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Just-in-Time Learning in a Tumultuous Time:

An Asynchronous, Virtual Lab Course Model using the Framework to Reshape Student Responses to Media Narratives

Jonathan Harwell and Deborah Prosser

For spring 2021, we—two librarians in a small liberal arts college—redesigned a lab course tied to a 200-level methods course, "Research, Media, Culture," a requirement for the Critical Media & Cultural Studies program. The lab had previously been taught as a synchronous course over three weeks. As a response to lower enrollments in the major, as well as the virtual teaching mode for the main course, we adapted the lab component into a six-week asynchronous course pilot with a goal of delving more deeply into information literacy pedagogy than the previous course format allowed. We also embedded ourselves in the main course over those six weeks, joining discussions of documentaries and readings and answering questions on research and analysis.

We designed the new course around the ACRL *Framework for Information Literacy for Higher Education* and each week focused on one of the six frames, with readings and online discussion questions in Canvas, some involving search exercises. The final assignment for the lab course was a short reflective essay (300–500 words) in which students were asked to do the following:

> Explain what you've learned from these readings, and what you've been think-ing about what they mean in your own life, perhaps including your relationships with family and friends. Do you have any ideas about what you might do differ-ently as you progress in your education and your career path?

In this chapter, we will describe the coursework, the discussion prompts, and an assess-ment of the pilot based on student responses to discussion board questions, in which we clarified certain misunderstandings of concepts; as well as excerpts from the reflective essays and the students' evaluations of the course, anonymized and selected for relevance to the transformative educational aims of the course. We present this asynchronous course pilot as a model for other courses that seek to help students engage in transformative learning, with the discussion questions and readings included for reuse or adaptation.

DISORIENTING DILEMMAS AND CATALYSTS FOR TRANSFORMATION

The Olin Library at Rollins College has a longstanding collaboration with the Critical Media & Cultural Studies (CMC) Department in which a library faculty member teaches a one-credit lab course each spring semester, alongside a four-credit methods course required for CMC majors, for a total of five credits.* CMC 200, "Research, Media, Culture," is designed to introduce students to research methods in critical media studies and critical cultural studies. As the professor explains in the syllabus, "The 'critical' in critical media and cultural studies stems from our department's commitments to critical thinking, to critical issues of the twenty-first century, and to critical theory's analysis of social systems and the distribution of power and inequality." The course goals are to

- examine media and culture analytically and critically;
- sharpen our ability to find, analyze, organize, and synthesize reputable research materials pertinent to critical media studies and critical cultural studies;
- increase understanding of and practice with multiple methods of research;
- identify and navigate responsibly ethical dilemmas in research;
- understand the difference between research findings that are primary (original, the author's own) and secondary (from works an author cites);
- understand the difference between responsibly utilizing and misappropriating others' research findings;
- compose effective and persuasive evidence-based arguments;
- improve composition skills across forms of expression; and
- sharpen oral communication skills.

As the department's website explains, "CMC is an interdisciplinary program grounded in values of equity, human rights, and social justice. We are a welcoming community of scholar-citizens who aspire to be both critical analysts and critical producers of media and culture."[1]

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* For context, most Rollins courses are four credits each.

Catalysts for Change

The year 2020 was one of global disruption due to the COVID-19 pandemic as well as political upheaval within the United States. For instance, continuing police violence against African Americans captured in viral video evidence further propelled the Black Lives Matter movement into public consciousness. As of this writing in the summer of 2021, the economic effects of the pandemic continue to reverberate in colleges and universities. Overall enrollments for the 2020–21 academic year had dropped as many campuses closed and moved all operations, including course instruction, online in the spring of 2020.[2] Many courses, including CMC 200, remained online during the 2020–21 academic year. Rollins had instituted a hiring freeze and eliminated a number of faculty and staff positions in anticipation of declining tuition revenue. Two positions that had been left vacant were library faculty positions, one of which would have normally taught the CMC 200 lab course.

Redesigning the Lab Course

In our roles as the library director and the head of collections and systems, respectively, we decided to collaborate as liaisons to CMC, including co-teaching the lab course. In discussing course planning with the CMC 200 professor, we learned that enrollment had been dropping due to the time commitment of the accompanying lab course. Declining enrollment in a required course for majors was detrimental to the major program.

   To incentivize enrollment, the three of us decided to experiment with an asynchronous mode of instruction for the lab, with both course components being delivered online. We offered to attend and participate in regular class meetings as schedules allowed so that students could interact with us in real time. We decided to organize the lab course around the six frames in the Framework and to convert the formerly three-week lab component to six weeks, with a week to focus on each frame. We selected a combination of required readings and films, intentionally at no cost to the students, and provided questions for online discussions, which would be asynchronous via a Canvas discussion board, with a posted weekly deadline for contributions to each week's discussions. We also decided to assign a brief reflective essay for the completion of the lab course. Grading would be based on the Canvas discussions (50 percent of the lab grade) and the final essay based on their contributions to those discussions (50 percent). The lab grade would then constitute 20 percent of the CMC 200 grade (one of a total of five credits).

EXAMINING, EXPLORING, AND REFLECTING

Even in a fully online environment during the height of pandemic safety measures, the blended approach of the synchronous main course with the asynchronous lab course was an effective balance. Colleen Flaherty, in speaking with colleagues in higher education about teaching online during COVID-19, finds that each mode has its advantages and drawbacks, and when blended, together they can serve as a flipped classroom.[3]

Tartavulea et al. have surveyed European professors and students and found that the mode of synchronous versus asynchronous online learning is perhaps less important than the effectiveness of the online system itself. This research relies heavily on user perceptions of the trustworthiness of the system based on "technological readiness and the overall confidence that the system is functioning towards the intended objectives."[4]

Various researchers have innovated with information literacy approaches that incorporate asynchronous online learning. In 2015, Reichart and Elvidge modeled an asynchronous, online information literacy course for undergraduates based on the then-new Framework.[5] They have expanded the model for use with certificate programs as well as revising the designs of other courses in their online career school, where self-directed, asynchronous learning is the norm.[6] More recently, Bonnet and Sellers have had success with a weeklong, voluntary educational challenge that uses asynchronous learning to teach information literacy based on the glut of misinformation about COVID-19 and have followed up with similar initiatives based on racial justice and news literacy.[7]

Of course, there were educational approaches prior to the pandemic that blended synchronous with asynchronous learning modes. Northey et al. find that using Facebook as an asynchronous learning tool increases student engagement as well as academic outcomes, although their study was completed in a time when (according to anecdotal evidence) perhaps more students were familiar with Facebook than they are today.[8] Salter et al. find that synchronous discussions in person are "important for generating interest and commitment" and enable participants to brainstorm and "thoroughly explore the topic discussed."[9] They also assert that asynchronous discussions online can complement this approach with topics "explored more thoroughly" with "critical reflective discussion" that can be conducive to drawing conclusions. They find that the two modes "work very well in conjunction."[10]

Transformative learning theory is rooted in the understanding that learners can adjust their thinking based on acquiring new information. Critical thinking and reflection are fundamental to this transformation and to leading learners to new perspectives and understandings.[11] The professor teaching the methods course followed a transformative learning model adapted from David Kolb in which all students participated in collaborative document processes around concrete experiences of watching films and reflecting on what they had learned.[12] As Mezirow explains, "A mindful transformative learning experience requires that the learner make an informed and reflective decision to act on his or her reflective insight."[13] In many class sessions, we joined with students in adding to collaborative documents related to course readings and films. In these sessions, using the Microsoft Teams environment, we employed the transformative learning model by responding in real time to three questions relative to the article or film we had just seen. Students wrote responses to "I feel, I learned, I will," and in so doing chronicled a shared journey in how the resource they viewed might change their thinking and intentions.

We employed transformative learning theory in the lab course in three ways: the collaborative course content focused on asking students to challenge conspiracy theories and similar forces that led to the current political climate; in-depth and active engagement with the Framework developed students' information literacy skills; and the final reflective

essay assignment required students to consider and comment on new skills they had learned. Evidence from discussions and essays demonstrates that the students in the lab course developed as active "questioners" in their information consumption.

BUILDING SKILLS AND CONSTRUCTING KNOWLEDGE

Rollins College is a face-to-face learning institution that typically does not offer online courses. While most faculty use the Canvas learning management system for course announcements, organization, and information-sharing, learning overwhelmingly happens in the physical classroom environment. As with every institution in the country, the 2020 pandemic necessitated a pivot to virtual pedagogy. The shift to online mode for the CMC lab course, however, was much more than a necessary temporal response. The department faculty were looking for ways for the media research lab to fit more seamlessly into student workloads and credit requirements, and we as instructors intentionally sought to create and pilot a new practice that might work for CMC but also be transferable for reinforcing information literacy across the curriculum. Successfully mastering the online environment and devising engaging ways to advance learning in critical thinking were central goals as we developed and taught the course. As such, we saw the ACRL Framework as a pragmatic structure on which to "hang" our reading and assignment content that followed the themes of the instructor's reading and video assignments while reinforcing key research concepts. Our learning curve was threefold: to find relevant, current content that mirrored or enhanced the main course content in current politics, activism, and social justice; to use each reading and exercise as a catalyst for developing research and analytical skills; and to ensure that the online environment would lead to depth of engagement rather than the opposite.

While we hoped the overall course model we were building would be transferable to other disciplines in the future—and this idea constituted part of our higher-level view of the course design—our central challenge comprised finding material that matched the main course's subject matter each week and marrying it to exercises that would advance information literacy. We also had to think carefully about our places in the course as librarians. As instructors, we were neither fully embedded nor completely separate from the main course. And while we were teaching in a virtual environment, it also was important to us that the students knew who we were and that we were central to their overall learning experience across both courses. As such, we had to define and advance our presence while we were choosing content and devising learning assignments.

We achieved our instructional goals by several key means. As co-instructors of the lab course, we each attended the main course meetings anytime our schedules permitted. Our colleague teaching the main course also intentionally brought us into class discussions by asking periodic questions related to research and evaluation of sources. The three of us were partners as instructors across the two courses. The students saw this collaborative approach, and it helped reinforce the idea that all course content was relevant and important. One of the problems with the prior three-week lab course was that the students saw it as something separate from the main course. The integration we achieved with the new design was enriching for the students and for us as instructors. Also, as we selected

content for the lab, as co-instructors we worked closely together ensuring that there was synergy and relevance between the resources we assigned and the assignments that required the students to engage with them. For example, when asking them to read articles on algorithms and discrimination, we assigned dual exercises that required the students to research filter bubbles and echo chambers and then turn the theoretical to the practical by conducting numerous Google searches. Symbiosis was key to the success of the course. We achieved symbiosis with the instructor and content of the main course through our presence and practice. We intentionally created symbiosis between the resources we assigned and the exercises we created by thinking carefully about what approach would ensure the best outcome for the students each week in fully understanding the value and utility of that week's frame.

The final course demographics are of interest to the results we observed. CMC 200 and the attendant lab are required courses in the Critical Media & Cultural Studies curriculum, but only 50 percent of the students in spring 2021 were taking the class to fulfill requirements for the major or minor. The remainder of students took the class as an elective or out of interest in the topic. The student demographics also reflected a cross-section of student levels, with equal numbers of sophomores, juniors, and seniors, and just one freshman. We did not know these demographics at the outset of the class, but they are instructive as we reflect on what we achieved. Our experience with the material, the students, and the main course resulted in a kind of immersion. As our class progressed, while it was asynchronous, we could be "in the moment" with the students at any time our schedules permitted, and we found that the ongoing and developing discussions through the online boards each week created a rich, iterative experience around developing information literacy.

Iterative engagement with key concepts was a major success of the lab course. While we were in the moment, we did not know that the students' backgrounds and levels of preparation varied widely. We created an online environment where everyone was an equal partner in the learning. Our initial work in carefully choosing readings and assignments that worked together to advance our teaching of key concepts, coupled with our active online presence as discussion leaders, created a strong foundation for the learning that happened. Even more importantly, the students learned as much from one another through the online discussions as they learned from us. Everyone had time and space to contribute, and as instructors, we had time and freedom to guide the conversations toward our agreed-upon outcomes for each week. For example, for one week's discussion, we asked the students to consider whether they knew anyone who relies on just one source of information and how that works for them. One of the students took the question further into the pitfalls of relying on social media for news and how it can lead to widespread misinformation. In our comments, we joined in with how thinking critically can help mitigate the effects of misinformation and lead to a more balanced view of social media. Finally, the course professor commented on an acquaintance who altered their focus on news outlets, which led to a change in political party and voting behavior. Through the cyclical partnership the online discussion medium allowed, we all contributed to a deeper interpretation of the initial question.

For six weeks, the students "saw" us as there with them in the virtual Microsoft Teams environment of the main course and then "read" us in the lab course in Canvas, so we were able to expand on the main course content as well as fully reinforce information literacy as a transferable practice with value in many areas of their lives and scholarship. In final course comments, the students described us as "available" and "engaged." These are qualities to which we all aspire as librarians, and we hope to be able to work with our faculty librarian colleagues and build on the model we created for future lab courses across other disciplines at our institution.

PLANNING AND PILOTING IN PRACTICE

We identified and assigned readings and film viewings for the lab course, correlating them with the Framework. Each week, we focused on one of the six frames. Previously, the lab course had been taught over three weeks. We considered that timeframe and discussed it with the main course professor, but we all felt it would be too condensed for the aims of the asynchronous lab. Thus, the lab portion was spread over six weeks.

We intentionally designed the lab syllabus to feature only sources that are freely available to students to prevent adding to their college costs.* We included articles from library resources, including our campus site licenses to *The New York Times* and *The Washington Post*. We intentionally selected readings that were timely, provocative, and relevant to the goals of the main course. As it happened, there was breaking news on a frequent basis during the spring 2021 semester that reinforced the timeliness of the readings for the main and lab courses. Having the lab syllabus in a Google Doc enabled us to easily update reading lists on the fly as news happened. For example, the first reading was published on January 19, the first day of class, as news broke about Rebekah Jones, the controversial Florida data scientist who had published state-level data about COVID-19.[14]

Each week's readings are accompanied by a few related discussion questions, which were also posted each week to the course discussion board in Canvas for student responses. Responses were due before midnight each Friday, and together they constituted 50 percent of the lab grade. A brief final reflective essay (300–500 words) based on these responses carried the remaining 50 percent.

The main course readings included a number of articles and films in addition to those assigned for the lab. Class meetings via WebEx revolved around the main course readings, and the professor began each session with a guided meditation from a recording. The lab course instructors joined most class meetings during the first several weeks, as their schedules allowed. The professor ensured that we were included in the discussions, and we also provided a scheduled information literacy session for the class. By that time, the students were already familiar with us. We focused on helping them prepare for their literature review assignment for the main course. Other assignments for the main course included two- to three-minute video responses to readings, identifying key quotes from readings and answering discussion questions, creating fact sheets and presentation slides, and a final team-based assignment of an advocacy presentation with supporting documents.

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*   Our lab syllabus is open to view at https://tinyurl.com/RollinsCMClab2021.

The first main course assignment was to view the PBS Frontline film *United States of Conspiracy* for discussion in class. Additional documentary films assigned for the main course included *The Virus: What Went Wrong?*, *Advertising at the Edge of the Apocalypse*, *Merchants of Doubt*, *The Great Hack*, *The Man Card*, *Whose Vote Counts?*, *The Great White Hoax*, and other similar films, along with a number of articles.

TAKING TRANSFORMATION FORWARD

The overwhelming value of the asynchronous lab course was the ability to provide students with opportunities for deep engagement with library resources and active learning exercises in conducting research, engaging resources in a sustained way, and critically reflecting on the research process. Most librarians are well-versed in the "one-shot" instruction model, and many continuously reconsider ways to make the critical skills-building information imparted in these practical, hour-long sessions stick with the students. As we engaged with the students over six weeks, we discovered that the asynchronous, online environment allowed for extensive written dialogue around resources, research practice, and information-seeking behavior. The ability for the students to engage in discussions with us and each other meant that everyone was thinking more deeply about what they were learning, and, most importantly, the students were reflecting on what critical thinking and analytical research are and how to do them better.

Librarians familiar with the one-shot model likely are equally acquainted with the old "scavenger hunt" assignment that has been popular for years with wider teaching faculty. Requests for library scavenger hunts still occur at Rollins College, and as faculty librarians, we work to direct students and faculty to more engaging assignments than those that simply acquaint students with where things are and how to get help. What we discovered with excitement as we designed the CMC lab was that we were creating an environment for students to work more intensively with the resources we have to offer. We got them into the books and articles, not just into the building. The deep dive may seem like a simple and obvious concept, but it speaks to how the nature of the electronic environment has changed research. As electronic resources grow and our collections become increasingly invisible (if convenient), we need to continuously reflect on how the predominance of research in the electronic environment changes students' needs to adapt with new skills.

As the six-week course progressed, our work and the student feedback reflected a growing dialogue and understanding of how to do library research electronically. Discussions around optimal keywords, algorithms, and navigating the rapidly changing nature of highly current material resulted in the students gaining a more complete understanding of how the electronic landscape transforms research and how they can develop and enhance their skills to adapt. We found great synergy between teaching in the electronic environment and developing informed consumers of electronic information.

For any instructor in any subject, an enduring question is, "How do I know they got it?" This self-inquiry is perhaps more prevalent among librarian instructors who often meet students for just a short period of time to introduce critical, transferable skills. We discovered that the six-week asynchronous lab course resulted in a unique partnership with students around critical inquiry and thought. As instructors, we could praise,

redirect, question, emphasize, and suggest further lines of inquiry, and rather than just hearing it spoken once in class, the students could read and reflect at their own pace. All teaching is a contract between students and instructors, each with specific responsibilities for pedagogical success, but the lab course felt like—and indeed was—more of a partnership. The constant written dialogue and reflection resulted in a rich, enjoyable, six-week conversation.

Beyond the real-time comments, questions, and reflections across the course content and assignments, the final student course evaluations evidence our success in developing their research and critical thinking skills. This feedback is important in any academic institution where the goal is developing information literacy but is perhaps even more relevant and meaningful to a liberal arts setting where teaching information literacy is widely recognized as the value proposition of the librarians across disciplines in the liberal arts ethos, and where critical thinking skills are assessed at various stages of the curricula.

The students' final assignment for the lab course was a short reflective essay (300–500 words) examining what they learned from the readings and online discussions. Many submissions evidenced assertions of thinking about library research practice in new ways and most importantly included statements about, going forward, always questioning what they were seeing and avoiding simply taking information at face value without questioning and challenging it more deeply. While shorter and perhaps more subject, comments on the final course evaluations included statements such as:

- "I really enjoyed the lab discussions and learned a lot of valuable skills in regards [sic] to information literacy and researching."
- "Productive discussion posts"
- "The media research portion …was a positive learning experiences, and it went well with the course material."
- "I learned a lot of valuable skills I know I'll use even outside the scope of this class/discipline."
- "It was fun to have [the librarian] in our classes to bring in another point of view and give us some great insights."

Most of the assignments for the main course of which the lab was a part were grounded in a transformative learning model, adapted from David Kolb.[15] The model has four components: engagement, reflection and feeling, learning, and applying. In group discussions each week in class, the professor took students through the stages of the process by inviting them to reflect on a movie they were assigned by talking about how it made them feel. They then moved on to discussing what they had learned and ended the session with thoughts on how they might apply what they had learned not only from watching the movie but also from their process of reflection and analysis.

Kolb's model is instructive and valuable because it is a formula for taking students beyond simply reading or viewing a resource and talking about it to considering how they will adjust their thinking based on the guided engagement and analysis. In short, the model ensures a different learning outcome from the basic process of simply reading or viewing a resource and talking. The keys are in inviting students to make room for feelings about what they had seen, which validates them, and then giving them authority through

guided reflection on how they might apply the information they gained. We discovered that the lab course did the same. Online discussion boards provided a second flexible and expansive forum in addition to the in-person activities. Our process for the six weeks, with resource choices and guided questions grounded in the Framework, meant that each week the students were applying the same transformative learning model of feeling, reflecting, and considering how to apply what they learned to a different critical thinking skill each week. They learned how becoming information literate could help them adjust their thinking rather than simply accepting information at face value. These results aligned with the desired transformative outcome of both the main course and the lab.

The research lab course running for six weeks alongside a course within a discipline comprises a model for successfully advancing information literacy that can exist midway on the spectrum between the brief introductory one-shot and the labor-intensive, semester-long embedded approach. The latter allows for active learning and deep engagement but is a model that many libraries cannot achieve with equity across disciplines due to limited staffing levels. Our experiences show that a six-week asynchronous course may constitute another successful option in reinforcing information literacy that liaison librarians can adapt to multiple disciplines. A number of librarians are adopting this model as part of their "toolkit," and the nature of the librarian-taught lab offers the added advantage of enhancing the standing of librarians within institutions through contributing to credit-bearing course offerings.

CRITICAL REFLECTIONS FOR INSTRUCTIONAL IDENTITIES

The online asynchronous lab course is a model that can work across staffing levels and disciplines. In this instance, the CMC department was losing students because of the additional lab course required. Changing to an online asynchronous format allowed the students to learn necessary skills without adding to their scheduling burdens. The change in format immediately resulted in full enrollment for the CMC Methods course. It also allowed us to offer the lab course over six weeks instead of three for the former on-ground class, which enabled us to provide more in-depth learning and observe their progress. The exercises on the online discussion boards required students to respond to readings and videos and synthesize them within the Framework. In students' final reflective essays, we saw clear evidence that they were able to relate major national and global events to their own ability to distinguish and evaluate trustworthy information resources from a world filled with disinformation. The following questions may be helpful to librarian colleagues in adapting this model:

- Whether or not your library is leanly or robustly staffed, are you looking for ways to deepen librarian engagement with students around information literacy?
  - A short-term asynchronous course comprises a manageable time commitment for librarians and students. Everyone can work at their own times and pace within the confines of the weekly assignments. The flexibility of the environment invites and supports unrushed, reflective, collaborative learning.

- As librarians, are you looking for ways to develop and strengthen partnerships with teaching faculty at your institution?
  - Teaching a lab course provides an opportunity for librarians to work alongside teaching faculty rather than just stepping into a class by invitation. The students and our faculty partner recognized that we all were active partners in achieving the outcomes for the lab and the course.
- How do we know the students are learning the information literacy and critical thinking skills we teach that are so crucial to their success?
  - By nature, one-shots can feel like "one and done." An asynchronous lab course allows the librarian instructors to return and repeat key concepts as the students build their skills across the Framework for Information Literacy. The Framework becomes a learning process and living document rather than a theoretical lens to keep in mind. Paying attention to the timing of the courses also can provide an opportunity to assess the learning outcomes. Our course ran for six weeks alongside the longer course. This timeframe means that the students completed the lab and could apply what they learned as they progressed through their research papers and projects in the longer course.
- As librarians, in what ways can we help students take the critical step from what information literacy is to what it means for their lives?
  - Creating global citizens engaged in lifelong learning are pillars of the Rollins College mission. Our experience has taught us that lab courses running alongside core courses in select disciplines can comprise key resources in creating informed consumers of information. The lab course required the students to encapsulate their learning of the Framework for Information Literacy into practical applications to their daily lives now and going forward. At Rollins College, we are looking into ways to expand our model to other disciplines in close partnership with our faculty colleagues across campus. While we are a face-to-face institution, the asynchronous online lab course is a success we plan to take forward into our future information literacy teaching strategies.

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