Addressing the Challenges and Opportunities of a Feminist Rhetorical Approach for Wikipedia-based Writing Instruction in First-Year Composition

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Abstract: Wikipedia's gender gaps are both well-established and well-challenged, and while Wikipedia-based assignments have become more common in composition, teacher-scholars have not fully explored the opportunities for feminist pedagogy offered by the encyclopedia. This article reports on a teacher research study designed to examine the efficacy of the feminist rhetorical approach for understanding critical literacy learning through Wikipedia-based assignments in First-Year Composition (FYC). Findings from student forum posts, surveys, and reflection essays suggest that, despite its benefits, the Wikipedia assignment has been met with challenges that hinder students from making contributions critically and effectively, especially as they struggle to assume agency and criticality in the FYC classroom. By identifying and addressing these challenges, we seek to offer alternative approaches to teaching feminist rhetorical inquiries in FYC, and to expand the current critical practices in Wikipedia-based writing instruction.

Introduction

In what has by now become a widely-cited study, the Wikimedia Foundation found that less than 10% of Wikipedia editors identify as women, and less than 1% as transgender (Glott et al.). The encyclopedia that "anyone can edit," according to this research, is primarily edited by an overwhelmingly male demographic. Wikipedia's gender gap, as it has come to be known, is understood as a direct result of this homogenous editorship and the resulting gaps in representation, especially when it comes to the representation of women and women's issues. A more recent statistic: only 17% of the bibliographic articles on the English Wikipedia represent women ("Gender by Language"). The lack of biographies about notable women on Wikipedia is not without consequence. The importance of working toward equal representation is illustrated by the story of Donna Strickland. Editors had rejected a Wikipedia entry on Strickland, a highly accomplished physicist, just five months before she won the Nobel Prize in physics in 2018. It was not until Strickland was awarded the Nobel Prize that editors approved her Wikipedia page (Bazely). This example illustrates the need not only to improve the representation of notable women on Wikipedia; it also serves as an exigence for including Wikipedia-based assignments in First-Year Composition (FYC) as an opportunity for feminist practice.

The purpose of this article is to report on a study that explores the efficacy of applying a feminist rhetorical framework to understand Wikipedia-based assignments in FYC. In composition and new media studies, increased scholarly attention has been paid to the pedagogical opportunities afforded by Wikipedia, the online encyclopedia that allows "anyone" to edit its contents. Previous scholarship has approached Wikipedia-based writing instruction from numerous theoretical and pedagogical perspectives, including social epistemic theory (Berlin; McComisky), feminist epistemologies (Haraway; Harding), and queer feminist / media praxis (Cushman; Fotopoulou and O'Riordan). Drawing insight from these perspectives, scholars in composition studies have found the encyclopedia to contribute to academic writing instruction (Sweeney), collaborative writing practice (Cummings; Di Lauro and Shetler; Hood), and public knowledge making (Purdy; Vetter, "Archive 2.0"; Vetter, "Teaching Wikipedia"). However, there is a lack of empirical studies that examine the efficacy of Wikipedia-based teaching through the lens of critical literacy practices. Such a lens would be attentive to the fact that Wikipedia's gender gaps are both well-established (Collier and Bear; Ford and

Wajcman; Gruwell; Hill and Shaw) and well-challenged (Jiang and Vetter; MacAulay and Visser; Vetter and Pettiway; Vetter et al., "Wikipedia's Gender Gap"), but have not been adequately explored in terms of pedagogy.

This lack of exploration may be due to the novelty of Wikipedia-based approaches as well as the challenges inherent in critical literacies (or even a combination of both in FYC). Despite its various benefits, there is some pushback from students on the use of critical literacy pedagogies (Duffelmeyer; Jiang; LeCourt; Selber; Thomson-Bunn) in writing instruction. The issue with students' resistance to this type of pedagogy stems, to a large extent, from the enduring difficulty in encouraging students to position themselves as "agents with power" (Thomson-Bunn) and "participants in (not subjects of) a project" (Duffelmeyer 362). In other words, given the utilitarian and neoliberal notions about academic success that they bring into writing classrooms, it is challenging for students to assume agency in initiating social change and cultivating their membership in public participation. The feminist rhetorical approach to Wikipedia-based writing pedagogy, as one form of critical literacy pedagogy, has the potential to overcome this challenge in student agency. Due to its focus on producing public knowledge, the feminist rhetorical approach coincides with the tenets of Wikipedia-based writing (Purdy; Sweeney; Vetter "Archive 2.0," "Teaching Wikipedia"), and, accordingly, adds new dynamics to critical literacy education.

The framework of Feminist Rhetorical Practices (FRP) provides an alternative approach for allowing students to exercise agency in producing knowledge and to take membership in public writing contexts. The feminist rhetorical framework, advanced by Jacqueline Jones Royster and Gesa Kirsch, includes four elements or practices of critical inquiry, namely "critical imagination," "strategic contemplation," "social circulation," and "globalization" (71-128). Together, these elements of critical inquiry open up space for developing students' critical stance and literacy. While much of the existing research focuses on the implications and opportunities of Wikipedia for teaching academic writing, collaborative learning, and public engagement, some scholars (Nelson; Gold) apply the framework to upper-level undergraduate courses that engage Wikipedia-based assignments, arguing for the value of this framework in facilitating feminist social critiques in the Wikipedia community. Research in the tradition of feminist rhetoric, further, acknowledges the potential of Wikipedia for promoting students' critical literacy learning (Vetter et al. "Critical Digital Praxis"; Vetter "Teaching Wikipedia"). Such studies have not, however, fully assessed the efficacy of these approaches with research that validates student voices through the collection of qualitative data related to their experiences. Teacher reflective essays by David Gold and Julie D. Nelson reveal, to some extent, the affordances and challenges of FRP-inspired Wikipedia-based assignments. In this article, we hope to extend the reflective conversation begun by Gold and Nelson and to bring student voices into that conversation through qualitative data. Our study further applies the framework to FYC courses, with the end goal of exploring the efficacy of the framework for understanding critical literacy learning in FYC. Through emphasizing public knowledge making, Wikipedia-based writing aligns with the need of FYC instruction to "foster students' reflexive, critical, and rhetorical writing" (Moore et al. 1) and the field's call for teaching "media, literacy, visual and aural rhetorics, and critical literacy" in English and language arts classrooms (NCTE Position Statement).

We seek to explore the following research questions:

- What factors hinder or promote the efficacy of applying FRP in Wikipedia-based FYC classrooms?

- To what extent is FRP a useful construct for cultivating FYC students' critical literacy?

- What pedagogical implications does FRP hold for informing Wikipedia-based writing instruction in FYC?

To answer these research questions, we have conducted a qualitative study on Wikipedia-based writing in FYC. Drawing insight from FRP, we designed a Wikipedia-based writing assignment to explore the efficacy of the assignment in enhancing students' critical literacy. In this article, we maintain that Wikipedia-based writing instruction, when combined with feminist rhetoric, offers a potential method for further promoting critical literacy and enacting student agency in composition classrooms. Findings from three data sets—student forum posts, surveys, and reflection essays—suggest that the Wikipedia-based assignment enables more traditional academic outcomes related to online source reliability, writing for a general audience, and computer skills. In terms of the fourth category of the feminist rhetorical framework, that of "globalization," student-participants

further demonstrated overall positive growth in understanding their writing as contributions to a public and global knowledge archive. However, our findings also demonstrate that such a potential is not easily achieved, given challenges related to growth in the other three categories: "critical imagination," "strategic contemplation," and "social circulation." Such literacies require time, effort, and conscious engagement on the part of both instructors and students, and may even require a vertical and scaffolded sequence of courses beyond FYC. Based on these findings, this article provides recommendations to address these challenges and work towards a pedagogy that more fully engages FRP. In the section that follows, we review previous research to highlight how the encyclopedia creates a potential space for enacting feminist rhetorical practices, while also describing, in more detail, a focused framework for FRP.

Feminist Rhetorical Practices

While previous research on Wikipedia-based education has focused on opportunities for teaching writing in academic, collaborative, and public writing contexts, investigation of critical literacy practices made available by the encyclopedia has received less attention. The use of feminist rhetorical frameworks may seem to be slightly counterintuitive, or at least not immediately applicable, for the situation of writing for Wikipedia. Numerous studies (Collier and Bear; Ford and Wajcman; Gruwell), for example, have pointed out the issue of Wikipedia's gender gaps, with only about 16.1% of Wikipedia contributors being female according to a 2013 estimate based on survey responses (Hill and Shaw). The disparity between male and non-male edits on Wikipedia is inextricably connected with the scarce representation of feminist voices on Wikipedia. Furthermore, Wikipedia's "neutral point of view" (NPOV) policy has been critiqued for conflicting with feminist pedagogical approaches that stress the importance of experiential learning and value students' expression of their own voices (Cattapan).

Given the incongruity between Wikipedia principles and feminist epistemologies, we submit that such an epistemological disparity does not foreclose the possibility of using feminist approaches to expand the territory of teaching with Wikipedia. Instead, composition scholars have recognized the affordances of feminist theories and practices for enriching Wikipedia-based writing practices (Gold; MacAulay and Visser; Nelson; Vetter and Pettiway; Vetter et al., "Critical Digital Praxis"). Borrowing Aristea Fotopoulou and Kate O'Riordan's "queer feminist media praxis," Matthew A. Vetter and Keon Pettiway elaborate on the opportunity of the framework for fueling digital activism, and for railing against heteronormative identities in Wikipedia discourse communities. Following and extending such a critical practice, Vetter et al. employ "disciplinary praxis" as a model for engaging graduate students in addressing the disciplinary biases on Wikipedia. This type of disciplinary praxis prompts composition scholars and graduate students to collaboratively add to the representation of women and minority scholars in Wikipedia articles related to digital rhetoric, writing studies, and new media composition (Vetter et al. "Wikipedia's Gender Gap"). Likewise, even though her undergraduate writing students have not engaged explicitly with feminist theories, Nelson highlights that "the process of students analyzing, writing, and contributing to Wikipedia is still valuable feminist rhetorical work" (492). Working within the guidelines of NPOV, students can share their perspectives through constructing Wikipedia pages and references and write in their own voices through completing reflective assignments. Ultimately, Nelson calls upon scholars to rethink Wikipedia in rhetorically appropriate ways and to reframe Wikipedia editing as feminist rhetorical work in action.

The Framework of Feminist Rhetorical Practices

This project draws upon the FRP four elements of engagement advanced by Royster and Kirsch. Critical imagination is the identification of marginalized or previously unnoticed perspectives in texts (e.g., remaining open to new interpretations that question the existing viewpoints on rhetorical practices); strategic contemplation is the consideration of multiple and even conflicting perspectives within texts (e.g., taking multiple sources of information into account without rushing to judgment); social circulation is the critique of social and power dynamics through texts (e.g., disrupting the historical understanding of rhetoric to be "the public domain of men"); and globalization is the production of texts across national boundaries (e.g., recognizing rhetorical actions that take place in diverse, global contexts) (71-128). Despite the usefulness of FRP in sustaining critical

feminist rhetorical practices, composition scholars have only just begun to explore the relevance of FRP for writing instruction.

Recently, the integration of FRP in Wikipedia-based writing has emerged in composition and feminist rhetorical scholarship. Gold and Nelson, for instance, have adopted the feminist framework to inform teaching with Wikipedia. Understood holistically as adding knowledge not only to Wikipedia's coverage of women but also to that of underrepresented social groups in general, FRP is particularly useful for encouraging students' participation in critical literacy learning. The framework allows students to critically address Wikipedia's underrepresentation of marginalized social and cultural groups, including female citizens, ethnic minorities, the LGBT community, and other disadvantaged groups. The four interrelated critical elements of engagement align well with the pedagogical practices afforded by Wikipedia. For instance, in their upper-level undergraduate courses on feminist and writing studies, Gold and Nelson activate the four critical elements by asking that students identify marginalized points of view on Wikipedia to practice critical imagination, negotiate the tensions among different texts and stakeholders to exercise strategic contemplation, critique Wikipedia's lack of representation of marginalized voices to achieve social circulation, and produce knowledge in Wikipedia's global public writing community to globalize their points of view.

In this study, we further inquire into the efficacy of applying Feminist Rhetorical Practices (FRP) in FYC. We seek to better understand the extent to which the feminist rhetorical approach can improve student critical literacy and overall writing performance. More specifically, we apply the framework to Wikipedia-based assignments in FYC, questioning the extent to which the feminist rhetorical approach supports and enacts critical literacy. With data-driven recommendations for better practices, this study seeks to inform the design of more effective and critical Wikipedia-based assignments.

Methodology

Teacher Research as Methodology of Pedagogical Engagement

The methodological design of this project is influenced by what has been termed "teacher research," or "systematic and intentional inquiry carried out by teachers" (Cochran-Smith and Lytle 3). Because Wikipedia-based education is not widely practiced in composition, teacher-researchers engaged in this pedagogical approach may often need to conduct research on or with their own students and classes. While this may be considered a conflict of interest or limitation in some models of qualitative research, teacher research values the subjectivity of the teacher-researcher as complementary to understanding and interpreting data.

Teacher research complements this project because it disrupts the "conventional belief in the separation between researchers (those who make knowledge) and teachers (those who consume and disseminate it)" (Ray 174). Such disruption provides opportunities for practitioners to make direct, practical inquiries into their own pedagogical practice, as well as to reflect on those inquiries towards future practice. In other words, teacher research offers compositionists an opportunity to research "problems that result in modification of their own behaviors and theories" (Ray 174). While we value the opportunity of the teacher-researcher to directly reflect on their pedagogical practices, we also acknowledge the importance of including a research partner positioned beyond the classroom. Accordingly, this project is guided by collaboration with a co-researcher (Vetter) that contributes insight to the research beyond the teacher positionality.

A final advantage of using a teacher research model of inquiry is that it allows for the collection of data in a way that is less intrusive for participants. While student-participants in this study did respond to a separate survey, other methods of data collection (discussion forum post and reflection) were integrated into regular coursework and enhanced student engagement with course assignments. In this way, teacher research allows for deeper student and teacher engagement. Student-participants contribute regular coursework enhanced by study methods that allow them to further reflect on their experience with an innovative pedagogical model. Teacher-researchers are more engaged in their own pedagogical practice because they are more closely attuned to its outcomes when collecting data from students.

Study Context

The project is situated in two FYC courses at a large research institution on the east coast of the United States. A total of 44 students participated in the study. Institutional demographic data collected in the fall of 2018 (concurrent with this study) describes the student population as 58% female, 42% male, and 20% ethic minority student population. Students and instructor worked together to identify and address the lack of coverage of underrepresented social groups on Wikipedia. Following the framework of FRP, Jiang developed an FRP-inspired writing assignment which asked students to collaboratively expand twelve underdeveloped Wikipedia articles pertaining to marginalized voices and social groups. Assignment goals were made explicit to students in the assignment handout, throughout the introduction, and through classroom discussions and activities. Furthermore, the assignment was heavily integrated into the day-to-day class activities. Because of the assignment's focus on knowledge gaps (and more subtly, epistemology), the instructor also led discussions on these topics, especially the issue of Wikipedia's gender gap. Editing assignment topics included the following: Violence against LGBT individuals; Wealth inequality; Augmented learning and educational equality; Propaganda in the U.S.; Gender equality; Racial inequality; Obesity and poverty in the United States; Representation of women and male gaze in films. Influenced by the course designs described by Nelson and Gold, Jiang challenged students to identify marginalized topics on Wikipedia, evaluate the coverage of multiple perspectives in these Wikipedia articles, analyze information gaps and biases, and contribute knowledge to the global Wikipedia community. A small percentage of participants had edited Wikipedia before this assignment (5%; 2/39), while the large majority had no editorial experience (95%; 37/39).

Data Sets

To garner students' perceptions of their critical literacy learning, we obtained IRB approval and collected three sets of data. First, students wrote forum posts to describe their perception of the Wikipedia-based assignment and the potential challenges they may encounter before editing. After publishing final edits to Wikipedia, the students individually completed a survey on Qualtrics (Appendix 1 [#appendix1]) and collaboratively wrote reflection essays (Appendix 2 [#appendix2]). Both of these instruments were designed to ask questions about students' experience with critical literacy learning through this Wikipedia-based assignment and any challenges they faced in completing the assignment. The survey data were interpreted using the statistical tools afforded by the Qualtrics software. The forum discussion and reflection data were transcribed and analyzed with Nvivo, following the procedure of thematic analysis. The coding of survey, forum post, and reflection essay data resulted in initial codes. After developing the initial codes, we coded the data again, grouping the codes into broader themes. The broader themes that emerged included both students' opportunities and challenges in editing Wikipedia. Because the methodology of teacher research guided our overall study, our main emphasis in designing instruments was focused on student experience and learning. Furthermore, we intentionally chose not to incorporate language related to feminist rhetoric in these instruments in order to gather more open and unprompted responses from students. Our coding of a good majority of the qualitative data, however, was guided by the four elements of FRP as is evident in the following sections.

Limitations

This study is limited by its small sample size (N=44). Due to the small sample size, it is impossible to fully account for every single factor that may promote or hinder the implementation of FRP in first-year writing classrooms. Future studies might collect a larger set of data to account for other possible factors. We anticipate the possibility of developing this study into larger research projects examining the efficacy of critical approaches to Wikipedia-based education. Another limitation of this study is its open-ended emphasis on critical literacy and learning experience in the survey and reflection instruments. Applications of FRP are relatively novel. As researchers, we struggled with the decision to bring language directly from the FRP framework into our instruments. We ultimately decided against this strategy because we wanted to avoid characterizing students' experience with language they might not choose on their own. Cassandra Woody, for instance, acknowledges the difficulty of integrating explicitly feminist theory into the first-year writing class when she asserts that "curriculum developers must possess a deep understanding of the theory they employ and then move that

expertise into learning goals, assignments, and activities that draw out theoretical moves *without* explicitly addressing complex theory or using discipline-specific language" (486; emphasis added). This type of balancing act, in which the instructor must obscure overtly feminist ideology, constrained our design of research instruments. Survey and reflection data from this study are admittedly somewhat limited, accordingly, given the constraints teacher-researchers must work around when enacting FRP. Although we triangulated between three data sources, future research might employ more qualitative methods such as interviews and focus groups to offer methodologies for assessing FRP. We also see opportunities for future research in extending and modifying the instruments we offer in this article towards more explicit applications of FRP.

Additionally, this study is also limited by the position of the primary researcher as instructor of the course. However, the dual roles of researcher and instructor are also beneficial for the data collection. In tandem with the methodology of teacher research, the dual roles provide the opportunity for the researcher, along with the students, to participate in public writing contexts, with the goal of initiating social change. Despite these limitations, collecting multiple sources of data, including student Wikipedia edits, surveys, forum posts, and reflections, allows us to investigate students' perception and reflection of their critical literacy learning process through the Wikipedia-based assignment. In so doing, this study also illustrates ways through which factors can hinder or facilitate critical literacy learning.

Findings

Based on the data collected from student forum posts, surveys, and reflection essays, preliminary findings suggest that, despite its potential for facilitating critical literacy learning, employing the feminist rhetorical approach in FYC has been met with challenges in student learning. Although some student-participants responded positively to the Wikipedia-based assignment's capability for teaching feminist rhetorical practices, a majority of students encountered challenges in learning growth among three of the four FRP categories (critical imagination, strategic contemplation, and social circulation). The following sections report on these findings, and are organized by these categories. This does not indicate, however, that the Wikipedia-based assignment is not pedagogically successful at other learning goals. An additional category, "Overall Learning Outcomes," introduces our report on student perceptions of learning outcomes, which demonstrates high valuations of the assignment for teaching more traditional academic literacies. Additionally, students reported positive changes related to their engagement with Wikipedia as a global platform for building knowledge.

Following our report of these findings, a discussion section provides pedagogical suggestions to address these challenges. Data challenging the teaching benefits of Wikipedia-based assignments is especially useful now as researchers increasingly make claims about the learning outcomes made available by this pedagogy (Cummings; Hood; Nelson; Sweeney; Vetter, "Archive 2.0," "Teaching Wikipedia"; Vetter, McDowell, and Stewart, 2019). Drawing from these preliminary findings, we also attempt to provide pedagogical suggestions for addressing these challenges and improving student writing. Finally, this article provides recommendations on how to better integrate the feminist rhetorical framework in FYC, with implications for enriching the existing critical approaches to Wikipedia-based writing instruction.

Overall Learning Outcomes

While this study did not always demonstrate student-participants' growth in critical literacy, more traditional and academic learning outcomes did seem to be engaged more often. When asked to select specific learning outcomes participants "felt [they] acquired through the assignment, for instance, students emphasized "online source reliability" (34/39); "writing for a general audience" (32/39); and "computer skills" (27/39) over "critical thinking" (24/39). These results demonstrate how students have valued traditional academic skills and knowledges over outcomes related to critical literacy more generally. Figure 1 [#fig1] shows a quantitative visualization of the selections made by students when asked to choose one or more learning outcomes engaged through the assignment. Selections of learning outcomes more commonly associated with writing and research literacies also underscore how a limited number of participants engage with categories in the FRP framework, reported below.
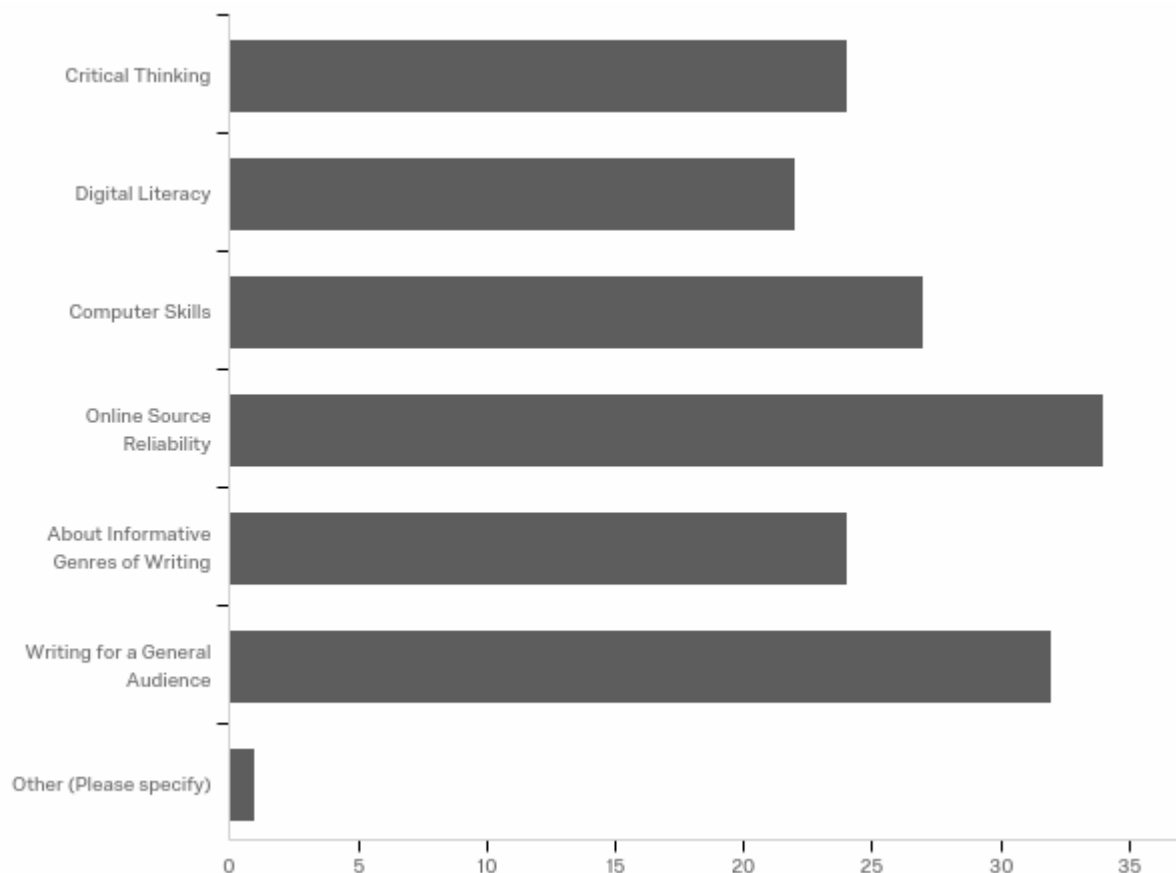
Figure 1. Student selections of learning outcomes

Critical Imagination

Wikipedia-based assignments that engage issues and topics related to social equity should provide plenty of opportunities for critical imagination, or the identification of marginalized or previously unnoticed perspectives in texts (Royster and Kirsch). One of the most salient of these opportunities would be the identification of content gaps, both in terms of under-developed articles and articles that are simply non-existent, especially when these gaps coincide with already marginalized perspectives, identities, or topics in larger cultural discourses. Finding underexplored topics and identifying content gaps has been linked to critical imagination in other pedagogies studies (Nelson). When asked to comment on their thinking about the marginalized groups of people involved in the topic that students worked on (Appendix 1 [#appendix1]), participants offered a number of responses specific to the ways that they selected their topic and identified marginalized perspectives. Over half of the survey respondents (22/39) expressed how their understanding and perspective on social issues evolved in a variety of ways. Among some of the most compelling:

> "It make [*sic*] me more aware of the problems of stereotypes of women."

> "This article really made me feel more sympathy [*sic*] for the lower class community."

> "I feel awful for the number of people who have been a part of a hate crime ... I also feel really bad for those who were a victim of the hate crime and their crime wasn't reported."

Indeed, a majority of students in this study were able to identify content gaps and practice critical imagination; however, this practice was often limited to superficial understandings of an article's development. The following student forum posts illustrate this superficial understanding of content gaps in their reliance on simple cues signaling a lack of development in Wikipedia: "We have found many content gaps such as little information, off topic sections and the history of only one person editing the page. It's important to fix the content gaps to have a

successful page for reader [*sic*] to have appropriate information." Similarly, another student shared the following: "I have noticed missing information, warning banners, information that was not cited." In short, while students were able to recognize an article's need for development, they weren't always cognizant of the wider implications for marginalization and weren't always sure how to develop the article further.

Furthermore, the assignment was met with challenges as students struggled to locate sources to fill in the content gaps they had identified. As has been noted by other studies on Wikipedia-based pedagogy (Vetter "Teaching Wikipedia"), marginalized topics on Wikipedia are often less-developed because of a lack of secondary sources covering the topic. In their collaborative reflection essays, student-participants made realizations about how the assignment allowed or did not allow them to address Wikipedia's content gaps. The group editing "The Historical Violence against the LGBT Community" mentioned that "the article itself mainly shows the attacks that have occurred to members of the LGBT community rather than help to show some more of the history that has been developing over a period of time." The group working on the topic of "wealth inequality" identified the article's lack of discussion of gender pay inequality: "Upon first reading our article 'Wealth inequality in the United States,' we noticed a few problems one of which was the lack of having a section devoted to gender pay inequality." However, there were also students who reflected on the difficulties in addressing the content gaps and in finding reliable sources on Wikipedia articles—"One of the biggest challenges we faced was finding reliable research and up to date information about our topic"; "Many websites we came across couldn't be cited because of a lack of an author or reference, and others didn't have the information that we were precisely looking for"; "Though a search through google [*sic*] scholar provided an overabundance of websites many were off topic and just had a few relative words."

Challenges related to locating sources highlight a complex conundrum in Wikipedia-based assignments, especially those focused on social equity. Topics and identities that are marginalized in the broader culture are often more difficult to research because of that marginalization. There aren't as many sources dedicated to these topics, which leads to their continued neglect and marginalization on Wikipedia. Addressing the issue of systemic bias in Wikipedia more directly in the classroom would ultimately allow for more active critical imagination. Students need to realize that much of the marginalization surfacing in Wikipedia is a reflection of marginalization occurring in cultural processes outside the encyclopedia.

Strategic Contemplation

Strategic Contemplation, or the consideration of multiple and conflicting perspectives within texts, allows for a negotiation of tensions among different texts and stakeholders and has the potential to create opportunities for reflecting on one's own assumptions and biases (Royster and Kirsch). Strategic contemplation is especially useful in a contested space like Wikipedia, which, although it strives for a type of objectivity through its NOPV policy, is rife with disagreements, dialogue, and conflict both in its main article spaces as well as within the underlying talk pages which exist as a space for editors to discuss an article's continued development. Our survey addressed participants' engagement with strategic contemplation by asking about the assignment's capability to "change [their] thinking about the topic [they] worked on" (Appendix 1 [#appendix1]). Participants provided varying perspectives on the particular ways Wikipedia editing allowed them to practice strategic contemplation. Qualitative coding of these perspectives produced three particular themes in which participants (1) reported changes in thinking which resulted in consideration of multiple/conflicting perspectives on their topic (n=17/39), (2) reported increases in content knowledge about the topic, but no change in thinking or consideration of multiple/conflicting perspectives (n=11/39), and (3) reported no change in thinking nor increase in content knowledge (n=11/39). In the first category, participants' reflections on editing subjects, such as gender inequality, especially demonstrate strategic contemplation: "The article can be related to many areas of our society today that resembles problems of stereotypes especially in women. I was able to understand more of where and how those claims start and remain in the culture." Another student's response illustrates strategic contemplation regarding the complex factors related to obesity: "I knew that obesity was a complex issue. I did not realize the impact that one's socioeconomic status had on their likelihood of becoming obese. It's not just about calories and exercise. Having this assignment makes me want to learn more about the varying contributing factors to obesity in my own life." In another instance, a student opened up to the depth of multiple and conflicting perspectives, stating that "I already knew what propaganda was but I never really thought of it in

depth and working on this edit made me realize that propaganda can be about anything and everything to try and convince people of the creator's idea.”

While these responses demonstrate some limited positive strategic contemplation, multiple students (22/39) reported only increased content knowledge (11/39) or no change in thinking or content knowledge (11/39). Of the former, comments such as “It really didn't change my thinking because I didn't know much about the topic....I do think some of the products I learned about were interesting” were common. In the latter and final thematic category, responses were shorter and less engaged: “It did not really influence my opinion on the topic one way or the other.”; “It didn’t.; “Not much.” Given that over half of the participants failed to demonstrate strategic contemplation in accordance with this survey question, there is a need for more investigation of pedagogical methods that might more fully allow critical thinking. Overall, these findings are corroborated in an accompanying quantitative question which demonstrates an even larger percentage of negative views about the capability of the assignment to “change [students’] thinking about the topic [they] worked on.” In this data, 72% of participants expressed detracting views, 28% passive (or neutral views), and no participants expressed promotional views. Ultimately, such views demonstrate the need for increased attention and discussion of the ways in which conflict and contestation occurs in Wikipedia (both in article mainspace and talk pages).

Social Circulation

According to Royster and Kirsch, social circulation is the critique of social and power dynamics through texts. Theoretically, Wikipedia provides multiple opportunities for such critique, especially given its demonstrated biases and lack of representation of women. As of January, 2019, for instance, only 17.83% of English biographies in Wikipedia are written about women figures (“Gender by Language”). Wikipedia projects like Women in Red (“Wikipedia: Wikiproject”) focus on creating and developing nonexistent biographical articles on such women. Topic selections in this assignment were guided by the instructor towards issues concerning social equity, and accordingly, do represent some engagement, on the part of participants, to engage in social circulation. These social equity topics provided opportunities for student-participants to consider Wikipedia’s lack of representation of marginalized groups and voices.

However, this consideration did not mean, according to this data set, that participants questioned underlying social and power structures. Achieving social circulation and the critique that it involves is difficult for FYC students. To question Wikipedia is to question and undermine the assignment itself. For instance, students need to be able to write in a neutral, encyclopedic style, following the guideline of NPOV in order to be successful in the Wikipedia community. By contrast, to adequately critique Wikipedia as a global epistemology that seeks to gather “the sum of all human knowledge” (Wales), students need to be open to the idea that Western epistemologies often silence or omit already marginalized types of knowledge (especially folk knowledge and oral traditions) (Vetter and Pettiway). A small number of groups in this study engaged in such social critique. For example, in their reflection essay, the group working on the topic of “propaganda through media” found biases within the existing article of the same title: “The content of this section had many holes, showing one sided topics and American ideology, creating a biased appearance. We addressed these content gaps by adding additional sections as well as adding to existing ones.” However, the majority of students seemed to take NPOV as a given without questioning or critiquing this ideology on Wikipedia: “I also learned how Wikipedia articles are made by factual evidence from reliable sources, drafts from the sandbox and are made with no opinions leaning one way or the other”; “The information gathered must be clear, concise, and analyzed in a way that is unbiased and un-opinionated”; “This is an informative writing assignment and therefore needs to be factual and precise.”

Globalization

The final category in the FRP framework is globalization, or the production of texts across national boundaries. Such a practice might emerge from participants actively producing knowledge on Wikipedia, a global platform, in order to enhance their understanding of issues related to information or knowledge access. The Wikipedia assignment reported on in this study asked students to write for public audiences and to globalize their points of view. Students’ engagement in globalization was reflected in two areas: student edits related to globalization and

their changing perceptions of Wikipedia itself as a reliable platform for global and public knowledge making. In terms of student edits, the groups that contributed to knowledge production across national borders included one expanding the Wikipedia article "Educational Inequality." As part of their edits, students researched and wrote about global issues such as the immigrant paradox in the United States and educational inequality in other countries.

In addition to these editorial engagements, student-participants also adopted more globalized mindsets related to their understanding of Wikipedia's reliability. Persistent myths about Wikipedia's credibility are rooted in the encyclopedia's distribution of knowledge curation across temporal and geographical boundaries and among multiple editors with varying levels of expertise. Commons-based peer production (Benkler) or "crowd-sourcing" has become a more commonly accepted method for other purposes (e.g. fundraising), yet the negative narrative related to Wikipedia persists, especially in secondary educational settings. However, when students experience Wikipedia editing assignments, they are able to (largely) dispel this myth, as they begin to see such distributed production as an asset.

Before the Wikipedia assignment, students were asked to submit forum posts in which they answered the question: "To what extent do you think Wikipedia is (or is not) a reliable source of information?" Twenty-two out of the thirty-eight students who submitted their posts identified Wikipedia as unreliable. For example, one student shared that "personally, I don't think Wikipedia is a very reliable source because anyone can edit an article and change it to whatever they want." Nine out of the 38 students held ambivalent feelings about Wikipedia's reliability: "There are some pages on Wikipedia that are very reliable, but there are some that are completely not." In comparison, only seven students demonstrated positive attitudes toward Wikipedia as a reliable source: "With the pages being examined, most of the information on the site is accurate and should be safe to use for school or any other projects." In addition to personal opinions, previous schooling also seemed to exert an influence on students' attitudes toward the credibility of Wikipedia: "Throughout high school my teachers never allowed me to use wikipedia [*sic*] because they said it is not a reliable source."

After the assignment, however, student attitudes towards Wikipedia demonstrated a fairly remarkable change. When asked how the assignment changed their thinking about Wikipedia overall, a majority of student-participants reported positive changes to their perceptions about the online encyclopedia, especially in terms of reliability. 67% (n=26/39) responded positively to this survey question. Common responses included the following: "I learned that it is more reliable than I thought"; "I have a lot more respect for Wikipedia as a whole. I know now that some people put in a lot of time and effort to give information about topics that everyone doesn't know about"; "I did not know that it is possible to draft and test what people edit in the articles. I have more trust in the credibility of the site." Such comments highlighted the way participants began to see how internal processes and checks within Wikipedia made space for more credible information. Despite these positive changes to student perceptions, 15% (6/39) reported a negative change to their thinking about the website. These responses often highlighted how their own capacity to edit articles led them to question the site's reliability: "It made me realize how easy it is for random people to spread false information on wikipedia [*sic*]"; "This made me think that wikipedia [*sic*] is no good. If i [*sic*] could get on here and change something than that would allow everyone to do the same and some people will do it just because they're bored." Finally, a similar percentage of participants (18%; 7/39) reported no change at all in their thinking about Wikipedia. These findings suggest that most participants are open to new ways of thinking about Wikipedia and questions of its credibility. They also suggest how these participants are beginning to accept and contribute to a distributed model of global knowledge curation.

Discussion

This study, through practicing teacher research, sought to explore the following questions: What factors hinder or promote the efficacy of applying FRP in Wikipedia-based FYC classrooms?; To what extent is FRP a useful construct for cultivating FYC students' critical literacy?; and What pedagogical implications does FRP hold for informing Wikipedia-based writing instruction in FYC? In our examination of the three datasets, including student-participant discussion forum posts, reflection essays, and surveys, we have concluded that a majority of students in this study expressed limited engagement with feminist rhetorical practices in their work on a

Wikipedia-based assignment. We do not see such a finding as indicating that Wikipedia-based assignments cannot teach towards an FRP framework; however, we do acknowledge the multiple challenges associated with the demographic involved in FYC.

Assignment Challenges

While most students responded positively to the Wikipedia assignment in this study, the data revealed challenges that hindered the efficacy of applying FRP in Wikipedia-integrated first-year writing classrooms. While the Wikipedia assignment is generally successful in teaching "globalization" and other traditional academic literacies, the assignment falls short of teaching "critical imagination," "strategic contemplation," and "social circulation." On the one hand, FRP has provided the means through which students become "agents with power" (Thomson-Bunn) and "participants in (not subjects of) a project" (Duffelmeyer 362) in public writing contexts. On the other, however, Wikipedia's tenet of neutrality, activated through NPOV, has prevented students from full participation in the critical FRP of social circulation. Since NPOV is essential for being successful in the Wikipedia community, it is difficult to enact the ideological critique that would potentially undermine students' success in producing public knowledge. Nevertheless, it is important for teachers and scholars to recognize Western epistemologies that often silence or omit already marginalized types of knowledge (especially folk knowledge and oral traditions) (Vetter and Pettiway). In addition to NPOV, another factor that might have influenced the practice of social circulation is students' level of knowledge. As first-year writers, students in this study may not be ready to engage in more advanced feminist social critique, especially in addition to the challenges associated with re-framing previous assumptions regarding Wikipedia and the technological skills participating in Wikipedia requires. Teaching this framework at the advanced undergraduate level, as Nelson and Gold have done, or at the graduate level, would pose fewer intellectual challenges. This being said, given that students may not have explicitly identified engaging with FRP, the feminist framework was inherent in the Wikipedia assignment and students were exposed and engaged (on some level) with its practices.

While not being a dominant theme in our analysis, some student groups did encounter technological difficulties, especially when first exposed to Wikipedia editing. In response to the question on the challenges they may have experienced in completing the Wikipedia assignment, students reflected on the technological difficulties of editing Wikipedia. Among the most persistent technical difficulties were citation practices and navigation and usage of talk pages. While some groups perceived these unfamiliar aspects of Wikipedia editing as a bit confusing at first, with experience and training, these students were able to manage the technological difficulties.

Assignment Opportunities

Despite the challenges associated with teaching FRP in a Wikipedia-based assignment, a majority of participants in this study (28/39 or 72%) reported the Wikipedia classroom project was a worthwhile experience. Furthermore, many of the student-participants in this study (though by no means a majority) did report engaging with rhetorical feminist practices. According to survey data, students tended to enjoy the different format of the assignment, learn more about their topic, successfully work in groups, and become more Wikipedia-literate. However, when asked if they would continue to edit Wikipedia in the future, only 18% (7/39) answered affirmatively. These participants overwhelmingly reported that they would be motivated to edit, in the future, by the topic of a particular article or their interest and passion in an article.

Future Pedagogies

Our findings have broad implications for critical applications of Wikipedia-based writing instruction. In thinking through how a portion of our participants failed to engage in feminist rhetorical practices in this Wikipedia assignment, we call for future pedagogies to be more attentive to four particular strategies of instruction. First, addressing the issue of system bias in the encyclopedia more directly and consciously in the classroom, through readings and discussions on the gender gap, for example, would allow for more active and aware critical imagination. Second, we recommend that instructors be more attentive to Wikipedia as a contested site for the production of knowledge. Such attention could manifest in discussions and explorations of Wikipedia talk pages,

spaces where editors negotiate disagreements about an article's development, especially talk pages of articles that are more controversial. Third, we call for instructors to be open with students about how knowledge-making practices in Wikipedia re-affirm traditional print-based epistemologies that omit and/or marginalize knowledge practices from other cultures outside the western tradition. Doing so, as difficult as it may be with undergraduate audiences, will ultimately provide pathways into students practicing the critique of social circulation. Finally, in order to encourage globalization as a feminist rhetorical practice, we recommend that students engage in discussions and low-stakes assignments that ask them to consider the global audience they are writing with and for in Wikipedia-based assignments. Paying attention to issues of information access from a global perspective, and acknowledging their own privileged access to information, can lead to a globalized perspective about education, knowledge, and digital literacy.

These recommendations contribute to scholarly conversations in composition studies over the past decade about how to support students' literacy development using Wikipedia (Di Lauro and Shetler; Purdy; Vetter "Archive 2.0" "Teaching Wikipedia"). Given the existing challenges in enacting FRP in Wikipedia-based first-year writing contexts, there is considerable potential for future applications of the feminist framework to writing instruction, as well as the employment of teacher research as methodology.

Appendices

1. Appendix 1: Survey Questions (PDF) [wikipedia-appendix1.pdf]

2. Appendix 2: Reflection Essay Prompt (PDF) [wikipedia-appendix2.pdf]

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