INCREASING CRITICAL CONSCIOUSNESS IN AN UNDERGRADUATE COMMUNITY OF RESEARCH PRACTICE

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INTRODUCTION

Over the past few years, higher education institutions have been called to decolonize their learning curriculum. According to Marsh, the academic library reflects the legacy of colonialism and needs to be deconstructed through its collections, spaces, instructional and research practices.[1] Particularly in research and instructional settings, librarians are called upon to practice critical information literacy to interrogate inequalities and power relations existing in the creation, dissemination, and use of information. According to Tewell, critical information literacy is "an approach to education in library settings that strives to recognize education's potential for social change and empower learners to identify and act upon oppressive power structures."[2] Motivated to engage in a critical discourse of uncovering white supremacy approaches in the research process, we applied for a university-sponsored professional development program that invited faculty to transform their courses through a Diversity, Equity, and Inclusion (DEI) lens. Selected to participate in the DEI program and supported through recommended readings, group discussions, and consultations with instructional design specialists, we revised the learning curriculum of the McNairy Library Research Fellows Program.

Since the inception of the research fellows program, the learning curriculum has been developed and hosted within the university's learning management software, D2L Brightspace (D2L). The D2L course guides research fellows in learning the research process through readings, discussion posts and reflections, and applying the ACRL Framework concepts to their individual research projects. While revising the course through participation in the DEI program, we pursued two main goals: to make the learning content more accessible to all learners and to raise our and fellows' critical consciousness around research practices. Defined by Paulo Freire, critical consciousness refers to "learning to perceive social, political, and economic contradictions, and to take action against the oppressive elements of reality."[3] Guided by Freire's concept of critical consciousness, we made significant changes to the curriculum's content, organization, and delivery.

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The McNairy Library Research Fellows Program

The McNairy Library Research Fellows program provides undergraduate students with a unique opportunity to carry out an independent research project, participate in a community of practice with other research fellows, present their findings at conferences, and to serve as mentors for their peers. Selected through a competitive interview process, a new cohort of research fellows begins each spring and continues in the program for three semesters. Fellows attend weekly meetings with their librarian mentor and fellow cohort. During the meetings they share their research progress, provide feedback to each other, and discuss their interpretations and applications of learning acquired from the shared D2L course. In addition, each week fellows devote approximately eight hours to work on their independent research projects. The program is designed to provide students with a holistic approach to the research process while contributing to a community of practice. The program reflects Lave and Wenger's theoretical concept of a community of practice that involves "participation as a way of learning- of both absorbing and being absorbed in the culture of practice."[4] More information about how the program applies the theoretical framework to the development of a research community of practice can be found in our chapter in *Undergraduate Research and the Academic Librarian: Case Studies and Best Practices, Volume 2.*[5]

PROJECT IMPLEMENTATION

Exploring our Positionality

We both identify as white, cis-gender, heterosexual women with no visible disabilities. One author identifies as an American that grew up privileged and spent most of her life in predominantly white cities and institutions. The other author identifies as a Russian living in the US for almost half of her life. We have each been educators for over 17 years and have advanced degrees in English, Biological Anthropology, and Library Science, but neither of us has formally taken courses in Critical Race Theory, African American, Women's, or Gender Studies. We have been educating ourselves over the past five years, yet still consider ourselves novices in studying universal design and antiracist research concepts. As novices, we acknowledge our privilege in sharing our journey through this paper and our related ACRL presentation.

We acknowledge that our positionalities impact the lens through which we have conceived, developed, and, ultimately, will assess this project. Throughout our process we have worked collaboratively and expanded our knowledge on related topics through the following methods: took the Whiteness at Work course;[6] read and discussed works by Ibram X. Kendi,[7] bell hooks,[8] April Baker-Bell,[9] Safiya Umoja Noble,[10] Jay Timothy Dolmage,[11] and Crystal Fleming[12] (among others); and consulted the literature on antiracist research, inclusive pedagogy, and critical information literacy. Our presentation will provide a conversational space conducive to sharing ideas and activities on antiracist research practices. In response to this paper and our presentation, we hope to learn from our colleagues and receive feedback on our project.

Developing a Conceptual Framework

While thinking about how to revise the research fellows' learning curriculum, we immersed ourselves in the works of Maryellen Weimer, Paulo Freire, and bell hooks and conducted literature and web searches to engage with critical information literacy practices, antiracist research, and universal design concepts.[13] Guided by Weimer's learner-centered element of "the function of content"[14] we selected DEI learning activities that can be transferred easily and applied by research fellows to their research projects. Additionally, Weimer's learner-centered approaches including "the role of the teacher"[15] and "the balance of power"[16] helped us cement our role as facilitators of fellows' research journeys, center their voices through discussions during in-person meetings and online, and connect the DEI content to their prior and current research experiences.

According to Freire, critical consciousness, which is our ultimate goal for revising the learning content, can be facilitated through dialogue and reflection.[17] Our program focuses on facilitating dialogue, through discussion posts and weekly meetings, and encourages reflective practices, through individual reflection assignments at the end of each D2L content module. To help us create a welcoming and engaging dialogic space both in

person and online, we followed bell hook's engaged pedagogy principles that emphasize well-being, the union of mind, body, and spirit, and growth of the teacher.[18] For example, we sought activities that would invite the learner's personal, academic, and social self into the research process. Further, we prioritized establishing a learning community that welcomes the wholistic learner and empowers the mutual growth of librarian mentors and research fellows through discussions about power, privilege, and exclusion in the research process.

Whereas Weimer, Freire, and bell hooks shaped our teaching framework, findings from literature and web searches offered us some potential content and guidelines to revamp the learning content and make it more accessible. For instance, to transform the course, we followed Marsh's decolonial information literacy principles, such as centering marginalized voices, destabilizing learners' perceptions of dominant research practices, questioning content and tools, and drawing on students' prior knowledge and experience.[19] To maximize inclusion and accessibility for the research fellows, we modified content using principles primarily from Universal Design for Learning (UDL)[20] and Universal Design for Instruction (UDI).[21] UDL and UDI share a focus on allowing users to engage with learning content in multiple ways at their level and preference. Further, instructional content created with these principles in mind is scaffolded and intuitive with explicit directions and clear language, which can allow for a more engaging experience for all students.

Inventorying and Brainstorming

After developing our conceptual framework, we thoroughly reviewed the content of the fellows D2L course, which contained six main modules:

> 0. Course Orientation,
> I. Introduction to our community,
> II. Exploring Topics,
> III. Decoding Information,
> IV. Finding & Evaluating Information, and
> V. Methodology & Funding for Research.

We reviewed all associated assignments, discussions, and submodules, which included over 35 individual pages. During this inventory, we looked for opportunities to improve accessibility as well as to increase fellows' critical consciousness around research practices. We generated a list of accessibility improvements to make and brainstormed ideas for content additions that would fit within the course content. We created an outline of the course that included new DEI content ideas, many of which were sourced from existing activities shared by other researchers, such as the University of Michigan's Inclusive Teaching site[22] and Gruwell and Ewing's Critical Thinking in Academic Research.[23] The added content prompted us to modify the organization of the learning content, change a module title, and develop additional submodules.
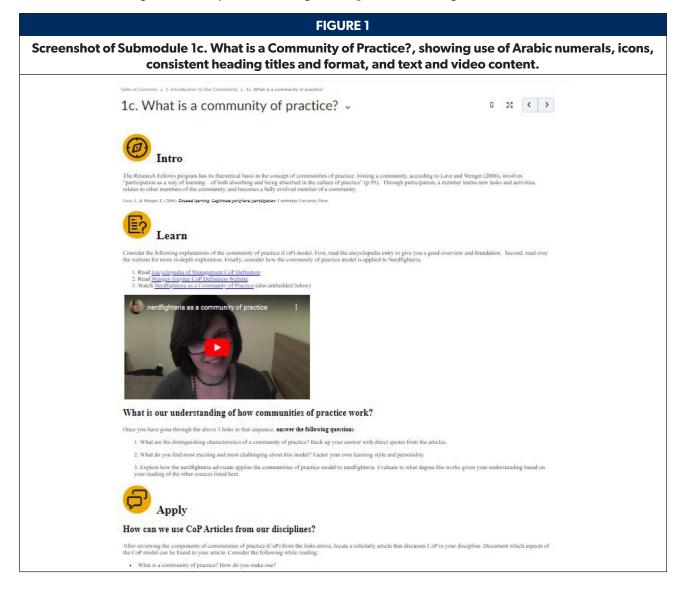
Making Targeted Changes

It was clear throughout the inventorying process that though there had been a previous attempt to structure the D2L course in a user-friendly and consistent manner, more could be done to improve overall accessibility and ease of engagement for our students. Though a slight exploration of critical consciousness may have existed in the previous version of the fellows course, we identified many opportunities to address these concepts more explicitly as they relate to research. As such, our changes focused on providing more equitable access, student choice, consistent organization & transparent content, community involvement, and increasing DEI content. The following sections will discuss the changes we made to ensure equitable access to the learning content and to increase fellows' critical consciousness around research practices, and how these changes relate to UDI principles,[24] UDL checkpoints,[25] and other relevant principles discussed in our conceptual framework.

Equitable Access

Our changes in this area focused on making our fellows D2L course more accessible for a variety of students.

These changes closely align with UDI Principle 1: Equitable Use as well as UDL checkpoints 1.2 and 1.3 that provide multiple options for perception. We made the following changes:

- Ensured all images/icons had alternate text
- Ensured that all self-created videos included captioning
- Used headings consistently and according to web protocol[26] (see figs.1 and 2)

FIGURE 1
Screenshot of Submodule 1c. What is a Community of Practice?, showing use of Arabic numerals, icons, consistent heading titles and format, and text and video content.

Student Choice

Increasing opportunities for student choice is not only important for UDI and UDL but is also a significant way to balance power within the classroom and increase student engagement.[27] Student choice can be in the form of how a student interacts with the course and content, which aligns with UDI Principle 2: Flexibility in Use as well as UDL Checkpoints 1.3 and 2.5 that provide options for perception, language, and symbols. Student choice can also involve how a student chooses to respond in discussions or assignments, aligning with UDL 7.1 optimizing individual choice and UDL 5.1 allowing for multiple forms of expression. We made the following changes in our D2L Course:
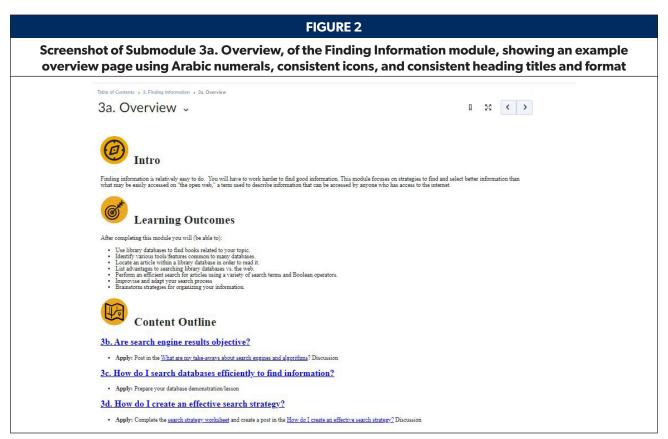
- Edited most submodules to include text and video content (see fig. 1 for an example), with special attention to the Course Orientation submodule

- Added appropriate duplicate content, like instructions for discussion posts to allow for different paths through the course
- Edited discussion and assignment instructions to allow students to choose the modality of their response: audio, video, or text
- Provided a variety of discussion prompts to choose from within Apply sections

Consistent Organization & Transparent Content

Since the D2L fellows course is serving as our curriculum, the content needs to be organized consistently and easy to navigate. This aligns with UDI Principle 3: Simple and Intuitive Instruction, which in an online environment looks like straightforward organization with added visual cues. Structurally, changes in this category allow students to know what to expect and minimize distractions while they are navigating the course (UDL 7.3). For the content, changes to more consistent and explicit sections provide many options for representation and engagement, including helping with comprehension (UDL 3.1, 3.3, and 3.4), recruiting interest (UDL 7.2), and self-regulation (UDL 9.1 and 9.3). We made the following changes:

- Revised the module and submodule titles to include Arabic numerals and letters to demonstrate a path through the course (see figs. 1 and 2)
- Revised each submodule/page to include three sections of information: Intro, Learn, and Apply (see fig. 1)
  - Developed Intro content as needed
  - Added Apply content as needed
- Maintained consistency in each module's overview page (see fig. 2)
- Added consistent icons to represent all sections throughout the course (see figs. 1 and 2)
- Edited each weblink to open in a new page/tab
- Added a discussion evaluation rubric to provide transparent expectations for participation

FIGURE 2

Screenshot of Submodule 3a. Overview, of the Finding Information module, showing an example overview page using Arabic numerals, consistent icons, and consistent heading titles and format

Community Involvement

In order to more fully develop our fellows' community that fosters critical consciousness and engagement with the content, we made changes that align with UDI Principle 8: A Community of Learners. As the concept of community is a foundational block of the program, we clarified the expectations for communication and participation in the program and created more opportunities for fellows to interact with each other. According to UDL Checkpoint 8.3, fostering community contributes to students' sustained effort and persistence. We implemented the following changes:

- Articulated program expectations to clarify fellows' participation on several levels, such as during the weekly meetings, through discussion posts and responses on the D2L course, and at semester events
- Added discussion and commenting guidelines
- Created an activity for research fellows to contribute guidelines for establishing an inclusive and open-minded community of practice
- Developed numerous discussion post assignments within the Apply sections to encourage reflection and interaction among fellows within the D2L course

DEI Content

Content changes to the course revolved around our goal of increasing fellows' critical consciousness around diversity, equity, and inclusion in the research process. During our inventorying and brainstorming we identified several topic areas to which it seemed organic to link new DEI learning materials to the research process: the researcher's identity; privilege and oppression in personal and institutional settings; technology and personal biases; diversity of voices and expertise; and research ethics. See Table 1 for an overview of the new DEI content and the corresponding location within our D2L course. To illustrate how we either embedded or connected the new content to our existing course, we will discuss the first two rows from Table 1 in detail in the next section.

TABLE 1			
Listing of new DEI activities and their location within the research fellows D2L course, including module and submodule, as well as whether the activities were added to existing or new submodules. Italics indicate activities created by the authors.			
Module Title	**Submodule Title**	**Existing or New Submodule**	**New DEI Activities**
Introduction to Our Community	Who are we?	X	Topic: Identity • University of Michigan's Social Identity Wheels Activity[28]
Exploring Topics	How may Critical Race Theory influence our research practices?	X (New)	Topic: CRT • American Bar Association Article[29] • *CRT Activity and Discussion Post*
Exploring Topics	Why examine privilege, curiosity, and exigency in the research process?	X (Existing)	Topic: Privilege • everyday feminism article[30] • University of Michigan's Privilege & Oppression Activity, including Checklists[31] • *Discussion Post*
Finding Information	Are search engine results objective?	X (New)	Topic: Search Tool Bias • Safiya Noble Video[32] • Analyzing Search Engines Activity[33] • *Discussion Post*
Evaluating Information	How is information created?	X (Existing)	Topic: Information Creation • Information Spectrum Activity[34] • *Discussion Post*

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Module Title	**Submodule Title**	**Existing or New Submodule**	**New DEI Activities**
Evaluating Information	How can you tell if a source is credible?	X	Topic: Authority is Contextual • Sources of Indigenous Knowledge Chapter[35] • Indigenous Knowledge Article[36] • Evaluation with SIFT Chapter[37] • *Discussion Post*
Approaching Research Design	What are researcher biases?	X	Topic: Researcher Bias • Researcher Bias Article[38] • Implicit Bias Tests[39] • *Discussion Post*
Approaching Research Design	Why are research ethics important?	X	Topic: Research Ethics • Bias in Research Article[40] • Henrietta Lacks Article[41] • *Discussion Post*

As the first module "Introduction to Our Community" focuses on developing a community of learners and getting to know one another, we added two activities adapted from the University of Michigan's Inclusive Teaching website. The first activity, a personal identity wheel, asks fellows to identify individual skills, characteristics, and preferences. The second activity further develops their reflection by asking them about their social identity, which includes sociodemographic questions about age, race, gender, (dis)ability, religious affiliation, and sexual orientation. Fellows engage with this content first through the "Learn" section of the "Who are we?" submodule, which provides background information, questions for reflection, and identity handouts. Then in the "Apply" section they are asked to introduce themselves by highlighting their identities in response to some of the previous questions (of their choosing) in a discussion post. During the follow-up weekly meeting, the librarian mentor prompts research fellows to further reflect on their social identities, associated privileges and oppressions, note similarities and differences among their peers, and discuss how their identities may influence their approach to research and interactions with peers. These activities and related discussions lay the foundation for fellows' critical thinking about their research practices, particularly about their researcher identities that may belong to privileged and marginalized groups simultaneously.

The second module "Exploring Topics" sets the stage for research fellows to discover and decide on a topic of interest. To help them generate potential topics that are grounded in antiracist research practices, we created a new submodule to introduce Critical Race Theory (CRT). In this submodule's "Learn" section, fellows read the American Bar Association's comprehensive article on CRT. After that, they are guided to "Apply" it as an antiracist research framework by first locating and reading an article discussing racism in their research topic or discipline. Then, they are prompted to reflect on the article, CRT, and possible antiracist research practices in a discussion post. During the follow-up weekly meeting, the librarian mentor prompts research fellows to share their definitions of CRT and how they will apply it to their own research projects.

PLANNED ASSESSMENT

During this transformation process, we developed assessment opportunities within the research fellows' experience to evaluate whether the transformed content and structure of the D2L course contributes to an increase in research fellows' engagement and critical consciousness. We will look at two lines of evidence: quantitative user

data from D2L and qualitative assessment of fellows' work produced during the course of the program. User data from D2L such as discussion post quantity, content page access, and course and D2L access frequency will speak to engagement. Additionally, we adapted the Student Engagement Questionnaire[42] and Nasir's edited version for online classes[43] to include it within an already developed post-dispositions survey, initially created to have fellows reflect on their learning in the program at its culmination. These survey results will be included in assessing fellows' engagement. Assessment of fellows' discussion posts, final projects, and responses to the post-dispositions survey will address critical consciousness. These data points from a cohort of fellows participating in the program before the curriculum changes were made (2022-2023) will be compared with those from a fellows' cohort participating after the changes were made (2023-2024). We received IRB approval for the study and results will be forthcoming in a future publication.

REFLECTIONS

Currently, there are three research fellows engaging with the revised course curriculum. At the time of writing, they have attended five meetings and have discussed portions of the first three modules. Thus, this section includes our qualitative reflections with regard to how the students are engaging with the content up to this point.

D2L Engagement

For the past two months, fellows have been logging into the D2L course regularly and engaging with the learning content. They seem to be navigating the course seamlessly on their own, as they have not posed any questions about the course's organization. Two out of the three research fellows have contributed actively to discussion posts. However, some prompts may still need to be edited to be more explicit in their meaning, as fellows' responses were not as in-depth as they could be.

Critical Consciousness

The research fellows are eager to engage in activities and follow-up discussions about diversity, equity, and inclusion topics in the program. When discussing their personal and social identities, they were open and vulnerable to identifying social contexts where they felt either privileged or oppressed. They were interested in learning about each other's shared and unique instances of privilege and oppression. In response to the value of learning about identities, the fellows indicated that the opportunity to reflect allowed them to create deeper connections with one another, better understand each other, and provide a reality check of privilege and oppression.

While discussing Critical Race Theory, the fellows needed to be prompted to define CRT and to identify its main principles and significance. When connecting CRT with the concept of privilege, the fellows also needed further prompts and reflection time to articulate how privilege and oppression are enacted in their everyday lives. By the end of the discussion, the fellows were ready to share how they would apply CRT to their research practices. Particularly, they would seek diverse voices on their research topic, question search tools, and critically choose research methods for their projects.

In reflecting on the fellows' discussion posts and conversations during the weekly meetings thus far, we are realizing the need to continually address DEI concepts throughout the program through scaffolded activities that allow regular and critical discourse. We believe that fellows will need this depth of exposure to be able to fully articulate antiracist practices relevant to their research projects. We keep reminding ourselves that the goal of the course transformation is to *increase* our and the research fellows' critical consciousness; for us to *begin* to internalize antiracist research practices, which takes time and consistent practice. While putting antiracist research concepts into practice alongside the research fellows, we are also continuously improving our pedagogy to engage them more effectively in seeking a diversity of knowledge, questioning content and tools, finding gaps, and centering their voices and research experiences constructively.

CONCLUSIONS

Even though we are still at the beginning stages of engaging fellows in learning and applying antiracist research practices, we would like to share our early successes and recommendations for librarians interested in embedding DEI content in their existing instructional programs:

1. Start small by deciding on main DEI topic areas to explore and map them to your existing content
2. Conduct research on existing DEI activities as there is plenty of content available for adaptation
3. Accept that you may be a beginner in these topics, embrace vulnerability, and keep learning
4. Prepare for a long-term process of absorbing and internalizing antiracist practices
5. Focus on fostering an open-minded and open-hearted learning community that raises critical consciousness
6. Our project will continue for the next two semesters as we collect and analyze the necessary quantitative and qualitative data to assess fellows' engagement and critical consciousness. We will describe our study findings in a future scholarly publication.

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