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### Authors

Abumeeiz, Salma  
Lopez, Christopher  
Weirick Johnson, Matthew  
et al.

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# Promoting Critical Reading through Learner-Centered Design:

## WI+RE's Approach to Open Online Learning

*Salma Abumeeiz, Christopher Lopez, Matthew Weirick Johnson, Kian Ravaei, Renee Romero, Hannah Sutherland, and Doug Worsham*

### Introduction to WI+RE and Learner-Centered Design

UCLA Library WI+RE (Writing Instruction + Research Education) is a team of undergraduate and graduate student employees, library staff, and librarians who create digital



learning modules to promote student success in academia and beyond. WI+RE modules cover diverse topics—from finding scholarly articles to writing literature reviews—using a variety of media, including interactive activities, videos, and digital comics. Since its establishment in 2016, WI+RE has garnered a total of 8,063+ online workshop completions at UCLA, 235K+ views on YouTube, and 296K+ website page views. This chapter outlines WI+RE’s approach to teaching critical reading through critical pedagogical practice and values-driven, learner-centered design.

## Critical Reading Connection

As a team situated within a large public research university, WI+RE recognizes the importance of critical reading not only for success in academia but also as a tool to aid students in developing their capacity to socially engage after they graduate. Each resource recommends practical actions and mental processes that readers can implement into their practices before, during, and after reading. These practices help learners evaluate the purpose of the text and think about how they can add their perspective to the scholarly conversation. In addition, learners are encouraged to think about how what they have read has importance beyond their academic context.

## Learner-Centered Design

WI+RE is a team of learner-designers—in other words, our creators are learners themselves because they are primarily UCLA students, though some of our creators are full-time staff who approach designing as lifelong learners. We believe that a resource is more helpful *for* learners when it is created *by* learners. When creating modules, WI+RE team members leverage their training in pedagogical concepts (such as active learning, social constructivist learning, and critical pedagogy) and design values as well as their own experience as learners.<sup>1</sup> The efficacy of learner-centered approaches to instruction is well documented. Empirical evidence signals that learner-centered instruction can result in “authentic inquiry” whereby learners not only acquire information but also engage in reflection, critical thinking, and knowledge construction.<sup>2</sup> This approach disrupts hierarchical teacher-student relationships, distributing power such that learners can engage in active, cooperative learning.<sup>3</sup> Further, learner-centered instruction prioritizes learners’ pedagogical needs and learning outcomes rather than imposing an instructor’s views onto learners.<sup>4</sup> Consequently, the practical application of learner-centered instruction will vary depending on the specific learning context in which it is used, as instructors respond to the needs of learners and their holistic experiences.

Within academic libraries, learner-centered approaches have been used to design in-person information literacy teaching sessions,<sup>5</sup> online instructional resources including LibGuides,<sup>6</sup> and physical library spaces.<sup>7</sup> Literature documenting such activities praises learner-centered design for its versatility in addressing various learning styles and ability to simultaneously connect learners with what they really need while actively involving them in the learning process. Further, learner-centered pedagogy emphasizes “diversity in learners and teachers” by utilizing “interactive and progressive activities... [and] appropriate technology” to explicitly connect instruction to real-world applications relevant to learner needs.<sup>8</sup>

Literature on the application of learner-centered design in the context of online teaching and learning is still burgeoning. As noted by Watson, software that lacks “a recognizable pedagogic basis or learning design” can deter instructors from utilizing online technologies in their teaching.<sup>9</sup> New and emerging technologies that emphasize active learning and interactivity seek to disrupt this. One such example is H5P—an HTML tool that enables creators to create dynamic online tutorials, videos, games, and more—which the WI+RE team utilizes to create many of its resources. Such pedagogically responsive technologies have built-in active learning strategies, including “simulations, screen manipulation, [and] quizzes” that have the potential to “expand the reach of information literacy beyond what a librarian can do in-person.”<sup>10</sup> Learner-centered approaches are well-suited to inform the design of online learning resources since they promote learner engagement, emphasize practical takeaways, and encourage students to take learning into their own hands.<sup>11</sup>

The literature on learner-centered design recognizes the essential role of learners in providing feedback to assess its efficacy<sup>12</sup> and establish a learning community.<sup>13</sup> Despite this, literature exploring learners’ participation in the totality of the design process, from planning to building and implementation of learner-centered instructional materials, is lacking. The WI+RE team seeks to address this gap in the literature. By establishing a community of learners as designers who participate in the design of instructional resources from start to finish, and collaborate with full-time library staff, UCLA faculty, and campus groups, we intend to further disrupt teacher-student hierarchies and assert that learners are experts in determining their own needs. This instructional approach is equipped to support and promote student reading, which is inherently personal and varies depending on learning context.

In order to create resources that center learners and their needs, WI+RE follows an intentional design process. This process begins with “empathy mapping,” where designers explore learning challenges by examining who the learners are, what context they are coming from, and the learner’s goals in relation to the expectations or requirements of their institutional context. Starting the process by putting the designer into the learner’s context prioritizes empathy with the learner and a method of exploring the breakthroughs that may lead to a learner’s success. From empathy mapping, the process leads to exploring the “learner’s journey” and what information is important for learners to know in order to understand and grasp the learning outcomes for each tutorial. Further steps in the process ask designers to think critically about the best format for a resource to take by sketching out different pathways and modes for learners and prototyping pathways.<sup>14</sup>

The learner-centered design process is augmented by The WI+RE Way—our manifesto,<sup>15</sup> or list of shared values about collaborative learning and design. Our manifesto includes values such as “Build imperfect solutions quickly and on purpose” and “Design multiple pathways for learning.” WI+RE seeks to make a difference for learners by equipping learners with the skills and reflective practices to take an active role in shaping their educational experience as students and lifelong learners. We know that learning occurs in the context of several factors, including “employment, service, families, clubs, social groups,” and more, and hope to inspire learners to think critically about the connection between what they are learning and experiencing.<sup>16</sup>

# Programmatic Strategies

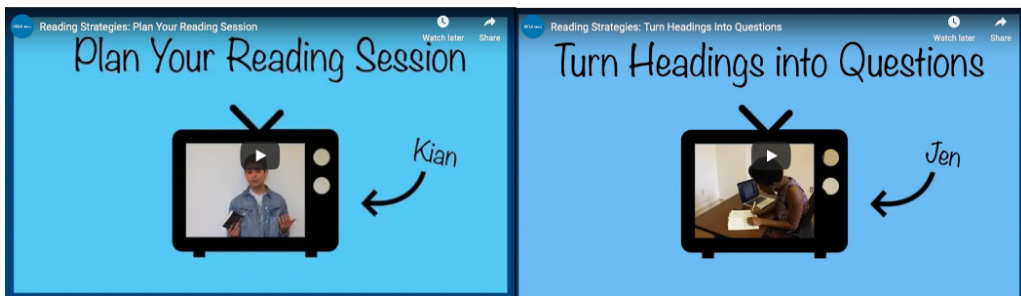
## Critical Reading in Practice — Strategies for Promoting Practical Reading Skills

The WI+RE team has leveraged the values-driven, learner-centered design process described above to create a large and wide-ranging set of open educational resources (OERs). This section details three of WI+RE’s critical reading OERs: (1) Reading Strategies Playlist, (2) CREATES, and (3) *Breaking Down Academic Articles*. Together, these projects demonstrate how libraries can take programmatic approaches to learner-centered design that enhance and expand critical reading instruction and reframe reading as an active, adaptive, and personal practice.

### PERSONALIZING STRATEGIC READING

The Reading Strategies Playlist<sup>17</sup> is a series of minute-long, vlog-style YouTube videos in which students on the WI+RE team demonstrate their favorite reading strategies, from planning a reading session to generating questions while reading. The video series was conceived through a series of conversations about challenges and breakthroughs in the research and writing process. Effective critical reading was a common topic in these conversations, with both students and instructors identifying it as a prerequisite for academic success that was often not directly addressed in the curriculum.

The critical questions for the project began to come together in the early stages of the design process: How do we help learners see reading as a more active and strategic process? How do we reframe reading as an aspect of learning that can be improved and even personalized? How do we center the learners in discussions of reading and empower them to construct their own approaches based on personal preferences and goals? Exploring these questions helped the team identify a curated video “playlist” as the initial pathway for the project, in part because a playlist is an adaptable and customizable framework that brings a variety of different voices and perspectives into conversation around a theme.



**Figure 39.1**

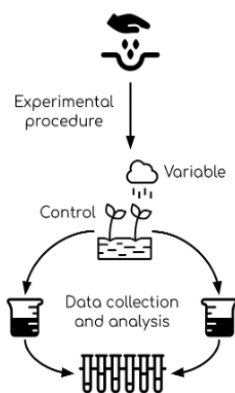
Thumbnails of two videos from the Reading Strategies Playlist: Plan Your Reading Session with Kian (left) and Turn Headings into Questions with Jen (right)

In the published playlist, each student speaks candidly about their experience with the reading process, recognizing reading as challenging and essential. The readers in these videos are as diverse as the materials that they are shown reading, from fiction to academic articles to science textbooks (see figure 39.1). In keeping with WI+RE's core value of designing multiple pathways for learning, the tutorial offers a bulleted list for each video that summarizes the key takeaways. Rather than focusing on one or two key strategies, the playlist as a whole presents a variety of approaches to reading and encourages learners to create their own toolbox of reading strategies. Representing multiple strategies and perspectives on reading signals that each learner's unique strategies are valid and helpful.

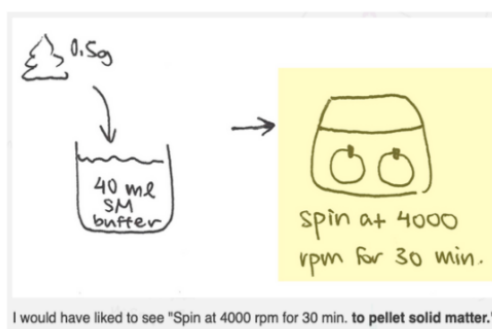
## PROMOTING CRITICAL READING OF PRIMARY SCIENTIFIC ARTICLES

The CREATE method, developed by Prof. Sally Hoskins, was designed to address previously identified limitations in scientific reading instruction through a carefully structured process that includes concept mapping, extensive annotation and analysis, and interpretation of figures and data.<sup>18</sup> Over time, CREATE has become one of the most well-known frameworks for scientific reading instruction<sup>19</sup> and has demonstrated positive impacts on both critical thinking and student attitudes toward science for diverse learners at a variety of higher education institutions.<sup>20</sup>

In this project, the WI+RE team partnered with Prof. Jordan Moberg-Parker, director of Undergraduate Laboratory Curriculum and Assessment, to develop an instructional website<sup>21</sup> to support her adaptation of the CREATE method, which adds a sixth step in which learners “synthesize the entire paper to illustrate the scientific narrative.” In the project, WI+RE set out to empathize with learners in order to unpack the multilayered challenges in scientific reading and identify the key breakthroughs for learners when using the CREATES process.



Section 1: Simplified examples



Section 2: Authentic annotated examples.

### Figure 39.2

Example images from the CREATES website section on “R: Read the Methods and Results.” The left is a simplified example of the methods of a paper, and the right is a screen capture from a student example

The CREATES approach to reading may be quite different from what most students are used to when approaching a scientific paper. Each step in the process is detailed, and success requires both completing each step and understanding how it fits within the larger framework. To address this challenge, WI+RE designed single pages on the CREATES site for each step in the process. Each of these pages is structured in a similar way, moving from clear, step-by-step directions and simplified visual examples to annotated examples of student work and, finally, a confidence-building section, which includes learner and teacher testimonials and a self-evaluation checklist (see figure 39.2). All of these design interventions are intended to make it as easy as possible for the learner to satisfy the learning outcomes.

The CREATES site helps critically reframe the reading process itself, with a focus on centering learners and the understanding they develop in relation to a text through careful inquiry and annotation.

## BREAKING DOWN ACADEMIC ARTICLES

Despite being a common resource type for reading in higher education, academic articles have been identified as one of the most difficult reading resource types to understand.<sup>22</sup> As Manarin et. al. convey, the notion of critical reading appreciates not only the variety of resource types but also the reality that each type requires a specific kind of reading.<sup>23</sup> The *Breaking Down Academic Articles* (BDAA) webcomic was designed to help students identify the basic elements of an academic article (abstract, thesis, section titles, supporting arguments, and cited sources) and explain how the author(s) use these elements to communicate their arguments. Moreover, the webcomic meets students' need to critically discuss readings in class and lay the groundwork for future research projects. BDAA addresses multiple dimensions of critical reading, including approaches for identifying an author's argument, understanding claims in bolstering said argument, and considering how to apply articles to one's own research.

The webcomic format presents new opportunities to apply design values to resource design, including "pursuing universal design at every stage of the process."<sup>24</sup> Further, webcomics represent an effort to account for as many different reading/learning styles as possible. In the project's initial design phases, the team identified several reading groups who might find synthesizing and analyzing academic articles challenging, such as first-year students, students whose native language is not English, and visual learners. Contextualizing ourselves in the learning journeys of these readers and learners challenged us to consider a resource that could accommodate these learning needs. Researchers have shown that comics are an effective medium to instruct visual learners and students learning a second language.<sup>25</sup>

As Giroux and Freire note, "[T]o be literate is not simply to know something, it also means knowing how to participate in the act of producing knowledge."<sup>26</sup> WI+RE's use of H5P tools orients our learner-centered approach directly to critical literacy's goal of designing instructional resources that invite the student to engage with the content and produce their own knowledge, as opposed to passively receiving it. Comics scholars have pointed out similar modes of engagement with readers in the way the comics' juxtaposition of images and words invites collaboration and participation.<sup>27</sup> Incorporating H5P elements, such as reading comprehension questions and text boxes for students to input their own thoughts into our webcomics, allows WI+RE to take the pedagogical potential of comics to the next level.<sup>28</sup>

## Discussion

### Scaling WI+RE to Meet the Reading Needs of Students

WI+RE resources exist both on our website and within a course shell in Moodle, our learning management system (LMS). To increase visibility of these resources, WI+RE's resources are accessible within every single course in UCLA's LMS under a "Library Resources" menu item. This menu was added to the LMS in late summer 2019 and is available to anyone viewing the public section of the course. From this Library Resources menu, users can click on "Research Tutorials" and instantly access WI+RE's website. WI+RE actively encourages the sharing, duplication, and adaptation of our resources by instructors, campus partners, and any educator at any institution interested in exploring how WI+RE resources can be adapted to serve their own learning community and needs. As strong believers in open educational resources, all of WI+RE's work is open source, and our resources can be shared, re-used, and re-mixed under a Creative Commons Attribution-NonCommercial-ShareAlike license.<sup>29</sup>

Within our learning management system, quantitative assessment can be gathered from those who engage with the tutorial within WI+RE's course shell. For example, when reviewing *Breaking Down Academic Articles*, the tutorial has been completed almost 3,000 times since it was first added to WI+RE's course in late May 2020. WI+RE's Reading Strategies YouTube has views reaching around 1,439 for Reading Strategies: Turn Headings Into Questions. While quantitative assessment is useful in evaluating whether WI+RE resources are easy to locate and widely shared, WI+RE focuses more heavily on qualitative assessment when evaluating resources, revising them to better serve the learner, improve their accessibility, and find ways to more effectively share them.

Informal, qualitative feedback from UCLA Library colleagues indicates that WI+RE tutorials are utilized for a variety of teaching and learning initiatives with generally positive feedback from users. In addition to the Library Resources tab within our LMS, colleagues report utilizing WI+RE tutorials for courses ranging from first-year experience to senior capstone by embedding tutorials into course syllabi or assigning them as pre- and post-work for instruction sessions. Though these activities present ongoing challenges in determining how to effectively assess WI+RE's overall impact, YouTube and GitHub engagement metrics, as well as survey data collected from library colleagues who report on their usage, suggest that WI+RE is broadly utilized to instill foundational skills for being a successful student and researcher, including how to read critically and efficiently.\*

Learner-centered design is utilized at UCLA Library for more than online learning, including designing physical library spaces, additional teaching and learning

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\* WI+RE resources are particularly useful for undergraduate and first-year classes, where incoming students may not have been exposed to academic or scientific articles or be unused to a heavy reading load. For instance, a Cluster 20 teaching assistant incorporated *Breaking Down Academic Articles* into their course Moodle, saying, "I've noticed there is an unspoken expectation that students should be able to break down an academic article or chapter, but no clear instruction is given on the mechanics of how an academic article is written." These "assumptions" about expectations or prior knowledge reflect the hidden challenges that WI+RE's tutorials seek to break down and address.



opportunities, and course-integrated library instruction. One well-received course integration includes the close relationship between WI+RE and the year-long, interdisciplinary, first-year Cluster Program. Members of WI+RE partnered with Cluster Embedded Inquiry Specialists—“InqSpecs”<sup>\*</sup> (former Cluster students who serve as peer advisors to assist current Cluster students)—to identify hidden and stated learning challenges in the Clusters, and map WI+RE resources to those identified challenges to meet the learning needs of students. InqSpecs identified several challenges related to reading in the Cluster Program, including how to identify different source types and how to be an active, critical reader. InqSpecs identified the Reading Strategies Playlist as a valuable resource in addressing these aforementioned challenges.

InqSpecs identified critical and analytical reading skills as being essential to research and writing success, particularly in identifying how to meaningfully integrate sources to bolster claims, develop strategies for argumentative writing, and appraise sources to determine their relevance to one’s research. They also emphasized opportunities for tutorials to be extended; InqSpecs made suggestions for further developing the Reading Strategies tutorials through additional WI+RE resources, including a tutorial where students develop a checklist of writing conventions for a particular field of writing. These insights, by learners and for learners, are indispensable when considering how to iteratively improve our current resources or create new ones.

While WI+RE employs our learner-centered design process primarily to create open educational resources, learner-centered and values-driven design are applicable and adaptable to a broad range of instructional designing contexts. Values-driven design asks us to articulate our values and then be intentional about how we enact those values in our teaching and learning. To start, it’s helpful to identify your values and develop your own manifesto like the WI+RE Way: designing with your values means knowing what those values are. Next, consider how those values are or aren’t represented in your current work or instructional design practices. With your articulated values in mind, you can also start to form a learning community or community of practice with colleagues who share your values. WI+RE values learners and wants them to lead in the design process and co-create the learning experience, so we hire UCLA students as learner-designers on the WI+RE team. However, if your focus is on faculty engagement or professional development, you may want to primarily include faculty members in your design process.

## Recent Work and Next Steps

Moving forward, the WI+RE team will continue to expand on modules about critical reading skills and create new tutorials focusing on empathy as it pertains to writing and reading. For instance, a recent tutorial encourages students to think critically about identity and positionality in research and offers strategic tips for how to incorporate a regular self-reflective practice of examining their positionality.<sup>30</sup> Another tutorial explores scholar-activism and working with communities to positively impact said community. By incorporating more critical reflection on the application of learning, WI+RE hopes to

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<sup>\*</sup> Cluster “Inquiry Specialists” are now referred to as “Peer Research and Writing Specialists.”

inspire and empower learners to create change in the communities where they live and work.

## Conclusion

In this chapter, we have shown how WI+RE has built its team around learner-centered and values-driven design to create online learning resources that are for students and by students. By walking through our process, we hope that others will be able to build their own WI+RE team or learning community and employ similar processes and procedures. The WI+RE process is flexible enough to accommodate a wide variety of instructional contexts while being rigid in its commitment to values. The successes of the Reading Strategies Playlist, the CREATES website, and *Breaking Down Academic Articles* webcomic illustrate the elasticity of learner-centered design and its responsiveness to diverse learners and learning needs.

The WI+RE tutorials that teach critical reading allow students a simple entry into skills development from a learner perspective. Furthermore, these open educational resources provide an opportunity to learn critical reading skills not only for UCLA students but also for anyone with access to the internet. As we continue to grow, we look for additional opportunities to train and employ students. The WI+RE Team is currently participating in library instruction training for student workers across the library to integrate learner-centered design and values-driven design in our instructional practices and in the design of learning experiences across the library and across formats including in-person instruction, online education resources, research consultations, online synchronous instruction, and instructional and media design.

We believe that WI+RE's approach to open online instructional resources models how other instructors may implement learner-centered teaching, learning, and design in their own contexts. Those interested in employing learner-centered instruction—for student reading initiatives and instruction more broadly—should consider pursuing opportunities to identify, center, and validate the holistic and practical needs of learners. Instructors should consider utilizing student-centered activities, pedagogies, and technologies in addressing these needs rather than imposing learning outcomes from the top-down.

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