to describe in blog posts the depth of those relationships.

The other student-led portion of the course consisted of students working in teams that planned and led three days' worth of classes with content and activities related to a particular theme. The instructors taught the first five weeks of the course to lay the conceptual foundations: participatory culture, digital identity, privacy, online anonymity, and information ethics. During these weeks, the instructors provided the students with some examples for how they might convey their own content and lead the class.

Students brainstormed topics in small groups during class and through a threaded discussion. The instructors analyzed all of the topics and developed six key themes: psychology of Internet use, law and the Internet, creativity and the Internet, education and the Internet, online activism, and online careers. Once the themes were identified,

students were put into groups based around their first, second, and third choices of theme, and the groups were given an assignment for developing course material. The assignment provided some structure about how to focus the content and offered suggestions for teaching methods.

The student-led content and student-created assignments, including the assignment to make an assignment, counted for 50 percent of the grade. This raised some concerns for the two instructors, particularly because the assignments and the content were all developed ad hoc during the course. The instructors didn't know what those assignments would be or what content the students would choose to present until a few weeks into the semester. Nevertheless, because both instructors felt strongly about empowering students and working with a shared power structure, it seemed important to dedicate a large percentage of class points to assignments and content of the students' choosing.

APPLICATION OF METALITERACY LEARNING OBJECTIVES

The instructors understood that empowering students would require more than just the development of creative assignments and a bit of intentional class design. The instructors anticipated that teaching the course would require trial and error, constant reinforcement, and, of course, some failures along the way; however, both were excited to encourage students to engage in self-directed learning that would ultimately empower them. The metaliteracy learning objectives on the Metaliteracy.org website provided much assistance in the instructors' ability to conceptualize how to embed agency as a learning goal into the course.³²

Metaliterate learning falls into four major domains: behavioral, cognitive, affective, and metacognitive. There are four broad metaliteracy goals, and each of those has five to eleven more specific learning objectives enumerated beneath it. The instructors of II 399 had goals for all four domains. Although most interested in the affective and metacognitive areas, the instructors also hoped for growth at the behavioral and cognitive levels. For example, on the behavioral level, the instructors wanted students to become more proficient with online tools, including blogging platforms, social media, and the Canvas course management system. Many of the behavioral expectations of the course had to do with students' ability to engage with technology and use it to complete assignments and activities successfully.

The instructors also expected that as students developed the content for the class, they would use their cognitive abilities to comprehend, evaluate, and organize their sources. Since the instructors didn't require or restrict types of information sources, students needed to use their own judgment to critically evaluate the information and decide about issues like scope and authority. In addition, the instructors wanted students to think critically about issues of information ethics, privacy, online identity, and anonymity. Virtually every lecture, class discussion, and class activity asked students to do this in some way. For example, one student writes in her blog, "I think that everyone deserves freedom of speech but the line needs to be drawn somewhere when things like child pornography are being posted onto popular websites. That is where cyber ethics should come in."³³ Another student makes an interesting observation about the images people portray on Facebook and how those often show only the "highlights" of one's actual life, a curated set of memories and experiences: "For instance, on my Facebook, I

may only upload pictures that give off the idea that I am doing things with my life like hiking, swimming, traveling, etc. No one posts pictures of them sitting at home watching Netflix, or crying about something tragic that has happened in our lives.”³⁴

As the semester progressed, students became more aware of their own thinking about digital identity, which falls into the metacognitive domain. In class and on assignments, the instructors often asked for students to reflect upon their own attitudes and thought patterns. For instance, in one activity, the instructors asked students to create a profile using the social network of their choice. The profile could be true to who they were in “real life” or completely fabricated. Students were then asked to write a blog post in which they reflected on the choices they had made in constructing that online identity.

Students met the objectives and outcomes articulated at the beginning of the semester in many of the class assignments. For example, during the semester there were two “open blog” assignments in which students could choose their topics. Students almost always used these assignments for opportunities to be reflective about either their own thinking or behavior around social media or their own changing attitudes toward social media and learning in general, even though the instructors hadn’t specifically asked them to be reflective in those assignments. It seemed as though having the freedom to choose what they did in assignments led many students in more metacognitive and affective directions. In reflecting upon her use of social media, one student asks this question: “Do we control our social media by sharing our experiences, or do we have experiences only to be able to post them on our social media?”³⁵

Because students generated much of the content for the second half of the semester, they were constantly evaluating the information they encountered, which

addresses metaliteracy goal 1: “Evaluate content critically, including dynamic, online content that changes and evolves, such as article preprints, blogs, and wikis.”³⁶ Since the instructors hadn’t provided any specific instruction about which types of information sources students should use, there was quite a range that students could consider. Some student groups used sources from theoretical to legal to pop culture in order to look at the issue holistically, while contextualizing the sources appropriately. Other groups used mainly Web articles and videos and did not do much contextualizing. All student groups did, however, display an understanding of the limitations and potential biases of their information sources during discussions and activities. Although not all students were necessarily able to “distinguish between editorial commentary and information presented from a more research-based perspective” on their own, when they were prompted after presenting the material, students were able to recognize “that values and beliefs are embedded in all information” (metaliteracy goal 1.2).³⁷ Often, the instructors used time left over after the groups had led the sessions to tease out some of the nuances and potential biases of their information sources.

Much of the course content addressed metaliteracy goal 2, “Understand personal privacy, information ethics, and intellectual property issues in changing technology environments,” in the content, activities, and class discussions.³⁸ The topic of online anonymity generated many lively class discussions and diverse opinions from students. For example, we discussed Anonymous, the loosely connected network of hacktivists. This group is well-known through a series of cyber terrorist attacks on religious and government organizations.³⁹ Some students thought that members of Anonymous were heroic because they rebelled against hate groups like the Westboro Baptist Church. Other

students, however, found Anonymous too extreme. As one student noted in a class discussion, the ends didn't justify the means.

One student group explored the theme of law and the Internet. The students addressed a variety of interesting topics, including the NSA (National Security Agency) and Edward Snowden, GPS (Global Positioning System) tracking, and online information collection. Students were particularly drawn in by the Edward Snowden interview.⁴⁰ The class content and discussion led students to “recognize the ethical considerations of sharing information” (metaliteracy goal 2.5).⁴¹ For example, during the GPS class, the students leading that day's content and discussion divided the class into two groups: one was to argue for GPS technology, and the other was to argue against it. This allowed students to approach the ethical considerations of sharing information from a relevant perspective. Almost all students relied upon GPS technology daily. Considering the potentially negative impacts of GPS on privacy made students think differently about their trusted devices, although almost all said they would continue to use GPS just as much as they had before.

Although the instructors did not specify any outcomes for the student-created assignments, they all addressed metaliteracy goal 3: “Share information and collaborate in a variety of participatory environments.”⁴² In the Vine contest, students shared information in a video format. In several of the other assignments, students shared information on their blogs. On Spotify, students shared information on a social network based on musical tastes and interest. Only the Vine contest, however, included a direct process of collaboration. The other assignments required that students create, write, or

analyze something on their own and then share the results with the instructors and their classmates. All assignments involved some form of commenting or feedback.

The student blogs, assignments, and class discussions reflected metaliteracy goal 4: “Demonstrate ability to connect learning and research strategies with lifelong learning processes and personal, academic, and professional goals.”⁴³ Students naturally connected what they were doing in class with their lives outside of class. One student observes:

When learning about our online identities and how we want people to perceive us, it turned into real life material that exists in our everyday life and I then began to love this class. I didn’t realize how much time and effort people put into their profiles to make them seem a certain way. . . . How attached we become to our technology and the effects that it has on us such as loneliness and depression. After learning about this I noticed it in myself and becoming aware of it was pretty cool.⁴⁴

One student notes in an anonymous evaluation “the way that we talk about online relationships and the sometimes drastic impacts that technology has on our lives, in some cases not in the best way. This class has made me more conscious about how and when I use technology and has in a way made me use it less.”

We asked students to “use self-reflection to assess one’s own learning and knowledge of the learning process” (metaliteracy goal 4.4) at several points during the semester in self-evaluations and reflective blog posts.⁴⁵ Students expressed throughout the semester that they felt comfortable sharing their opinions and that they enjoyed hearing different viewpoints from their peers (metaliteracy goal 4.7). Students also expressed that because they were responsible for teaching the content to their peers, they took more time and energy to find information, evaluate it, and synthesize it. They also

retained the information much more than they normally would have in a class where they were completing an instructor-determined assignment or memorizing information for a test (metaliteracy goals 4.9 and 4.10).

Throughout the semester, it was challenging for the instructors to avoid giving more direction when students became anxious about creating assignments and leading content. Although the instructors wanted to encourage students to develop a sense of agency, it was difficult to remain firm in the face of students' anxiety. This was especially true at the beginning of the semester. Students would often ask us, the instructors, what we wanted them to do or how they were supposed to complete a given task. The instructors responded by supporting them and clarifying details, but not giving instructions. Often, given time and space, students were able to work through their anxieties and make decisions. Sometimes those decisions did not work out, but for the most part, students took that in stride and made adjustments, which was reflective of metaliteracy goal 4.8: "Recognize that learning is a process and that reflecting on errors and mistakes leads to new insights and discoveries."⁴⁶

ASSESSMENT OF INSTRUCTION ENDEAVOR

The instructors assessed the students' learning experiences in informal and formal course evaluations. At the midpoint of the semester, students submitted anonymous answers to three questions. Out of twenty-two students in the class, only eight responded. The instructors found this troubling in a course so focused on student input. When asked directly why they hadn't filled out the evaluation, students said they were busy or they had forgotten. Of the students who did respond, several expressed that they had been challenged by the open, self-directed nature of many of the assignments. One student

notes, “I personally have a hard time with creative things like ‘Open Blogs’ just because I’m not sure what to post about or where to start. I tend to enjoy/learn more when I have more structure.” This reflects Maryellen Weimer’s point that students are often lacking the confidence to be self-directed and thus seek out structure and direction from the instructor.⁴⁷ It was interesting that the student expressed the ability to learn more with structure, and the instructors questioned whether this was actually true, or if the student was simply expressing that he or she was more comfortable with structure.

For end-of-semester evaluations, the instructors assigned students a wrap-up blog post in which students responded to the following prompts:

- Your expectations versus the actual course
- What you learned
- What opinions/beliefs of yours were challenged
- Most effective versus most challenging aspect of the class
- If this class ran again, what you would change and what you would keep?

Formal course evaluations were also conducted. Both evaluations yielded commentary about the student-created assignments and the student-led content aspects of the course.

In general, students found it challenging to generate their own assignments for the class, but they found the process of doing so to be a good learning experience. In her wrap-up blog, one student notes, “I would say making up assignments for the class was the most challenging part, but was also the most effective.”⁴⁸ Grading, however, was an issue for the instructors in terms of the student-created assignments. Most students attached some form of rubric to their assignments. Some of the rubrics, though, did not fit the assignment so they were difficult to use. In future iterations of the course, the

instructors would reimagine how grading and evaluation should happen for the student-created assignments. See the following Discussion/Lessons Learned section for additional details.

In terms of the student-led content development, the instructors identified a mixture of responses from students. Some found the student-led portion of class empowering and engaging. Others found it problematic. Many had initially found it uncomfortable but ultimately enjoyed the process. One student notes:

The first day I was intrigued by the topic but when our professors described to us that we would be making up our classes halfway through the semester, I wanted to bail. As the semester went on I ended up liking the students teaching the class more. . . . I thought it made us really have to learn about our subject instead of just listening to our teachers talk about it.⁴⁹

Another student commented that at first he thought the student-led content was “lazy teaching.” However, he felt he learned much more knowing he was the one responsible for presenting it. Another student notes: “Breaking the class into small groups and giving them each a topic with three days to present was a great way to get everyone involved. . . . I thought that was a very effective way of learning.”⁵⁰ In an anonymous evaluation, one student comments, “I really enjoyed the class. I learned a lot more than I had expected to. I enjoyed how the content of the course was in the hands of the students.” In his wrap-up blog, one student expressed that the student-led content had challenged him to define his own goals and direct his own learning. He found it to be a powerful learning experience. Another student noted in her post that she appreciated the bottom-up structure of the class.

On the other hand, some students disliked being taught by their peers. One student notes on the anonymous course evaluation: “The course itself was interesting, fun, and

interactive. However, I feel it lacked in structure. It was hard to stay motivated to learn and come to class when most of the class was designed and led by peers.” In their final blog posts, many students expressed that the student-led portion of the class felt more like student presentations than students teaching the class. Many felt they were being presented with information but not given an opportunity to apply it. Others felt that the student-led portions of the class went on for too long and should have been either reduced or broken up. The majority of responses in the wrap-up blogs critiqued the execution of student-led classes, yet they felt the experience had been useful or powerful in some way. Almost all responses indicated that the students had enjoyed leading their classes and had learned a lot from the process but did not particularly enjoy sitting through the classes led by their peers.

The instructors also had mixed feelings about the effectiveness of the student-led portion of the course. Many students approached this project as they would a presentation. Despite the attempts at designing the assignment to give students a lot of choice, they seemed hesitant to venture out with any unconventional teaching activities or approaches. Although all groups at least attempted some form of interactivity in the classes they led, not all groups were successful in their attempts to engage their peers. Also, because the instructors did not specify a time frame for the student-led portions, there was great variety in the length of student-led classes. One student took only fifteen minutes of class time to present her content. Other students took the entire class period, which is an hour and forty-five minutes at Keene State College. After reviewing the evaluations, the instructors developed a list of ideas for revision to the next iteration of this course, which will run in the fall 2015 semester:

- Make student-led content a collaboration between instructors and students.
- Require conferencing before students present so instructors can assist students with pedagogy and innovative presentation of content.
- Have a clear, agreed-upon time frame for student-led content.
- Emphasize that students need to tie their content back into larger course themes.
- Include at least one class worth of content, activities, and assignments about effective educational practices as well as ideas for how to stimulate critical thinking and engagement in others.
- Formalize some method of engagement for groups that are not leading the class that day.

DISCUSSION/LESSONS LEARNED

Five words sum up teaching Digital Identity and Participatory Culture: messy, exciting, engaging, empowering, and challenging. Messy may sound negative, but as an instructor, I embrace mess. In her 2015 article, Mahrya Carncross discusses the pitfalls of working within a neat, unambiguous framework when teaching. Carncross notes that one of the things that made her uncomfortable about teaching with the *ACRL Information Literacy Competency Standards for Higher Education* was “how tidy IL seemed under its prescription. The document describes a universe where one can ‘determine the extent of an information need’ where search strategies are ‘designed,’ and useful information is ‘extracted.’”⁵¹ At its core, metaliteracy is about thinking beyond linear instructional models, engaging in metacognition, and cocreating knowledge. This means that we often walk into the classroom with some objectives, some questions, and many unknowns. The

visual representation of the metaliteracy model illustrates the recursive, nonlinear ways in which abilities, concepts, creation, and metacognition all converge in the student's learning experience.⁵² Reframing of information literacy as metaliteracy "places all of the essential characteristics in a nonlinear, circular, and transparent framework. This integrated design recognizes that users approach information from multiple perspectives and may start and end an information process . . . from any point and not necessarily in sequential order."⁵³ Thus, the squirming and rebooting the II 399 instructors and students did throughout the semester struck me as appropriate and powerful. Many of the students were empowered through the class experience. I also felt empowered as an instructor to let go. Educators want to do everything they can to make sure students are getting all the tools they need from our classes to go on and be successful. This can sometimes lead us to overstructure or be too prescriptive when a more appropriate reaction would be to sit back and say, "You figure it out." Throughout this class, I felt empowered to do just that. That being said, there are several things I will do differently the next time I teach the course. It is my hope that these four suggestions will assist instructors who are designing a similar course or who simply desire to use student-led content and student-created assignments in an existing course or lesson.

1. Be clear about what you, as the instructor, are responsible for and what the students are responsible for, and maintain that distinction. Remember, in student-centered learning pedagogy, the instructor is a facilitator. Understand what type of structure you need to provide in order for students to be successful, and remain as consistent as you can in that role. Also, be firm about making sure students are consistent in their roles.

2. Consider assessment—carefully. One of the major challenges with this course was determining how to assess and evaluate the student learning. Many of the assignments were open ended, and although they came with a rubric, the instructors struggled with grading. Several self-assessment measures were used successfully. Many of the students graded themselves at or near where the instructors would have graded them. The instructors considered involving the students in the grading of one another's projects, something the instructors might consider for a future iteration of the course. Perhaps a collaborative grade based on instructor, peer, and self-assessments would be the best approach.
3. Coteach if possible. One of the greatest things about teaching this course was that the two instructors were able to do it together. The instructors wanted to embody the collaborative, participatory concepts being taught. For both instructors, this was the first experience coteaching, and contrary to expectations that it would mean less work, it often meant more. However, the outcome of that work was richer and more diverse than what either instructor would have been able to accomplish on her own. Coteaching is often not a possibility due to the financial constraints of institutions not willing to pay two instructors for teaching a course. Hopefully, institutions and faculty will continue to strategize about making cotaught courses a staple, particularly in courses where collaborative learning models are used.
4. Don't be afraid to try something new—and fail. The instructors often tell students that learning is a process, and that mistakes are a part of that process,

but sometimes this is forgotten in the instructors' own practice. One of the biggest obstacles to innovative teaching may be fear. What if it doesn't work? What if no one learns anything and it turns into chaos? These are all legitimate fears. Of course the instructors don't want to fail and don't want the students to fail. But failure often gives birth to success. Don't be afraid to have a class that is difficult in some way. Discomfort often gives birth to some new strength or idea that can be applied in future classes. In my mind, the only real failure in teaching is to not try something because you're afraid. Instructor agency is an important precursor to student agency.

CONCLUSION: EMPOWERMENT, AGENCY, AND METALITERACY

In February 2015, the *Framework for Information Literacy for Higher Education* was filed by the ACRL. The Introduction states:

Students have a greater role and responsibility in creating new knowledge, in understanding the contours and the changing dynamics of the world of information, and in using information, data, and scholarship ethically. Teaching faculty have a greater responsibility in designing curricula and assignments that foster enhanced engagement with the core ideas about information and scholarship within their disciplines.⁵⁴

The flexible threshold concepts around which the *Framework* is centered represent an opportunity for teaching librarians to move away from the traditional skills-based approach to information literacy and create dynamic classroom opportunities that facilitate critical thinking, metacognition, and, more broadly, metaliteracy. Nonetheless, the threshold concepts present challenges similar to those experienced by the students in II 399. Teaching librarians are used to the highly structured *Information Literacy Competency Standards for Higher Education*, which delineate in a clear and linear

manner what exactly library instructors are supposed to do with students and what exactly students should be able to do after that instruction activity.⁵⁵ The *Framework* is composed of six frames, each of which contains a threshold concept. Although the frames are listed in an order, it is simply alphabetical. It is clear from the way they are presented that the process of moving through those frames is not linear. The recursive nature of learning is embedded in the recursive nature of the six frames. The *Framework* allows the space for both librarians and students to collaborate and define the scope, trajectory, and challenges in any given teaching situation. The *Framework* and metaliteracy both allow space for students to be involved in the process of thinking about their own learning and making decisions based on those thoughts. This will likely be challenging and uncomfortable, both for students and instructors. Experimentation and trial and error, as well as failure, will be steps in the process of transitioning from a model of information literacy instruction to a model of facilitating metaliteracy. We felt the discomfort and excitement that comes from making a difficult but necessary change while teaching II 399. The students in the course felt it too.

In the fall 2015 semester, II 399: Digital Identity and Participatory Culture will run again, this time as II INFO 320: Participatory Cultures. Both the threshold concepts from the ACRL *Framework* and the metaliteracy learning outcomes will continue to guide the development of the course, as will the instructors' unwavering pedagogical dedication to student agency and empowerment.

NOTES

1. Thomas P. Mackey and Trudi E. Jacobson, "Reframing Information Literacy as a Metaliteracy," *College and Research Libraries* 72, no. 1 (2011): 68. doi:10.5860/crl-76r1.

2. Robert Barr and John Tagg, "From Teaching to Learning—A New Paradigm in Undergraduate Education," *Change* 27, no. 6 (1995): 13.
3. John W. Collins and Nancy Patricia O'Brien, eds., *Greenwood Dictionary of Education* (Westport, CT: Greenwood, 2003), 446.
4. Constance Kamii and Yasuhiko Kato, "Constructivism," in *Early Childhood Education: An International Encyclopedia*, ed. Rebecca S. New and Moncrieff Cochran (Santa Barbara, CA: Praeger, 2007),
<http://search.credoreference.com/content/entry/abceeduc/constructivism/0>.
5. Barr and Tagg, "From Teaching to Learning," 14.
6. Ibid.
7. Stephen D. Brookfield, *Becoming a Critically Reflective Teacher* (San Francisco: Jossey-Bass, 1995).
8. Maryellen Weimer, *Learner-Centered Teaching: Five Key Changes to Practice* (San Francisco: Jossey-Bass, 2013).
9. Paulo Freire, *Pedagogy of the Oppressed*, trans. Myra Ramos, 30th Anniversary Edition (New York; London: Continuum, [1968] 2005).
10. Ibid, 72.
11. Weimer, *Learner-Centered Teaching*, 28.
12. Ibid.
13. Alison King, "From Sage on the Stage to Guide on the Side," *College Teaching* 41, no. 1 (1993): 30.
14. Carol D. Lee and Peter Smagorinsky, eds., *Vygotskian Perspectives on Literacy Research: Constructing Meaning through Collaborative Inquiry* (Cambridge, England: Cambridge University Press, 2000).
15. George Siemens, "Connectivism: A Learning Theory for the Digital Age," *International Journal of Instructional Technology and Distance Learning* 2, no. 1 (2005): 3.
16. Henry Jenkins, *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century* (Chicago: The MacArthur Foundation, 2006), 4,
www.macfound.org/media/article_pdfs/JENKINS_WHITE_PAPER.PDF.
17. Ibid., 8.

18. Ibid.
19. Greg Bobish, "Participation and Pedagogy: Connecting the Social Web to ACRL Learning Outcomes," *Journal of Academic Librarianship* 37, no. 1 (2011): 54–63.
20. Ibid., 63.
21. Mackey and Jacobson, "Reframing Information Literacy," 62.
22. Quoted in *ibid.*, 67.
23. Patricia Hartman, Renae Newhouse, and Valerie Perry, "Building a Sustainable Life Science and Information Literacy Program Using the Train-the-Trainer Model," *Issues in Science and Technology Librarianship* (Summer 2014), www.istl.org/14-summer/refereed1.html, doi:10.5062/F4G15XTM.
24. Thomas P. Mackey and Trudi E. Jacobson, *Metaliteracy: Reinventing Information Literacy to Empower Learners* (Chicago: Neal-Schuman, 2014), 34.
25. Keen Info Lit Bank, "Faculty DIY Information Literacy Modules and Resources" (accessed April 22, 2015), <http://infolit.keene.edu/faculty-diy-modules/>.
26. Association of College and Research Libraries (ACRL), *Framework for Information Literacy for Higher Education* (Chicago: American Library Association, 2015), www.ala.org/acrl/standards/ilframework.
27. Mackey and Jacobson, *Metaliteracy*, 21.
28. Jim Groom, "Welcome to ds106," DS106 (accessed April 21, 2015), <http://ds106.us/>.
29. Adam W. Tyma, "Pushing Past the Walls: Media Literacy, the 'Emancipated' Classroom, and a Really Severe Learning Curve," *International Journal of Communication* 3 (2009): 891–900, <http://ijoc.org/index.php/ijoc/article/view/633/364>.
30. Ibid., 896.
31. Weimer, *Learner-Centered Teaching*, 23.
32. Metaliteracy.org, "Goals and Learning Objectives," updated September 11, 2014, <http://metaliteracy.org/learning-objectives/>.
33. Kelsey Marscher, "Open Blog: Anonymity," *Kelsey Marscher* (blog), September 18, 2014, <https://kelseymarscher16.tumblr.com>.

34. Sam Provencher, "Internet Persona," *Sam Provencher* (blog), September 8, 2014, <https://samprovencher94.wordpress.com>.
35. Ibid.
36. Metaliteracy.org, "Goals and Learning Objectives."
37. Ibid.
38. Ibid.
39. David Kushner, "An Inside Look at Anonymous, the Radical Hacking Collective," *The New Yorker*, September 8, 2014, www.newyorker.com/magazine/2014/09/08/masked-avengers.
40. Kevin M. Gallagher, *NSA Whistleblower Edward Snowden: "I Don't Want to Live in a Society That Does These Sort of Things"* (Praxis Films, Freedom of the Press Foundation, 2013), accessed February 16, 2015, <http://youtu.be/5yB3n9fu-rM>.
41. Metaliteracy.org, "Goals and Learning Objectives."
42. Ibid.
43. Ibid.
44. Sam Provencher, "Wrapping Up the Semester," *Sam Provencher* (blog), December 8, 2014, <https://samprovencher94.wordpress.com>.
45. Metaliteracy.org, "Goals and Learning Objectives."
46. Ibid.
47. Weimer, *Learner-Centered Teaching*.
48. Victoria Folk, "Wrapping Up the Semester: Open Blog," *torifolk18* (blog), December 3, 2014, <https://torifolk18wordpress.com>.
49. Provencher, "Wrapping Up the Semester."
50. Kelsey Marscher, "Open Blog: Wrapping Up the Semester," *Kelsey Marscher* (blog), December 12, 2014, <https://kelseymarscher16.tumblr.com>.
51. Association of College and Research Libraries (ACRL), *Information Literacy Competency Standards for Higher Education* (Chicago: American Library Association, 2000); Mahrya Carncross, "Redeveloping a Course with the Framework for Information Literacy for Higher Education from Skills to Process," *College and Research Libraries News* 76, no. 5 (2015): 248–9.

52. Mackey and Jacobson, "Reframing Information Literacy," 23.
53. Ibid., 25.
54. ACRL, *Framework for Information Literacy*.
55. ACRL, *Information Literacy Competency Standards*.

BIBLIOGRAPHY

- Association of College and Research Libraries (ACRL). *Framework for Information Literacy for Higher Education*. Chicago: American Library Association, 2015.
www.ala.org/acrl/standards/ilframework.
- . *Information Literacy Competency Standards for Higher Education*. Chicago: American Library Association, 2000.
www.ala.org/acrl/standards/informationliteracycompetency.
- Barr, Robert, and John Tagg. "From Teaching to Learning—A New Paradigm in Undergraduate Education." *Change* 27, no. 6 (1995): 12–25.
- Bobish, Greg. "Participation and Pedagogy: Connecting the Social Web to ACRL Learning Outcomes." *Journal of Academic Librarianship* 37, no. 1 (2011): 54–63.
- Brookfield, Stephen D. *Becoming a Critically Reflective Teacher*. San Francisco: Jossey-Bass, 1995.
- Carncross, Mahrya. "Redeveloping a Course with the Framework for Information Literacy for Higher Education from Skills to Process." *College and Research Libraries News* 76, no. 5 (2015): 248–73. <http://crln.acrl.org/content/76/5/248>.
- Collins, John W., and Nancy Patricia O'Brien, eds. *Greenwood Dictionary of Education*. Westport, CT: Greenwood, 2003.
- Elmborg, James. "Critical Information Literacy: Implications for Instructional Practice." *Journal of Academic Librarianship* 32, no. 2 (2006): 192–9.

Folk, Victoria. "Wrapping up the Semester: Open Blog." *torifolk18* (blog), December 3, 2014. <https://torifolk18wordpress.com>.

Freire, Paulo. *Pedagogy of the Oppressed*. Translated by Myra Ramos. 30th Anniversary Edition. New York; London: Continuum, 2005.

<https://libcom.org/files/FreirePedagogyoftheOppressed.pdf>.

Gallagher, Kevin M. *NSA Whistleblower Edward Snowden: "I Don't Want to Live in a Society That Does These Sort of Things."* Praxis Films, Freedom of the Press Foundation, 2013. Accessed February 16, 2015. <http://youtu.be/5yB3n9fu-rM>.

Groom, Jim. "Welcome to ds106." DS106. Accessed April 21, 2015. <http://ds106.us/>.

Hartman, Patricia, Renae Newhouse, and Valerie Perry. "Building a Sustainable Life Science and Information Literacy Program Using the Train-the-Trainer Model."

Issues in Science and Technology Librarianship (Summer 2014).

www.istl.org/14-summer/refereed1.html. doi:10.5062/F4G15XTM.

Jenkins, Henry. *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. Chicago: The MacArthur Foundation, 2006.

www.macfound.org/media/article_pdfs/JENKINS_WHITE_PAPER.PDF.

Kamii, Constance, and Yasuhiko Kato. "Constructivism." In *Early Childhood Education:*

An International Encyclopedia, edited by Rebecca S. New and Moncrieff

Cochran. Santa Barbara, CA: Praeger.

<http://search.credreference.com/content/entry/abceeduc/constructivism/0>.

Keene Info Lit Bank. "Faculty DIY Information Literacy Modules and Resources."

Accessed April 22, 2015. <http://infolit.keene.edu/faculty-diy-modules/>.

King, Alison. "From Sage on the Stage to Guide on the Side." *College Teaching* 41, no. 1 (1993): 30–35.

Kuhlthau, Carol Collier. "Information Skills for an Information Society: A Review of Research." An ERIC Information Analysis Product. Information Resources Publications, 1987. <http://eric.ed.gov/?id=ED297740>.

Kushner, David. "An Inside Look at Anonymous, the Radical Hacking Collective." *The New Yorker*, September 8, 2014.
www.newyorker.com/magazine/2014/09/08/masked-avengers.

Lee, Carol D., and Peter Smagorinsky, eds. *Vygotskian Perspectives on Literacy Research: Constructing Meaning through Collaborative Inquiry*. Cambridge, England: Cambridge University Press, 2000.

Mackey, Thomas P., and Trudi E. Jacobson. *Metaliteracy: Reinventing Information Literacy to Empower Learners*. Chicago: Neal-Schuman, 2014.

———. "Reframing Information Literacy as a Metaliteracy." *College and Research Libraries* 72, no. 1 (2011): 62–78. doi:10.5860/crl-76r1.

Marscher, Kelsey. "Open Blog: Anonymity." *Kelsey Marscher* (blog), September 18, 2014. <https://kelseymarscher16.tumblr.com>.

———. 2014. "Open Blog: Wrapping Up the Semester." *Kelsey Marscher* (blog), December 12 2014. <https://kelseymarscher16.tumblr.com>.

Metaliteracy.org. "Goals and Learning Objectives." Updated September 11, 2014.
<http://metaliteracy.org/learning-objectives/>.

Provencher, Sam. "Internet Persona." *Sam Provencher* (blog), September 8, 2014.
<https://samprovencher94.wordpress.com>.

———. “Wrapping Up the Semester.” *Sam Provencher* (blog), December 8, 2014.

<https://samprovencher94.wordpress.com>.

Rheingold, Howard. “Digital Storytelling 106: Open, Participatory, Student-Centric,

Social . . . the Future?” *dmlcentral: Digital Media + Learning: The Power of*

Participation, September 9, 2013. [http://dmlcentral.net/blog/howard-](http://dmlcentral.net/blog/howard-rheingold/digital-storytelling-106-open-participatory-student-centric-socialthe-future)

[rheingold/digital-storytelling-106-open-participatory-student-centric-socialthe-](http://dmlcentral.net/blog/howard-rheingold/digital-storytelling-106-open-participatory-student-centric-socialthe-future)

[future](http://dmlcentral.net/blog/howard-rheingold/digital-storytelling-106-open-participatory-student-centric-socialthe-future).

Siemens, George. “Connectivism: A Learning Theory for the Digital Age.” *International*

Journal of Instructional Technology and Distance Learning 2, no. 1 (2005): 3–10.

Tyma, Adam W. “Pushing Past the Walls: Media Literacy, the ‘Emancipated’ Classroom,

and a Really Severe Learning Curve.” *International Journal of Communication* 3

(2009): 891–900. <http://ijoc.org/index.php/ijoc/article/view/633/364>.

Weimer, Maryellen. *Learner-Centered Teaching: Five Key Changes to Practice*. San

Francisco: Jossey-Bass, 2013.