DOI: 10.37514/DBH-J.2024.12.1.05 *Double Helix*, Vol 12 (2024)

Report from the Field

Arts-Based Pedagogy to Enhance Critical Thinking in Research-Based Assignments

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Introduction

In writing classes, how often are students motivated to think critically throughout a research process rather than follow passive routines that allow them to conserve energy? In *Beyond Note Cards: Rethinking the Freshman Research Paper,* Ballenger (1999) stated that there is a difference between a writer who creates and a researcher who collects, arguing that many research assignments enforce collection rather than creation. Are students, for example, selecting sources to construct knowledge or just to meet an assignment requirement? Are they making thoughtful decisions about how they display their knowledge, or are they putting their research together in a prescribed format for an assumed audience? As a writing teacher, I have told students for years that research is a journey and, at the end of any journey, the person who went on it should be changed. But were students significantly changing or simply compiling source information in order to end the journey I asked them to go on?

Teaching research assignments has always been a challenging aspect of my undergraduate writing courses, for both myself and my students. I agree with Simmons (1999) that "[r]esearch is a process, not a product, and the most important skill is thinking" (p. 115), but as Stancliff and Goggin (2015) articulated, "students often view research and research writing as the demonstration of knowledge" (p. 28). It is a common view in higher education that critical thinking should occur in writing courses. According to the "WPA Outcomes Statement for First-Year Composition 3.0," critical thinking is "the ability to analyze, synthesize, interpret, and evaluate ideas, information, situations, and texts," and critical thinkers "separate assertion from evidence, evaluate sources and evidence, recognize and evaluate underlying assumptions, read across texts for connections and patterns, identify and evaluate chains of reasoning, and compose appropriately qualified and developed claims and generalizations" (CWPA [Council of Writing Program Administrators], 2014, Critical Thinking, Reading, and Composing section). The "Framework for Success in Postsecondary Writing" expands the idea of critical thinking in writing courses to include "mak[ing] thoughtful decisions" (CWPA et al., 2011, p. 3); however, these definitions feel potentially lacking if, as writing instructors, our aim is for students to pour energy into research-based tasks rather than try to conserve it. While students may learn that research requires critical thinking, without the motivation to exercise that thinking, research will not occur.

If students tend either to conserve their energy or to pour it into projects in order to thinking critically about them (Csikszentmihalyi, 1996/2013), then it is up to us to find ways to inspire the latter. In my writing courses, I attempt to cultivate bell hooks's (2010) concepts of engaged pedagogy and critical thinking. Engaged pedagogy is a teaching strategy aimed at

promoting self-actualization. Students are invited to construct knowledge "while being honest, open, and authentic in a setting where all voices are valuable and are provided the same amount of time to be heard" (Hash, 2021, p. 1). There is some overlap between the WPA Statement's attention to self-directed learning to construct knowledge through various methods and the Framework's emphasis on making thoughtful decisions, but hooks (2010) pushed these learning processes a step further, arguing that critical thinking should involve a longing to know and the creation of a *personal* connection between assignments and one's experiences, uniting the construction of knowledge and self-actualization. Hooks's (2010) concept of engaged pedagogy offers a way for instructors to get students to think critically. Assignments that promote self-actualization can motivate students to pour energy into them as they connect their experiences, stories and understandings of course material. To hooks, the "heartbeat of critical thinking" is this "longing to know—to understand how life works" (p. 7), which comes from a personal place. If longing to know is facilitated, students will be more likely to think critically and, consequently, their longing could extend to other writing assignments, courses, and beyond. This report from the field shares how I sought to motivate students to think critically through a stage-based multimodal research assignment designed to facilitate self-actualization.

Teaching Research and Aesthetic Education

Over the years, there have certainly been many pedagogical proposals for how to teach research in writing courses. Hood's (2010) synthesis of over 200 articles on teaching research reveals that modifying certain components of the research process has been going on for decades. Modifications have included allowing students to select their own topics, limiting topic choices, and conducting primary research through data gathering methods such as interviews. Chatterjee (2020) suggested that instructors scaffold the research unit as well as provide examples, utilize library resources, use time in class, and facilitate peer interactions. Kessler et al. (2023) focused on guiding students through literature reviews, annotated bibliographies, research proposals, and the production of an essay. These traditional methods may fulfill the WPA outcomes and conform to the Framework's definitions of critical thinking, but they do not necessarily create engaged pedagogy, where students are constructing knowledge through a longing to know and by making personal connections.

Scholarship in writing studies indicates that research may require alternative *products* that include multimodality. Often, these multimodal assignments emphasize or require the use of digital technologies, such as infographics, podcasts, poster presentations, and so on; however, as Shipka (2013) theorized, in attempting to resist "pro-verbal bias" in composition assignments, instructors may instead become "pro-digital," funneling students into a narrow focus of multimodality where they must use digital technologies they may not desire to become fluent in to meet the expectations of the assignment (p. 74); therefore, she advised writing instructors to "resist equating multimodality with digitally based or screen-mediated texts" (p. 76) and adopt activity-based multimodal frameworks "*without* having teachers predetermine for students the specific genres, media, and modes with which they will work" (p. 77). A way to include in the writing classroom activity-based multimodal pedagogy that resists pro-digital and pro-verbal forms of research is to present students with the option of using arts-based methods.

Art-making can fulfill multimodal requirements while also promoting hooks's (2010) engaged pedagogy, motivating students to create. Aesthetic education—learning through the arts—requires paying close attention in order to come to new insights and understandings (Greene, 1980). If thinking is a process of making symbolic representations of one's knowledge (Efland, 2002), then art-making can enact this process by allowing students to deviate from alphabetic text to compose and depict their knowledge in multiple ways (Dunn, 2001). Students are encouraged to use their imaginations in composing processes to make sense of their worlds (Berthoff, 1975). While art-making can include digital tools, it opens up more opportunities for expression in research assignments (Blue, 2006, p. 179), such as creative writing, music, dance, drama, visual art, and so on. Additionally, there are more opportunities for knowledge construction (Hanzalik, 2021), such as through play and experimentation with ideas and composition processes (Hanzalik & Virgintino, 2019), seeing or thinking differently by tapping into emotions (Leavy, 2015), and reporting research in nontraditional formats (Bailey & Carroll, 2010). Hanzalik (2019) found that art-making supported research in her writing courses by creating opportunities for students to make experimental and thoughtful decisions in their composing processes.

Mallory and Siddiqui (2020), however, pointed out that there can be drawbacks with multimodal research assignments. Students might not feel creative or comfortable taking creative risks that could affect their grades. But the authors found that through in-class guided activities and assistance, their students were willing to embrace the process and make products that reflected significant time and effort. Still, it seems that in-class assignments are often more traditional, such as Hanzalik (2019) asking students to fill out worksheets on source information rather than engage in multimodal activities before their multimodal projects were due. My goal was to create an assignment that would offer multimodality throughout the research process, not just towards the end or as part of the final product.

Assignment Design

When revising my research unit, I aimed to create assignments that do the following:

- Motivate students to put energy into their assignments rather than attempt to conserve it (Csikszentmihalyi, 1996/2013).
- Allow students to experience self-actualization through self-directed, active learning where they can blend their personal experiences with research (hooks, 2010).
- Depict their efforts in their journeys of "longing to know—to understand how life works" (hooks, 2010, p. 7).
- Facilitate multimodality throughout the research process.

I first considered how to create a topic that could be individually meaningful for students. From teaching first- and second-year writing courses at a public university, I identified a common theme with many students: They were approaching the time to declare majors and minors but had not yet had the opportunity to take many courses related to their interests due to general education requirements (my writing course being one of them). Students would express frustration over feeling unprepared to select majors and minors.

Moreover, they often stated that they did not see the point of my composition course because they did not understand how the skills would transfer to their majors. "What if," I wondered, "the research assignment could allow them to explore these interests?" This question led to the Composing in Your Major research assignment.

This assignment was used in a writing across the curriculum course, a class required of students before they take courses on writing in their disciplines. To prepare students for discipline-focused writing courses, I asked them to research ways they would be composing within them. The knowledge constructed on this topic would not only prepare them for what was ahead but also help instill that composing is a process they will engage in throughout college and into their careers.

Part 1

To facilitate motivation and self-actualization at the beginning of the research process, I assigned students the task of creating a multimodal depiction of how they felt about their prospective major or minor. If they had not decided on one, I allowed them to represent how they felt when they thought about declaring one. As my entire writing courses are arts-based, students were already comfortable with art-making. (However, if a writing instructor desired to use only this assignment in class, its open-ended question provides an accessible entry point into research by asking students about their feelings. After all, everyone has feelings.) Students were also asked to complete a written portion of the product by explaining their design choices in reference to Ball et al.'s (2022) key multimodal design concepts, a resource students reference throughout the course. I anticipated that students would be motivated to complete this portion because it requires no external research. Instead, they create based on their individual experiences. By beginning with the personal, they might be more interested in research during Part 2. I also hoped some critical thinking through self-actualization would occur. By completing this assignment, they would construct knowledge on their relationships to their majors or minors.

Part 2

The second part of the project asks students to conduct research on what it would mean to compose in their majors, minors, or future careers. As my courses are titled Rhetoric & Composition, I sought to broaden their ideas of what composition means (not just writing) as well as expose them to ways they would realistically compose in the future. For students who did not select a major or minor for Part 1, they were asked to commit to one for Part 2 as an opportunity to explore an option. In terms of sources, we discussed primary and secondary ones, including interviews with peers who had declared their majors or minors and with professors of upper-level courses. Students could also attend course meetings, speak to advisors, use the Career Center, search online for job descriptions, watch documentaries or TED Talks about working in fields of interest, and even utilize our university's webpage that discusses graduation requirements; however, any sources they found must relate to *composing* in their majors or minors.

After students find their sources, they are ready to create Part 2. For this part, students make multimodal depictions of what they learned and how they felt about it. Each source needs to be represented and, additionally, they are required to incorporate Part 1 of their project in some way. They can modify their Part 1 projects or create something new and include a theme from Part 1. In the written portion of this project, students do not write

a traditional research paper that would potentially eliminate their personal connections. Instead, they reflect on their research processes, explain what they learned from each of their sources, express their feelings along their research journey, and articulate what their projects represent. As with Part 1, students are also required to explain how they incorporated key multimodal design concepts from Ball et al.'s (2022) *Writer/Designer*. My hope for this part of the assignment was that students would be motivated to think critically in the research process. They would meaningfully select and include sources, construct knowledge based on their findings, and experience self-actualization by blending their personal identities into the process. Moreover, critical thinking would occur as students altered their Part 1 products for inclusion in Part 2.

Results and Discussion

As I reviewed students' projects, I noticed that critical thinking was demonstrated in two ways, or themes: by fulfilling the project as intended and by experiencing disruption between Part 1 and Part 2. These two themes are represented by the projects submitted by two students, Lilly and Brooks (see Figure 1). After the course ended, I reached out to Lilly and Brook and asked if they would be willing to allow me to showcase their data (with IRB-exemption approval for educational settings). Figure 1 provides visual images from the two participants selected. I also collected data from the students' written components of Part 1 and Part 2 in order to understand their processes of creating.

In Part 1 of her project, Lilly desired to create a poster for her major, graphic design, that incorporated drawings, graphics, and text. She used colored pencils, printed typographic imagery, magazine cut-outs, and Photoshop editing. In her written piece, she described how the idea for her art came from her fondness for CD booklets and vinyl inserts, which were also what initially sparked her interest in the major. The staff and notes in her poster were intended to represent her love of music. The face with "nervous eyes" express her doubts about the future, which come from the stress of living up to expectations and comparing herself to others in her major. However, she also represented her motivation to grow and succeed, which is reflected in the colors, textures, and layering she used, all of which she considered part of her personal aesthetics as a designer and was able to explain, among other components, in reference to Ball et al.'s (2022) key multimodal design concepts.

For Part 2 of her project, Lilly decided to redesign Part 1 to depict her research experience. She cut up her original art and "[wove] it together with a cut-up graphic from one of [her] design classes." Lilly was inspired to work with her hands for Part 2, as she created Part 1 digitally, and in her career, she hopes to use "a combination of digital and physical artwork." In the written component of her project, Lilly made connections to her sources, which included interviews, artist discussions, articles, and a history of graphic design, as she discussed how they influenced her design choices in terms of artistic processes, themes, and emotions, such as excitement about the field. Lilly also wrote about how she desired to "break up" her original composition to bring new life into it, working to balance and organize the colors and shape to make it "much more interesting to pick apart" when viewing it. In her connections to Ball et al.'s (2022) key multimodal design concepts, Lilly referenced her use of color, contrast, organization, and alignment again, but explained how she approached them differently from Part 1 to Part 2. At the end of her written component, Lilly mentioned her excitement during Part 2 to research and showcase what she had learned. When discussing her process of making, she noted, "I liked creating

something that literally and figuratively wove together part one of this project and my interest in graphic design. I love working with new materials and methods as it expands my knowledge as a designer."

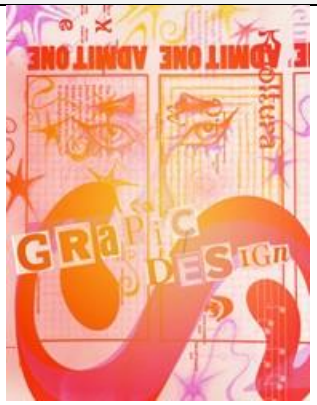
Student	Part 1	Part 2
Lilly		
Brooks		
		

Figure 1. Create in Your Major research project examples.

Going back to the goals I set for this project, Lilly definitely put energy into this research project rather than attempt to conserve it (Csikszentmihalyi, 1996/2013). Part 1 and Part 2 reflected significant time and effort in both the multimodal and written components. Lilly also noted that she created an additional challenge and more labor for herself by shifting from graphic to physical forms for Part 2. She engaged in critical thinking through self-directed, active learning by researching sources that were not only informative

but also significantly influenced her approach to the project in meaningful ways. Additionally, Lilly blended her personal experiences with her research (hooks, 2010), desiring to find ways to express what she learned about design processes as well her emotions and individual style as a designer. Throughout her project, I saw representations of the "longing to know—to understand how life works" (hooks, 2010, p. 7). Lilly engaged in research on graphic design in a significant way, reading about its history as well as its current practices. In her written components, she demonstrated self-actualization through her passion for the field and excitement to have learned so much more about her future possibilities in it. Lilly certainly analyzed, synthesized, interpreted, and evaluated ideas, read across texts for connections and patterns, and evaluated chains of reasoning (CWPA, 2014, Critical Thinking, Reading, and Composing section). She also made thoughtful decisions in her project (CWPA et al., 2011, p. 3), but more importantly, she seemed to extend herself past fulfilling requirements for the assignment and instead went on a journey of research where she, in fact, was influenced because of it.

Like Lilly, Brooks began his project in a straightforward way. In his written portion of Part 1, he explained that "an idea immediately popped into [his] head." He had already completed an internship for his major, kinesiology, and desired to use the shirt he wore as the base for his art. With other projects, Brooks wrote that he might question his choices, but as he started cutting and writing on the shirt, he "knew it was a done deal" and he "had to commit to the process." Originally, he planned to draw on paper and cut out sections of the shirt, but then he decided to draw on the shirt as well, although using a Sharpie on fabric was a challenge to make the imagery "neat and well-drawn." Brooks reflected on his process of "trial and error" in planning where to put his images and words. He chose to include the words "study," "learn," and "connection" to depict how his major resonates with him. In terms of images, Brooks explained that his choices of a dumbbell and a virus to showcase his reasons for his major. During the COVID-19 pandemic, he started working out to improve his body image and "[fell] in love with health and the human body." He also depicted images of a money sign and the British flag, as he hoped to become financially stable and live in England one day. When making connections to Ball et al.'s (2022) key multimodal design concepts, Brooks wrote about how he used color, alignment, proximity, and contrast.

Unlike Lilly, though, Brooks's composition process from Part 1 to Part 2 was significantly disrupted, as were several other students'. On the day the projects were due, Brooks announced to me that he had decided to change his major, and completing this project was a major factor in doing so. I suppose I should not have been surprised. Arts-based research falls within a poststructural framework, and new knowledge occurs from a disruption of what was previously believed. In his written portion of Part 2, Brooks explained that he came to realize that he was not as excited about going into the field of kinesiology as he initially thought. He did not enjoy his STEM-based classes, and he saw Part 2 as an opportunity to "find a new path." He wrote about completing some "soul-searching to determine [his] core strengths" and realized that he enjoyed, and excelled at, working with different types of people. Brooks defined himself as extroverted and social, which led him to research majoring in communications. Brooks showed his change in major by creating "tiger-like scratches through the kinesiology-based art and [adding] communication-related art through the scratches." Brooks felt this method was a metaphor for how "all the kinesiology-related things were tearing out of [his] life and how communication information was brought through these tears." He also created new images to include on his shirt, all of which depicted

various information he learned about majoring in communications, such as a checklist, a brain to represent selling an idea to someone, and chains to connect kinesiology and communication because he found that with this major he could still attain financial stability and live in England. Connecting to Ball et al.'s (2022) key multimodal design concepts, Brooks wrote about how he used color, emphasis, proximity, and contrast. He ended his written portion by stating that since joining my writing course, he "noticed how creative [he] can be when pushed to do something" and how the project generated both excitement to learn about a new major and confidence that he could be successful in it.

Like Lilly, Brooks definitely seemed to put a great deal of energy into his research project rather than attempt to conserve it (Csikszentmihalyi, 1996/2013). It would have been simpler to keep the same major, at least for his project, than research a new one and figure out how to transform his Part 1 to depict such a disruptive change in his life. But he was on a path of self-actualization, following his interests and feelings on a journey that I was unaware of until I read Part 2. The sources he selected were truly informative and, in helping him make a major life decision, were ones he could make a personal connection to (hooks, 2010). Like Lilly, there was the same "longing to know" (hooks, 2010, p. 7) but especially because he saw this project as an opportunity to make a major change and recommitment in his life. Brooks definitely analyzed, synthesized, interpreted, and evaluated ideas, read across texts for connections and patterns, and evaluated chains of reasoning (CWPA, 2014, Critical Thinking, Reading, and Composing section). Like Lilly, he also made thoughtful decisions in his project (CWPA et al., 2011, p. 3) and was transformed by a research process that was not just something required to complete an assignment but a personal journey of learning.

Lilly's and Brooks's experiences represent the two themes of critical thinking students demonstrated by fulfilling the project as intended or by experiencing disruption. Both groups of students wrote about feelings of excitement for this project, but more importantly, they showcased ways they were able to think critically by investing energy, following their longings to know, and experiencing self-actualization. While critical thinking could still be present in a more traditional research assignment or with students just completing Part 2, it seems that Part 1 generated the excitement and personal connection facilitating a "longing to know"; consequently, students invested their energy in the research process and sought to make it meaningful on an individual basis (hooks, 2010, p. 7). Additionally, being required to modify their projects from Part 1 to Part 2 added an additional level of challenge that seemed to have promoted further critical thinking during the assignment. As a writing instructor, I fully believe that the journey is more important than the destination, and creating this two-part multimodal assignment emphasized the research journey far more than other techniques I have tried.

Conclusion

This project is one I have assigned for several semesters now, and the submissions from Lilly and Brooks are representative of the critical thinking I have successfully promoted within my courses' research units. Multimodality unrestricted to the digital offers a challenge and opportunity for expression that, when paired with writing, create multiple ways for students to showcase their research journeys.

The pedagogical framework for this project could be used in disciplinary writing courses and beyond, extending to any research assignment. If educators would like to assign something similar, without researching majors and/or minors, the Part 1 and Part 2

sequence could essentially work with any topic. In Part 1, students should always begin with their personal connections and interests in the topic. Then, in Part 2, they would transform their Part 1 projects, in some way, to reflect what they learned after engaging in research.

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