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Reading with Social, Digital Annotation: Encouraging Engaged Critical Reading in a Challenging Age

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READING WITH SOCIAL, DIGITAL ANNOTATION: ENCOURAGING ENGAGED

CRITICAL READING IN A CHALLENGING AGE

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ABSTRACT

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This design-based research study examines the pedagogical role of

social, digital annotation in teaching reading as rhetorical invention,

particularly the kind of invention necessary for thoughtful democratic

participation in the contemporary discursive era, often described as troubled.

In this dissertation study, I deployed a classroom-based intervention meant to

challenge how educators in rhetoric and composition/writing studies might

directly address the acute and exigent discursive struggle in the first-year

composition classroom. This study ultimately finds that social, digital

annotation invites significant shifts in students' reading habits, in that

Hypothes.is-based annotations yielded a far more complex, multifaceted set

of reading skills, behaviors, and dispositions than the pre-intervention private

annotations. The social annotation experience proved far more performative

and, therefore, highly rhetorical and inventive, encouraging an agentic

approach to reading that many FYC teacher-scholars crave. In addition to the

performative nature of SDA (Hypothes.is, specifically), the social engagement

among readers afforded by this relatively new digital tool of reading were the

biggest catalysts for change. As a result, SDA may have that capacity as a technology to arrange meaning-making interactions in ways that are visible to the students themselves, shifting their perspectives on agency within reading.

Dedicated to my beautiful niece, Haley, who didn't get the opportunity to realize her own goals in this life. Her legacy reminds me to be deeply grateful for the opportunities to reach my own.

And, to the people in my life that I'm most grateful for— Jay, Tristan, and Truinn— for giving me every reason to keep striving.

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CHAPTER 1

INTRODUCING THE PROBLEM

Education, with all its various disciplines and environments, has a complicated relationship with a skill deemed essential to student success—reading. This tenuous relationship with reading is no more apparent than within the field of rhetoric and composition/writing studies (RCWS) where the teacher-scholars who are willing to discuss the matter argue over what reading is, how its goals are accomplished, and how (even *if*) reading gets taught at the post-secondary level. Yet, the price of this confusion (or outright dismissal) is high. This study enters this larger conversation in order to help reconcile the role of reading in RCWS classrooms for both students and teacher-scholars. While the challenge of re-negotiating what reading is and how it's taught at advanced levels has been taken up, instances of this debate are few and far between in this field, disappearing and reappearing as a category of study (Salvatori and Donahue, 2012b) with little substantive change that persists long enough for students to feel the impact.

Still, theory that grounds reading as a substantial part of the RCWS classroom does exist. Brent's *Reading as Rhetorical Invention* (1992) convincingly situates reading as a component of rhetorical invention and key to understanding more fully the "relationship between discourse and knowledge" (Brent, 1992, p. *xi*). To read in the way Brent (1992) asserts is to "participate in the creation of new knowledge through a process of symbolic

negotiation" (p. *xii*). Yet, reading— as an epistemic and rhetorical pursuit— is fraught, complex, misunderstood, and misapplied and the effort to fit the literal reader into this rhetorical negotiation remains a challenge, noticeably so among composition teacher-scholars.

This effort to do so, however, is warranted— not because of troubling standardized test scores or complaints regarding students' lack of sustained attention on reading tasks— but because our attempt at equality, freedom, and the pursuit of happiness rest on democratic deliberation which, in turn, includes a kind of active, advanced, and productive reader in an increasingly complex discursive ecology.

This project entangles two persistent interests: how discourse is constructed and controlled beyond the author/speaker, particularly in the form of reading, and the agency inherent in the act of reading as a mainstay of a civil, egalitarian society. With new digital annotation tools for reading, there is renewed potential for discovering meaningful pedagogies that help enliven the rhetorical reader. To that end, this project aims to formally explore if and, if so, how and under what circumstances social, digital annotation (using the online tool Hypothes.is) enables undergraduate composition students to learn skills, behaviors, and dispositions attributed to engaged critical reading in the contemporary discursive context.

Naming the Problem(s)

Teaching meaningful reading is well catalogued as a challenge for instructors across all grade levels, but more specifically, among educators teaching (or nonetheless expecting) advanced reading skills in higher education where research has not yet caught up with need. My classroom is no exception. I've taught for 20 years and have often lamented that my students are, on average, unable and/or unwilling to practice what I'm calling engaged critical reading— a term resembling Horning's (2007) "expert reading" or Vasquez et al.'s (2010) "critical literacy plus." Like many instructors in the field of rhetoric and composition/writing studies (RCWS), I've taught reading directly (i.e., active reading) and I've supported critical reading habits in classroom curricular design (e.g., making room for discussions about the reading, honoring diverse reading paths, asking students to reflect on the material conditions of reading that affect comprehension, etc...), but with no substantial results. The problems with academic perspectives on reading are well catalogued, often treated as crises (described in the next section); however, what's not as well catalogued is the role reading plays in the larger discursive problems.

The Academic Problem(s)

While the motivation for this project circumnavigates the crisis-in-reading rhetoric, numerous studies indicate what teacher-scholars have

complained about for years: that students are unprepared for reading at the post-secondary level.

There is no shortage of studies that note mounting crises in reading skills among students. These studies underscore a fear that ebbs and flows but persists nonetheless: educators, in the face of perpetual change, clearly fear the loss of critical consumption among their students. If test scores are any indication, the data is pessimistic. SAT and ACT scores show consistent declines (as cited in Horning, 2017). In a large-scale effort to study reading, ACT found that only 51% of students met college-readiness benchmarks in reading comprehension (ACT, 2005). The Citation Project— a large-scale empirical study of students' use of sources in their writing— found that students have minimal engagement with outside texts, often integrating based on their understanding from only "isolated sentences pulled from sources" (Howard, Serviss, and Rodrigue, 2010, p. 189). In digital reading studies, many have found that students don't understanding the mechanism of what they're reading, including concerns like: misunderstanding Wikipedia's editing process (Menchen-Trevino and Hargittai, 2011); choosing sources based on easy access and use, not relevance (Purdy, 2012); barely exhibiting the basic literacy skills needed to access, allocate, evaluate and understand online information (Project Sails, 2017; Stanford History Education Group, 2016); and, they are unable to discern real news from advertisements,

and blindly accept even minimally relevant forms of evidence without interrogation (Stanford History Education Group, 2016).

Myriad scholars and organizations (e.g., ACT, 2005; Hartman, 2001; Mendelman, 2007) agree that there are three clear areas wherein students lack the sufficient skills necessary for success in post-secondary education: reading comprehension, critical thinking, and metacognitive skills (as cited in Johnson et al., 2010). McCabe (2000) asserts that each year more than one million US students enter college without proper preparation and, consequently, must enroll in remedial courses (cited in Johnson et al., 2010). Corroborating McCabe's findings, a 2002 *Condition of Education* report suggests that a reading deficiency is the greatest barrier to under-prepared students' success in college (Wirt et al., 2002). The issue isn't as simple as this data suggests, and all the education system is implicated in the lack of preparation, but the data speaks to a need with significant implications, especially for RCWS teacher-scholars.

My own experience echoes common complaints: students seem to interpret all prompts as a call to regurgitate information (which could be due to any number of things, such as past academic experience, a system of standardized testing, poor prompting, etc...), and students seem to lack agency and/or motivation to *do* something with a reading event, such as interrogate the issue, wrestle with complexities, take intellectual risks, synthesize myriad voices in a controversy, challenge the ideas presented, or

transform knowledge to new domains. Students primarily see reading as an effort in knowledge-getting (Haas and Flower, 1988) or absorbing the knowledge that has been encoded and stored on the page by others—attuned only to passive representations that fail to ask questions of the information they receive (Sande and Battista, 2021, p. 178). As Whitehead puts it, students seem indoctrinated to "inert ideas," or "ideas that are merely received into the mind without being utilized, or tested, or thrown into fresh combinations" (as cited in Sullivan et al., 2017). Keller (2014) describes the problem as a commitment to surface learning and, in his extensive case study, found that students learn to game the inadequate system that promotes "fast, shallow, and testable" reading, by reading just enough to get by with their one required comment. There must be a way to support students beyond "inert ideas" emboldened by "shallow" reading, especially now in this troubled discursive environment.

The issue isn't just about students. Teachers are implicated, too. Even post-secondary teachers, according to Bosley (2008), view reading as "discovering authorial intent rather than as a developmental, active process of constructing meaning" (as cited in Keller, 2014, p. 25) and often fall back into old patterns of characterizing reading as passive, or worse, dismissing student ideas when they do dare to speak up about their own reading interpretations (Adler-Kassner and Estrem, 2007, p. 39). Even those who know that reading is something other than passive lack the confidence in reading

theories and pedagogies and end up falling into old habits. These habits run deep among instructors and graduate teaching assistants who, likely as a product of their own experiences, recreate pedagogical paradigms that reinforce reading as a passive activity, as is commonly articulated by our young students (Sande and Battista, 2021, p. 178). This dissertation attempts to describe something Adler-Kassner and Estrem (2007) note as essential: articulating *how* we want students to be as readers, why being this way matters to them, and how we foster such a way of being in our composition classrooms (p. 39).

While RCWS research has helped instructors to enact pedagogies that encourage active, agentic composition, the field is missing that same theoretically-sound and pragmatic pedagogical approach to reading. That sort of preparation is not simple and there are well-noted barriers to successfully preparing students for engaged critical reading, but the effort is warranted.

The Larger Discursive Problem(s)

The theme of my own undergraduate composition course is indicated in its subtitle: rhetoric and research for civic participation. This curricular framework joins a long-standing tradition within RCWS to adopt an overtly participatory democratic goal, a goal well suited to address shifting conditions of social discourse. However, naming the larger discursive problem that such a focus intends to remedy is a bit more complicated, though

necessary, since the exigence for this project rests in a troubling shift in discourse. While all scholars seem to see this shift, they tend to characterize it differently, and consequently, evaluate its consequences and propose solutions in contradictory ways.

One such characterization of the larger discursive problem is referred to as a rhetoric of post-truth. While the term *post-truth* is problematic, it helps name a shift in discourse that seems dominated by confirmation bias (Nickerson, 1998), motivated reasoning (Peterson, 2016), filter bubbles, information avoidance (Sweeny et al., 2010), lack of rhetorical listening/reading (Ratcliffe, 2005; Brent, 1992), ideological silos (Mirra, 2018), a deep distrust in institutions and experts and media (Worthen, 2017), a lack of critical literacy, unwillingness to engage in dialogue, valuing appeals to emotion more than facts which emboldens tribalism of ideas (Carillo, 2018), the rapid pace of information dissemination, the ease of sharing information, and the ability to stay in your own echo chamber (DiFonzo, 2008, as cited in Mirra, 2018). These shifts are largely related to reading, writing, and thinking—all within the purview of a first-year composition course.

McComiskey (2017) pulls no punches in his characterization of the larger social problem and unequivocally blames Trump's presidential campaign and ensuing language habits. For McComiskey (2017), Trump's unethical rhetorical practices comprised of "alt-right fake news, vague social media posts, policy reversals, denials of meaning, attacks on media credibility,

name-calling, and so on" (p. 3) has proven detrimental to public discourse. The term to describe this shift, for McComiskey (2017), is *post-truth*, which he defines as a "state in which language lacks any reference to facts, truths, and realities" (p. 6). Even with a rhetoric that deals in contingency, McComiskey claims the term is apt in that claims of fact are only coherent because they can be "plotted on an epistemological continuum" (p. 7) to be balanced against and with universal truths and reality. Apparently, McComiskey feels we've lost that epistemological touchstone.

He isn't alone. Ellen Carillo— a prominent scholar dedicated to critical reading at the post-secondary level— has written extensively on the need for pedagogies of reading that help young students fight the "post truth rhetoric" she sees pervasive in our contemporary culture. According to Carillo's *Teaching Readers in Post-Truth America* (2018), post-truth rhetoric dominates and is a product of allowing emotional appeals and personal beliefs to be more persuasive than objective facts (p. 5). The narcissistic nature of implicitly claiming that how *I* feel about a subject matters more than any presented facts speaks to the "cultural and ideological shifts that characterize our present moment" (p. 4). The roots of this post-truth discursive environment stem from roots buried deep and growing long before the term won word of the year in 2016. Our relationship with terms like *fact* has been troubled, perhaps forever, but certainly since the Enlightenment, since Kant called all to individually seek out truth. However,

the concern is that the "outgrowth of the postmodern rejection of an objective reality" (as cited in Carillo, 2018, p. 4) is largely responsible for lacking the standards necessary to gauge lies (Wight, 2018).

Of course, concerns with the term *post-truth* abound. For a scholar like Henry G. Frankfurter (2005), *post-truth* isn't the right term to describe the larger discursive problem. In his work, he describes the issue as "bullshit" propagated not by a rhetor who knows and deliberately bends truth, but a rhetor whose claims are unconcerned with reality (McComiskey, 2017, p. 11). The bullshitter, unlike the liar, "does not care whether the things he says describe reality correctly. He just picks them out, or makes them up, to suit his purpose" (Frankfurter, 2005). This rhetoric is strategic, programmatic, and self-serving. Ironically, bullshit, like rhetoric, must centralize an audience, reminding us that the power lies in the hands of what the reader/listener is willing to accept. The audience must reject or be indifferent to truth, too, for this tactic to work.

For Wight (2018), the issue is that *doxa* (common belief or popular opinion) and *gnosis* (knowledge based on personal experience) have replaced *episteme* (knowledge), "at least in the public domain, as the dominant form of knowledge" and that we must, in order to correct the mistake, put objective truth back at the center of our assessment of information. The real power, then, lies in the "realm of reception," not production. What's really changed is the public's response to the "lies, dissembling, spinning,

propaganda and…bullshit [that has] always been part and parcel" of discourse. While Wight acknowledges that we may never fully understand objective truth, we must accept that objective truth does exist in order to assess claims, a warning to fend off the consequences that Arendt offered decades ago:

> The ideal subject of totalitarian rule is not the convinced Nazi or the convinced Communist, but people for whom the distinction between fact and fiction (i.e., the reality of experience) and the distinction between true and false (i.e., the standards of thought) no longer exists. (Arendt, 1973, p. 474)

Beyond the issues with our philosophical commitment to objective truth, there is a problem that perhaps lies with identity-formation, tribalism, and the fear of difference that is discursively constituted. From Audre Lorde's perspective, this "very fractured time" is one where "difference has become weaponized, demonized, and where discourse demands allegiance to extreme instead of nuanced points of view" (as cited in Gay, 2020) and this commitment to extremism leaves us with a "marked decline in civility and argumentative complexity" (Dryzek et al., 2019).

Whether we characterize contemporary discursive problems as post-truth, or a rejection of episteme, bullshit, or a growing fear of *other*, the exigence for this growing concern regarding thoughtful civic participation and our role as educators in rhetoric and composition/writing studies is particularly acute *right now* (Roberts-Miller, 2016; Carillo, 2018). At the time of

this course (Fall 2020), the US was on the verge of another presidential election and immersed in a sea of discourse marked by growing concerns over mis- and dis-information. The call to action does not rest with asking elites to model better discursive behavior; rather, "any response has to involve ordinary citizens" (Drycek et al., 2019, p. 1144)— the readers and listeners who reason their way through such discourse. Those ordinary citizens are our students— the consumers and producers who are entering this troubled discursive space without the tools to navigate it. This study acknowledges the challenge posed to readers who are tasked with sifting through "bids for their assent" (Brent, 1992) and believes that RCWS is especially well-positioned to prepare students— through their discursive practices— to critically discern those bids for assent and engage in the praxis that is related to both their self- and social well-being, if only we knew how.

Proposed Goals

There is a problem to address regarding reading at this more advanced level and being life-long thoughtful consumers and producers of information, able to navigate the discursive challenges. And, there is a solution, at least in theoretical form, to help reconceptualize reading at this advanced level: Doug Brent's (1992) theory of reading as rhetorical invention may just have the power to centralize pedagogies of reading that honor the very skills necessary for on-going democratic participation in the current discursive climate.

To address the field's role in addressing this discursive exigence, I conducted a design-based experiment to improve the teaching of engaged critical reading in the first-year composition (FYC) classroom and inform the application of a theory of reading as a rhetorical and social epistemic pursuit. The pedagogical goal of this intervention is to foster the practice and advancement of engaged critical reading and to generate pragmatic pedagogical tools for teaching engaged critical reading in rhetoric and composition/writing studies classrooms. To attempt to better achieve such goals, I have re-designed my own asynchronous, online first-year composition course to include social, digital annotation practices (using Hypothes.is) in order to examine if and, if so, how and under what circumstances that practice affects students' learning skills, behaviors, and dispositions attributed to engaged critical reading, including their disposition toward praxis (or, their own future efforts at civic participation). Students responded to two surveys, used Hypothes.is to annotate multiple complex texts (around the theme of civic participation), kept a reflective digital log (7 total entries, with pre-designed prompts), as well as submitted writing/composition projects that depended on engaged critical reading.

Engaged Critical Reading

The term *reading* is often used as "synecdoche for any form of decoding meaning" (Brent, 1992, p. 12); however, this study finds reason to look at the medium-specific form of reading textual symbolic exchanges.

There are unique features of such a form of reading that make it most suitable for a study of this sort. For example, reading symbolic exchanges specific to textual exchange invites an "illusion of isolation" (Brent, p. 19) unlike aural speech. That means that reading, as opposed to other forms of reception to discourse, is distinct and plays a prominent role in education.

Studying reading requires a careful definition. The model of engaged critical reading (described in chapter three) used in this project is based, first and foremost, on Doug Brent's (1992) theory of reading as rhetorical invention alongside LaFevre's (1987) theory of invention as a social act. These theories rest on foundations provided by Kenneth Burke and Ken Booth who deem knowledge-building as an inherently social discursive act. Students must, in this theory, "be able to understand what it means to engage in the social construction rather than the individualistic de-archiving of meaning" (Brent, 1992, p. 107). Brent doesn't expound on the specific components of reading in his text, but does assert that rhetorical invention is a broad term to describe what "expert readers do when confronted by multiple texts offering multiple interpretations of the world" (p. 117).

To attend to the details of reading as rhetorical invention, the pragmatic components of engaged critical reading are presented as follows (See Table 1) and detailed more fully in chapter three.

Table 1 *List of Components of the Engaged Critical Reading Model*

Skills and Behaviors	Dispositions
- Ability to assess the contexts of meaning; - Ability to apply knowledge to real-world situations to test validity; - Ability to negotiate among multiple, competing claims to develop their own unified system of knowledge; - Ability to engage the confusion and complexity of text; especially immersion in chaos and complex, "ill-structured" problems; - Ability to engage with the pleasure of the aesthetics of language; - Ability to read both *against* the grain and *with* the grain; - Ability to describe their own metacognition; and, - Ability to identify and evaluate rhetorical moves.	- Demonstrate a feeling of empowerment and responsibility for making meaning of a reading (i.e., an agentic approach to reading); - Demonstrate a feeling of empathy, or a feeling *in* the other (often the 'other' is the author) and an awareness of affect/emotion when encountering text; - Demonstrate a purposeful approach to any reading event; - Demonstrate a motivation to do the strong, aggressive, labor-intensive work of reading for problem exploring or reading as a novice; - Demonstrate a state of mind that approaches texts flexibly, from various stances, with a desire to experiment and play with new ideas; and, - Demonstrate a favorable attitude and willingness toward praxis.

Research Questions

While the foundation for this theory of reading as rhetorical invention is powerful, the pedagogical application of this theory has gone largely uninterrogated. This study seeks to remedy that gap by asking a series of research questions. First, does and, if so, under what circumstances does

social, digital annotation (using Hypothes.is) enable students to learn skills, behaviors and dispositions attributed to engaged critical reading?

Research Sub-Questions

Part I. In what specific ways do students' interactions change while practicing social, digital annotation (using Hypothes.is) with complex texts over the course of a semester?

1. In what ways do students interact with the text in their annotations throughout the semester?

2. In what ways do students interact with fellow readers in their annotations throughout the semester?

Part II. In what specific ways do students' skills and behaviors change while practicing social, digital annotation (using Hypothes.is) with complex texts over the course of a semester?

Part III. In what specific ways do students' dispositions change while practicing social, digital annotation (using Hypothes.is) with complex texts over the course of a semester?

1. After repeated practice with social, digital annotation (via Hypothes.is), what dispositions do students demonstrate toward praxis, a characteristic commonly attributed to engaged critical reading, beyond the composition classroom?

   - By the end of the semester, what do students feel prepared to *do* beyond the composition classroom?

- By the end of the semester, do students acknowledge the relevance of, and relationship between, engaged critical reading and civic participation?

- By the end of the semester, do students shift their attitude toward being engaged in civic participation?

Conclusion

With the nature of the problem firmly established and the means of addressing that problem through a theoretically informed, classroom-based intervention introduced, this dissertation seeks to add to the body of scholarship that is interested in enacting meaningful reading practices (among students and teachers) in the university composition classroom.

The following chapters of this dissertation review the literature related to literacy, reading, and civic participation. Another chapter details the framework for defining *engaged critical reading* and its components. A pair of chapters explores the methodology of this study— both in how the course was designed as well as how the data was collected and analyzed in order to answer the above research questions. Following the methodological chapters, there are three findings chapters that outline prominent themes that emerge from the data, one chapter dedicated to putting the findings of this study in conversation with the findings within other related studies, and a final chapter that presents the culmination of the work as a series of insights and implications for application.

CHAPTER 2

REVIEWING THE LITERATURE

This chapter begins by framing reading in a rhetorical context, then reviews the literature that speaks to shifting means of defining and understanding the role of literacy and reading, as the specific constituent of literacy under study. Additionally, this review situates reading as a key discursive component of a deliberative democracy and explores the current research on social, digital annotation as one potential remedy (of many) to the issues with reading voiced by teacher-scholars from myriad disciplines (as outlined in chapter one).

Framing Reading as Rhetoric

This study works from the premise that rhetoric is epistemic (a la Booth and Burke), that knowledge is created when a proposition is negotiated via symbolic interaction, indicating that reading is a vital constituent of that interaction. Burke's metaphor of the "unending conversation," coupled with Booth's definition of *rhetoric* as "the whole philosophy of how men succeed or fail in discovering together, in discourse, new levels of truth (or at least agreement)" best characterizes both the epistemic and circulatory nature of rhetoric necessary to situate the reader as an essential component of that symbolic interaction.

This dynamic social process of negotiation has long included theory about the speaker/author's role in that interaction; however, the

listener/reader's role has been less clearly accounted for, yet a fuller frame of the processes involved in rhetorical negotiation necessarily includes a more robust and accessible theory of reception as equally epistemic. Nystrand's (2003) framework of both formative and receptive contexts provides a helpful precedent for examining this more complete frame, including both the *formative* contexts (i.e., the conditions of idea formation/production) as well as a *receptive* contexts (i.e., the conditions upon which the work is received, used, accepted or not, consumed, and/or re-circulated) necessary to account for the full rhetorical situation. The receptive context posed by Nystrand (2003) makes for a particularly generative approach within which theories of an epistemic, dialogical audience (including rhetorical listener and reader) are constructed. Nystrand (2003) has championed this expansion for years, asserting that "the constant in the equation of discourse is reciprocity, the underlying premise that the text generated must result in shared knowledge between writer and reader" (as cited in Lotier, in press, p. 16), and his framework helps cohere the audiences who are actively implicated in a rhetorical event, the listeners and the readers who, likewise, choose when and how to be persuaded by a writer and with what stance to position themselves with a speaker.

Rhetoric has long struggled to clearly delineate the distinctions among these components of the "receptive contexts" (Nystrand, 2003)— the audience, reader, listener, writer, and rhetor— within a rhetorical event. But

there are three theories, in particular, that help me begin that disentanglement: Perelman and Olbrechts-Tyteca's (1969) inclusion of audience beyond classical rhetorical models, Krista Ratcliffe's (2005) focus on the rhetorical listener, and Doug Brent's (1992) introduction to a distinctly rhetorical reader.

The centrality of audience is a basic tenet of Perelman and Olbrecht-Tyteca's (1969) *new* rhetoric. This *new* approach recognizes, even honors audience dissent which leads to a new way of understanding the role of the audience— as participants in an informal and dialectical relationship with rhetor. Broadly, they define *audience* as the "group effectively addressed by an orator— whether by speech or in writing— to an audience of *listeners* or *readers*" (as cited in Bizzell and Herzberg, 1990, p. 1084, emphasis mine) whose adherence the speaker wishes to gain (i.e., as distinct from rhetoric that aims to demonstrate truth of propositions). Rather than centering rhetorical theory around the rhetor and what she asserts as true, Perelman and Olbrechts-Tyteca (1969) anchor their rhetorical theory around the views of the audience, on premises that the audience is likely to accept (p. 23-24). The central value of Perelman and Olbrechts-Tyteca (1969) is to reconceive rhetoric as argumentation in a way that will presuppose a "meeting of the minds"— both the will of an orator and the audience's disposition to listen (as cited in Hester and He, 2010, p. 56)— thereby theoretically inviting scholars to

thoughtfully inquire into the elusive, yet central, nature of audience (Park, 1982, p. 247).

There are several significant texts that take up where Perelman and Olbrechts-Tyteca's theory of audience left off, but this study pulls predominantly from Park (1982) who helps distinguish between audience and reader/listener. Audience deals essentially with a whole set of contexts that are composed of "aspects of knowledge and motivation" of intended readers/listeners, but not the individual readers/listeners themselves. In other words, *audience* is far more abstract while *reader* is human-centric and often text-centric. Audience is certainly more complex than is commonly represented in pedagogies of rhetorical invention, but these more contemporary treatments of the phenomenon, when taken together, help sharpen the picture. And a sharpened picture is important to this study because theories of audience as central to rhetoric provide the bridge we need to see the literal reader/listener as central.

For insight into the way that the reader and listener are central, RCWS scholars often turn to Krista Ratcliffe who advances rhetorical listening. Ratcliffe (2005) defines *rhetorical listening* as a rhetorical trope, one that takes "a stance of openness that a person may choose to assume in relation to any person, text or culture" (p. 17). While Ratcliffe's (2005) ultimate goal is to foster a cross-cultural dialogue that is sensitive to and respectful of both differences and commonalities, listening for *their* intent and *our* intent at the

same time and is positioned canonically as an "interpretive invention— our stance in relation to any other" (p. 17). Ratcliffe's theory of rhetorical listening continues to take the traditional focus of rhetoric as a product of the writer/speaker's desires and shifts its goals to one of harmonics and/or dissonance of the desires of both the speaker/writer and listener (p. 46)— or, as will become apparent, the reader.

Rather than relying on the ambiguous collectivity we might term *audience* (Ong, 1975), this study focuses on the literal reader's place in the rhetorical situation. Doug Brent, a communications scholar, re-imagines the shape of rhetoric as he shifts the focus off the writers' purposes; however, he focuses on readers' purposes, a fairly unusual theoretical move for the discipline. Brent's (1992) approach is a lot like Nystrand's (2003) in that he is looking to expand a theory of rhetoric to include both the production and consumption of discourse—as both are components of invention. For Brent (1992), if rhetoric is the symbolic negotiation of knowledge production, an epistemic process, then it is epistemic for both speaker and listener alike, author and reader alike. With that in mind, Brent's rhetorical point of view includes both producing and consuming discourse as reciprocal acts— with neither one as "logically subordinate to the other" (p. 1).

Essentially, as Brent asserts, rhetoric refers to both the art of persuading through and/or being persuaded by symbolic negotiation. In order to understand *reading*, Brent (1992) works to understand *the reader*. Brent's

(1992) rhetoric of discourse consumption is specific to how readers come to be persuaded. If the writer is asking how to frame an argument, the reader is doing something different when she asks: "When should I change my mind?" (Booth) or "how might I sort through the bids made for my assent?" (as cited in Brent, 1992, p. 13). In this way, a rhetoric of reading must not simply account for the *understanding* of another's meaning, but the reader's process of updating their own worldview/belief system as a result of coming into contact with another person's worldview via text. He theorizes that the reader seeks to build on their existing belief systems by actively seeking out others' belief systems, actively choosing which "babbling" voice to tune in to, believe, and with "what degree of conviction" (p. *xii*). While the reader's purpose is often very different from the rhetor's (i.e., a reader is often consciously seeking information, not persuasion, p. 2-3), a rhetoric of reading describes reading as "an active attempt to find in discourse that which one can be persuaded is at least provisionally true, that which contains elements worth adding to one's own worldview" and accounts for the ways that readers choose meanings to accept (p. 3).

Brent (1992), however, doesn't place the reader at the center of control in this exchange. In fact, he criticizes theorists like Stanley Fish for granting the reader too much control while leaving the rhetor with too little (p. 38). According to Brent (1992), the exchange can't be entirely relative to the reader or else persuasion has no meaning and rhetoric has no predictable

method, effectively rendering rhetoric as an intentional art impossible.

Rather, he aligns with theories that elevate the reader while still making

rhetoric possible, like Rosenblatt who advocates for the reader as an active

creator of meaning in conjunction with the text. Her term is *transaction*

(borrowed from Dewey and Bentley) to refer to the way the components of

an "event in time" are each "conditioned by and conditioning the other" (as

cited by Brent, 1992, p. 24).

      Collectively, Perelman and Olbrechts-Tyteca (1969), Brent (1992), and

Ratcliffe (2005) help rhetoricians better consider the role of the 'receptive

contexts' to more fully account for a rhetorical event in circulation. Each

invites rhetorical study to examine the situation with a wider, yet ironically

more particular, scope— no longer just the rhetor as the autonomous

author/writer/speaker who creates and controls the message. Instead, they

help teacher-scholars account for audience, listener, and reader as central

constituents.

      Drawing distinctions among these constituents, though, is helpful. One

way to draw such distinction is to provide a genus-species description of the

relationship among audience, reader, listener: audience (genus), reader

(species), and listener (species). The species, then, are most clearly

differentiated by the medium of discourse (i.e., listeners hear a speech,

readers engage with written texts). In this way, reading is not parallel to

listening (Ong, 1982). After all, if calling it *reading* marks a transition in

medium— from an oral exchange, possibly, to an exchange in print— then of course that medium matters (McLuhan, 1964). In the case of text-based exchanges, the media presented to readers often exacerbate the "illusion that she is simply absorbing information from a text rather than conversing with, and being persuaded by, another human being" (p. 12). Ratcliffe (2005) and Brent (1992) also have an interest in drawing attention to the distinctions between reader and listener, though their desire for distinction is likely a product of traditional disciplinary boundaries. For example, reading was the domain of education research, cognitive science, and literary criticism until the emergence of literacy studies. Listening has been studied primarily by communication scholars since the split of communication scholars from English professional organizations[1] while *audience* has remained the custody of RCWS throughout the discipline's many complicated identity negotiations. That means that RCWS scholars aren't yet in the comfortable habit of putting these related components in relationship with one another. These distinctions are helpful in this study since the object of study in this case is reading, therefore concerned with a particular modality that is distinct from the more general *audience* and the more particular act of *listening*.

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[1] According to Reynolds et al. (2004), speech teachers broke away from NCTE, and formed their own organization around 1914.

Reading as Social Invention

For both Ratcliffe (2005) and Brent (1992), reading and listening are situated within the rhetorical canon of invention. For Brent (1992), reading is inventive in that a reader must actively construct a single satisfactory view from a collection of claims presented to them (p. 13). In order to support our students in the challenge of this highly active participation, we must understand reading and knowledge-building as a form of *social* invention. Burke and Booth figure prominently in such social implications, too, in their assertion that information is gained from interacting symbolically with other selves, participating in "co-operative competition" (Burke, as cited in Brent, 1992, p. 107). The idea here is that learning, reading, and thinking are not an individual's cognitive activities alone; rather, they are created by social interaction (Bruffee, 1984, p. 640). Oakeshott goes so far as to claim that our "range, complexity, and subtlety of our thought, its power, the practical and conceptual uses we can put it to and the very issues we can address" are in direct proportion to the skill of human conversation in public, social form (as cited in Bruffee, 1984, p. 640). We know the power of social dynamics, but still often speak of (and enact pedagogies that honor) knowledge as something we acquire as individuals (Bruffee, 1984, p. 645).

LaFevre (back in 1987) rallies against the individualistic view of invention— the faulty view that depicts a rhetor turning inward to find stores of creativity from within the self. Instead, LaFevre (1987) theorizes invention as

an act that is far more social, collective, and co-created. While LaFevre explores several versions of the social nature of invention (e.g., the individual's place in a social context, the constraints placed by that social collective, etc...), the ones that speak most exactly to a pedagogical application of rhetorical reading are the relationships formed between (1) writer and reader(s) and (2) readers, collectively inventing/making meaning around a particular text. The first dynamic (writer and reader) is not new. In this first instance of social invention, a particular type of interaction (i.e., a reader engages with a text) aids in a presumably dyadic moment of invention. The second, though, is newer, and posits that invention occurs when people "who are mutually involved in an enterprise" are culled together (LaFevre, 1987, p. 68). While LaFevre doesn't exemplify her theory with reading specifically (i.e., she uses writing and scientific innovation primarily to make her point), she confidently claims that "two or more people, working in concert, located in the same time and place... [increases] the chances that innovation will occur" (p. 74). Invention as a product of this social collective, united by time and [digital] space, is the basis for choosing to study reading with social, digital annotation.

Understanding Literacy

Beyond the rhetorical framework for theorizing the reader, the act of reading has an extensive history within the scholarship of literacy studies. This review can't reach back through the entirety of humanity's relationship with

symbolic negotiation, but will start with the place where *literacy* could no longer be defined as simply the ability to read and write— a challenged definition ever since Western civilization reached full literacy at the turn of the 20th century (as cited in Mangen and van der Weel, 2016). Rather, this review will focuses on understanding reading and literacy as it is described in our contemporary context.

It's relatively simple to say what literacy isn't, but what literacy actually *is* turns out to be a complicated matter discussed from disparate vantage points, with myriad values and epistemological assumptions. The relatively nascent approach to understanding what counts as *new* among 21st century literacy/ies (Lankshear and Knobel, 2008, p. 24) are collectively termed new litera*cies* (marked grammatically as separate from, but related to, earlier new litera*cy* studies)[2]. Yet, even with a term to help reflect a united front, what is *new* in these new litera*cies* studies is not uniformly accepted.

In fact, there are a variety of protocols used to sort through the ways scholars characterize these new literacies. Two prominent scholars are often evoked in this discussion: Brian Street (1984) and Shirley Brice Heath (1983). In the early 80s, when the sociocultural turn in scholarship was gaining critical momentum, scholars debated whether literacy could be best understood as

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[2] J.P. Gee (1998) claims to have coined the term *new literacy studies* to mark the sociocultural shift of the early 1980s (marked by scholars from multiple fields, including literacy scholars such as Street [1984], Heath [1983], and Scollon & Scollon [1981]) that pulled understandings of literacy away from cognitive psychology's focus on the individual mind. The plural version (new litera*cies* studies) mostly refers to the shifts that happened with the digital age.

a product of events or practices (Chandler-Olcott and Lewis, 2010). Heath (1983) argued that the *events*, or "occasions in which written language is integral to the nature of participants' interactions and their interpretive processes and strategies" (p. 50), are the key to understanding literacy, while Street conceived literacy more as a product of cultural *practices*— or observable behaviors around literacy— that occur for the "uses of reading and/or writing [within] given contexts" (Street, 1984, p. 38). Digital literacy/ies scholars continue to use Street's and Heath's terms concurrently, such as O'Brien and Scharber (2008) who describe 21st century literacies as *digital literacies*, or "socially situated practices supported by skills, strategies, and stances that enable the representation and understanding of ideas using a range of modalities enabled by digital tools" (p. 67). Because there is a great deal of overlap in the events vs. practices model of defining *new literacies*, this section will instead organize the complicated means of understanding new literacies as primarily knowing the new tools, the new sociopolitical conditions/contexts, including new epistemological frames, and the new skills and strategies necessary to navigate the 21st century literate landscape.

The tools of literacy have always mattered. After all, writing is a technology which means: "it is a set of materially embodied symbolic tools that humans use for the goal-directed accomplishment of work— work that is communicative, economic, or intellectual" (Hass, 1996, p. 6). However, in the age of digitality, these tools have taken on even greater implications in

shaping literacy events. The emergence of new information and communication technologies (ICT) are often the impetus for understanding new literacies (Leu et al., 2004, p. 2).

This impulse to describe these *new* literacies as a product of emergent tools is a practical one. The tools play a particularly significant role, especially in the digital age. While the explosion of personal computing devices is a notable feature of the 21st century (Coiro et al., 2008; Manovich, 2006), perhaps the single most significant change in available tools is Internet usage. The numbers that illustrate the Internet's usage are telling: 90% of adults in the U.S. use the Internet, with numbers higher for the 18-29 demographic (100%) and lower for the over-65 demographic (73%) (Pew, 2019). There are gaps among socioeconomic and rural populations where Internet access has yet to reach full potential[3]; however, this nearly ubiquitous access (in the U.S.) translates to nearly ubiquitous engagement in ways of reading and writing marked by an unprecedented scale and speed of change (Coiro et al., 2008, p. 2). Literacy is no longer centered around a relatively static technology (i.e., the printed book) and, in fact, the unique feature of the Internet specifically is that it's not only a deictic platform for communication, but it invites a perpetual deicity, a dynamic ever-shifting space for new practices, events, habits, and logics of literacy (Coiro et al., 2008).

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[3] Those 10% of non-adopters tend to reflect lower socioeconomic populations, with fewer years of formal education who cite cost and difficulty understanding Internet navigation as reasons, according to Pew (2019).

Gee (2010), in some of his later scholarship, focuses on just how significant digital tools are in shaping literacy in that they change the very nature of groups, social formations, and power. For Gee, the new opportunities for understanding literacy are made by the new social arrangements afforded in networked environments. For example, it's simpler to start and sustain membership in a group for personal purposes without any formal institutional sponsorship in digital spaces (p. 174).

Beyond the tools being central, scholars also position the skills and strategies of 21st century literacies as fundamentally new. Those skills and strategies include a competency with the technology mediating the exchange, which necessitates an enhanced metacognition to learn skills of literacy and perpetually adapt to the constant flux, including the range of modalities enabled by digital tools (Tracey et al., 2010, p. 107; Leu et al., 2004). For many, there are four key (and distinctly new) skills: Internet searching, hypertext navigation, knowledge assembly, and content evaluation (as cited in Lankshear and Knobel, 2008, p. 20).

Professional guidelines help teacher-scholars keep track of the new skills necessary, as well. For example, the No Child Left Behind legislation mandates information literacy instruction on the evaluation of Internet sources (Coiro et al., 2008, p. 8). Likewise, the National Council for Teachers of English (NCTE) (in conjunction with the International Reading Association) established their own curricular framework to help guide educators to fulfill

the needs of 21st century literate students, to include: proficiency with the tools of literate participation, collaborative problem-solving skills, sharing, synthesizing, creating, evaluating multimedia texts, and doing so with a commitment to ethical participation (Dellicarpini, 2010, p. 31). The Conference on College Composition and Communication, central to college-level RCWS instructors, names particular practices that make up literacy in digital environments, such as using a computer screen or word processor, participating in online discussions, and creating audio and video files (College Composition and Communication, 2004). Even global mandates, such as the United Nations Geneva Principles, call upon educators to foster an ability to "create, access, utilize, and share information and knowledge" in digital environments as critical for the full potential of each human to be reached (as cited in Tierney, 2009, p. 272).

For Leu et al. (2004), the shifts in literate activity can be traced directly to political and economic conditions; they claim that the new contexts are all in response to globalization, economic competition and governmental literacy initiatives to make citizens work-ready. As detailed in the introductory chapter, some even define *new literacies* in relationship to our current post-truth discursive environment as yet another, in fact the latest, large-scale social shift— one that leaves us with vast new challenges (detailed in chapter one).

For other scholars, defining *literacy* anew has more to do with new theories of knowledge construction than with the new tools, skills, or social conditions. For them, to be literate is to "participate in the social transmission of knowledge in society" (as cited in Cook-Gumperz, 2006, p. 4)[4] and, from that premise, construct a definition of *literacy* in the digital age as an entirely new phenomenon. These emerging "epochal changes in technologies and associated changes in social and cultural ways" of doing, being, viewing, knowing and acting in the world (Coiro et al., 2008, p. 7) are about "mastering ideas, not keystrokes" (Gilsterg, 1997). These epistemological (and ontological) stances imply that literacy is not just "a users' ability to put the tools of digital spaces into use" (Esthet, as cited in Lankshear and Knobel, 2008, p. 18) in contemporary contexts with specialized skills, but that knowledge-making is changing shape permanently. Some would like to see a new term to describe this new phenomenon. Bratta and Sundavall (2019) argue that while technologies have always shifted literacy practices, examining the tools and skills and contexts of literacy alone are simply too limiting for what society is enacting in a digital age. Instead, they call for an entirely new term, *electracy*,[5] to help scholars expand their purview (p. 2).

Kress (2003), though his disciplinary allegiance falls outside literacy studies, best exemplifies the evolving epistemological and ontological

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[4] See also Lankshear and Knobel, 2008; Alexander and Fox, 2009.
[5] The term *electracy* was first coined by Ulmer (1994).

approach to defining *new literacy*. His assertions about the fundamental shift in the shape of knowledge, the logic of meaning making via writing and reading (or design), and the way those symbolic semiotics are mediated is unequivocal. Kress (2003) believes that the *new* in new literacies is marked by two shifts that can be labeled nothing less than a "revolution" of cultural engagement with the shape of knowledge (p. 1), particularly evident in the image's dominance over writing and the screen's dominance over print. The significance of the image is in its fundamentally varied logics. According to Kress (2003), writing (heavily influenced by speech) is linear and governed temporally while the image is governed instead by the logics of spatial arrangement and simultaneity. As Kress (2003) puts it, "the world narrated" is necessarily different from the "world depicted and displayed" (p. 2) and the growing dominance of the world as depicted and displayed shapes the ways readers make meaning which, in turn, shapes ways of being in the world. For example, in the logics of text (and speech), students are asked to write a topic sentence and place it at the beginning of a paragraph because being *first* marks the significance of that idea. In the logics of the image, however, the equivalent of a main idea might be placed in the center to mark its significance (Kress, 2003). Another example might be helpful here. A student using the mode of the alphabetic text, writing about a cell with a nucleus, must make an assertion about ownership, such as "the cell has a nucleus" while the student asked to draw the depiction of a cell-nucleus relationship

has to place the nucleus in some spatial arrangement with the cell (p. 3). Both are epistemological commitments, but it is the mode that determines those commitments.

Of course, the answer (as it usually does) lies in a multiplicity of approaches. To account for something that is "new every day of our lives" (p. 1), Leu et al. (2017) suggest a dual-level theory— an uppercase and a lowercase. Lowercase theories explore specific areas of new litera*cies* (necessarily plural because these involve skills, technologies, events and practices in shifting contexts) in ways that help keep up with rapid change. By contrast, the uppercase theory is broad in scope and seeks the consistent elements and patterns among the varied contexts. Perhaps, Leu et al.'s (2017) dual level theory can help reconcile the varied accounts of the ways new literacies are indeed *new*.

One consistent factor in the way we describe literacy's evolutions in the 21st century is the protean foundations that mirror social, cultural, epistemological, and technological shifts— explicitly so, at least, since the sociocultural turn in the way scholars understand literacy. In the early years, though, those protean foundations did not shift as rapidly as they do today— where literacy is deeply embedded in an age of networked digitality that promotes rapid transitions. This goal necessitates a pursuit of rigor, not closure (Coiro et al., 2008, p. 12-13). And, this rigor is pivotal to understanding

the rapid fire pace of change in digital substrate (Mangen and van der Weel, 2016).

Understanding Reading Anew

Because most scholars have moved away from the term *reading* and on to describing the broader category of *literacy* instead, this study overtly distinguishes reading as a primary component of literacy and must, therefore, untangle definitions of the two terms *literacy* and *reading*. As Gee, Hull, and Lankshear (1996) claim, "whatever literacy is, it [has] something to do with reading" (as cited in Lankshear and Knobel, 2008, p. 5). That "something" is often described by looking at the contexts of reading in the 21st century and the skills necessary as a result of new tools.

New virtual contexts for reading create a context where readers play several concurrent roles, as "users, authors, and audience all at the same time" (O'Dell, 2020, p. 1) in far more explicit and perceptible ways. Even notably pejorative arguments around *reading* in the digital age speak to the significance of a shifting context. According to Birkerts (2010), reading in the digital age equates to "gobbling foie gras" (i.e., not slowing down long enough to enjoy what should be pure joy). This "gobbling" brought on by the era of Google search engines is one of loss for many other scholars, as well, such as Baron (2015), Carr (2010), and Wolf (2007) who all argue (from varying vantage points) that the digital "substrate" has led to the deterioration of reading skills (as cited in Mangen and van der Weel, 2016).

A less pejorative characterization, however, might characterize things a bit differently. They might recognize that the digital context means that readers are faced with new reading demands that are often distinctly separate from old reading demands (Leu et al., 2013). In fact, some readers who are not successful with offline reading may read better in an online context (Castek et al., 2010) and prior knowledge may contribute less to online research and reading comprehension because readers gather necessary prior knowledge based on their chosen reading path (a distinct quality of online reading) (as cited in Leu et al., 2013, p. 224-225). To meet these digital-specific reading demands, the Common Core State Standards have renewed focus on acquiring literacy skills specific to the digital environment— both in research skills and comprehension. For example, metacognition is deemed paramount in online reading comprehension because of pluralization of elements and exponential multiplication of possible interactions (Hartman, 2001, p. 146), including more than the standard declarative, procedural, and conditional types of knowledge, but also knowledge of identity, location, and goal (as cited in Hartman, 2001, p. 146).

These contemporary demands of digital reading calls for (or, rather, underscores) other skills necessary for advanced reading, as well. For example, a readers' ability to analyze metatextual cues (e.g., source, URL address, sponsored content, etc..) to determine validity, trustworthiness of

online content (Stanford History Education Group, 2016) has become especially central. Further, according to Coiro and Dobler (2007), readers must comprehend in rapid, recursive, iterative cycles where "multiple self-regulated decisions and understandings drive high-level sense-making strategies" (as cited in Baker, 2010, p. 144), as well as become adept at "questioning, locating, critically evaluating, synthesizing, and communicating" (Coiro, 2007). Other scholars call on teachers to focus on the distinct functions of digital reading— capitalizing for speed, teaching the ability to process large amounts of information while moving fluidly across texts to glean meanings instantly (Spiro, 2006).

Reading in the digital age may warrant additional sets of dispositions, as well, according to Coiro and Dobler (2007). Anderson et al. (2001), for example, posits that flexibility, versatility, high self-efficacy, learning style, and motivation are particularly important dispositions in hypertext reading events. Further dispositions include readers' attitudes and beliefs about using the Internet for inquiry and learning and their own levels of self-efficacy in relation to their peers and adults (Coiro, 2007; O'Byrne and McVerry, 2009). One theory for varied dispositions is that reading in digital spaces, particularly on the internet, is marked by a shift from a linear orientation (where the "path" is more firmly set by the medium) to a path that the reader has more control over as they navigate the complex structure of online texts. This control, according to Kalantzis, Cope, and Cloonan (2010), illustrates the way

digital spaces exhibit the reader's agency (p. 64) in its "bidirectionality" (Kress, as cited in Kalantzis et al., 2010), the control given to the consumer to determine their own reading path, and the "avenues for divergence" (not homogeneity) in representation (p. 64).

These new contexts, new tools, and the requisite skills necessary to navigate them all demand that we re-define *readership*[6] in a way that goes beyond the new digital contexts. For many scholars, the conceptual frame for what it means to read or to be a reader is the more fervent mission, and has been even before digitality.[7] Many of these fundamental shifts of the digital age underscore what postmodernism did to usher in a view of reader as that "*someone* who holds together in a single field all the traces by which the written text is constituted" (Barthes, 1977, p. 148). Rather than the Romantic notion that writers express, and readers merely eavesdrop into their inspiration, the reader as a postmodern construct is a dynamic constituent of meaning-making. The computer, as Bolter (2001) terms it, "makes concrete the act of reading…and challenges the reader to engage the author," making visible the contest between the two "for control of the writing space" (Bolter, 2001, p. 154). The contemporary digital and networked spaces enact this new

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[6] This is a term used by Geisler (1994b) that works well here because it refers more broadly to a concept that includes both reading (an act) and reader (an actor).

[7] There have been a series of significant shifts in readership theories that contribute to this claim: transactional reader as active meaning-maker (Rosenblatt, 1969); reader as active meaning-maker in conversation with author (Bazerman, 1980); reader as decoder (Enlightenment-era thinking); reading as overcoming oppression (Freire, 1970); even reading as a force *of* oppression and even "violence" (e.g., Stuckey, 1991).

conceptual approach to readership, even before digitality was widely available. Digital tools have made overtly visible these pre-existing postmodernist theories of reader-as-authority, where the fantasy of author-as-sole-creator is surrendered (Modir et al., 2014) and the reader is empowered to take their share of epistemological control.

To account for what the reader's authority looks like, Tierney (2009) suggests reading in the digital age is now akin to viewing art, a Gestalt-like process where, instead of digging deeply into a particular component of the whole canvas, readers must "discern composites" (p. 279). Tierney (2009) is referring to temporal-spatial shifts in meaning-making and, to understand those shifts more clearly, scholars must turn back to Kress' (2003) theories of new media (as he terms it). The screen-based, multimodal texts dominant in digitality call for a new conceptual approach of reading as ordering rather than reading as interpreting, demanding a dynamic experience where the reader sets the reading path[8] and establishes "the order through principles of relevance of the reader's making" (p. 162). The reading path of printed alphabetic texts are well established for the reader (though its elements require meaning be provided by the reader), but that is not the case with the spatial logics of the visual where the reader develops the path, though the

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[8] Kress (2003) notes that reading paths are also cultural decisions (e.g., left to right, top to bottom, linear) and while some things stay common in reading across time, culture, space (e.g., those things that derive from our bodies and their orientation to space like our heads are on top of our bodies, etc...), some are malleable, or cultural, like the nature of memory or the shape of the texts we read.

components of the image have a stable meaning[9] (Kress, 2003; Rowsell and

Burke, 2009). These new principles of meaning-making via screen-based

texts, organized by the logic of the spatial, marks a fundamental shift that

moves well beyond functional skills to navigate traditional reading in a digital

world.

Not only have the logics of reading shifted, but scholars argue for a

more fundamental conceptual shift in definitions of *reading* that recognize

digitality's impact on the relationship between writing and reading. Brandt

(2009) indicates that this "writing-based literacy" (p. 162) of the digital age has

undone traditional reading so that we now read "from the position of the

writer" through the same media, with our hands at the ready on the keyboard

(p. 162). This collapse of traditional boundaries between writing and reading

demonstrates how definitions of *reader* must conceptually shift away from

"being good…as in well socialized, well behaved, well cultured" (p. 163) to

being productive and agentic.

Finally, digitality has given rise to even broader social arrangements for

the reader as a dynamic, civic participant in society. The social arrangement

resulting from ubiquitous networked digitality is a conversation too rich to

treat with much detail within the limits of this review, but in brief, new media

invites "unification and involvement" (McLuhan, 1964, p. 8), making the

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[9] Kress' (2003) claim here that the elements of the image are "filled with meaning" with "no vagueness, no emptiness" is troublesome, but that's a digression beyond the scope of this review.

practice of reading increasingly social and collaborative (Lamb and Parrott, 2019), rather than individualistic (Tierney, 2009, p. 280).[10] This complicated, shifting social arrangement affects how the reader is positioned within society, as evidenced particularly well in Feenberg's (2017) theories of the Internet. He asserts that the Internet is a product of reciprocity; each participant is reader, viewer, publisher (p. 108). In this way, the Internet (and the literate affordances offered in new networked spaces) is an essential space for a revival of agency for democratic participation.[11] This new, rich space of agency[12] affords the rise of the reader as amateur. While scholars have historically protected published authors, they've failed to view the amateur reader as creator, according to Bordelajo (as cited in Winkelmann, 1995); however, the networked digital environment invites a return to the

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[10] To be fair and include counter positions, Gee and Hayes (2011) claim that the equalizing force of digital media brings many disparate people together, but equally fragments people into ever-expanding series of "tribes." They contemplate whether digital media is taking us back to Levi-Strauss' ideal world where tribalism helps us honor difference (from a distance) by occasionally influencing one another, without taking up separate space. To avoid uncritically attempting to put social action into motion in our classrooms, we must also remain sensitive to how technologies sustain individuation (Fleckenstein, 2012).

[11] To be fair, many critics do not see such rich possibilities. For example, in response to *Time* Magazine's mirror image on the person of the year, Frank Rich claimed that digital citizens are really just escaping, not engaging democratically (as cited in Tierney, 2009).

[12] It is also critical to acknowledge here that while some say digital environments are more fertile ground for exchanges (like people being more open, connecting with others), others are cautious in that digital environments can perpetuate existing hierarchies and inequalities, including: Foucault who says that "technology is just one among many similar mechanisms of social control, all based on apparently neutral knowledge, all having symmetrical effects on social power" (as cited in Feenberg, 2017, p. 29); Feenberg (2017) who says that power is not added on from the outside, but resides in the very design of the technology; or, Welsh (2019) who notes how algorithms limit the discerning practices of readers, affecting us without informing us (Gehl, as cited in Welsh, 2019, p. 62); further, Guzzetti (2010, p. 242-264) adds that virtual communities reinforce discursive gender roles.

power of the amateur[13] (Gee and Hayes, 2011). That amateur reader is further conceived as activistic in nature. In fact, electronic writing spaces provide an invitation of more disruption (Kalir and Dean, 2017), infidel heteroglossia (Haraway, 1991; Bakhtin, 1986), and anarchy (as cited in Winkelmann, 1995). These core premises of agency and civic participation are at the core of Tinberg's (2019) recent call to action— that in this age of post-truth (Carillo, 2018), "we have a moral and civic obligation to teach reading in our writing classroom and to pass on the view that reading is a moral and civic act that we are all responsible to act upon."

Literacy, Civic Participation, and Democratic Deliberation

The consequences of a potential under-preparation for 21st century reading and writing (no matter how that deficiency is characterized, as explored in chapter one) are not just endured by the struggling student alone; rather, the price tag applies to us all as there are many complex connections between reading, literacy, thinking, and social well-being. This study is particularly interested in engaged critical reading as a precursor to praxis in the shape of civic participation. A frame of participatory democracy is not at all unusual among rhetoric and composition/writing studies pedagogies. In fact, this goal of teaching productive discourse for thoughtful democratic participation has long been a value among scholars of rhetoric—

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[13] Geisler (1994a) claims that schools have used the technology of literacy to separate students into these two categories: producing the experts and producing the consumers of expertise (p. 82).

the *longest*-standing province of a rhetorical education (Fleming, 1998) if we're willing to reach back to the field's Greek and Roman roots— Protagoras, Aristotle, Quintillian, and Cicero. Still, the civic center of a contemporary research and rhetoric course warrants more careful and contemporary explication.

Even those who fit more squarely in literacy studies, like Rosenblatt, a Dewey adherent, detail the importance of reading and literacy as a democratic strength (1995). Democracy is not simply a structure of political institutions, but as Dewey said, a way of life. Democracy implies a society of people who, no matter how much they differ from one another, recognize their common interests, their common goals, and their dependence on mutually honored freedoms and responsibilities. For this they need the ability to imagine the human consequences of political and economic alternatives and to think rationally about emotionally charged issues. Such strengths should be fostered by all agencies that shape the individual, but the education system, through all its disciplines, has a crucial role (*Literature*, 1995, p. *xv*).

This project seeks to carefully discern between the contribution of literacy (specifically, reading) to civic participation in the form of democratic deliberation without falling victim to either Graff's literacy myth or adding to the unhelpful myths that literacy is somehow an autonomous (Street, 1984) agent of change. As Graff (2010) has fully explored, literacy has far too often

been associated with progress, light, the way to all things good and true in this world while, by contrast, associating illiteracy (or markers of poor literacy skills) with "ignorance, incompetence, and darkness" (Graff, 2010). While it is beyond the scope of this project to explore the ways that literacy in educational environments have been used to sustain oppression and inequity (see Stuckey, 1991), this project does rest on the assumption, in agreement with Graff (2010), that literacy is an important variable of democratic discourse and equity, though not the sole generator of such goods.

The shifting contexts of literacy offer a starting point to untangle the relationships among the highly contested terms *literacy*, *civic participation,* and *democratic deliberation*. While *civic education* has been widely defined and made operational across behaviors, knowledge, skills, and dispositions such as information literacy, evidence-based reasoning, public speaking, empathy, and collaboration (The National Task Force on Civic Learning and Engagement, 2012), the role civic education plays in RCWS is a bit more ambiguous. Wan's (2014) *Producing Good Citizens* helps illuminate this ambiguity by echoing a long-held belief that the writing classroom is preparation for citizenship, not just an indoctrination to academic writing and reading, but Wan challenges scholars and educators to consider what behaviors constitute *citizenship*. While we often acknowledge broadly that "democracy can't work unless citizens are literate and informed" (Ohmann, 1976), the specifics of what those literate skills, behaviors, and dispositions are

is less clear. For Wan (2014), who is a rhetoric and composition/writing studies

scholar interested in clarifying the relationship between *literacy* and

citizenship, a good citizen is one who "participates, who is engaged, who can

critique society, and who is a productive, satisfied member of the nation,

using advanced literacy skills as a means to achieve these civic acts" (p. 22).

Many of those lauded civic literacy practices are dispositions of praxis.

For example, as Westheimer and Kahne (2014) put it:

> A citizen in a democracy is expected (ideally) to live with a constant
>
> effort to critically reflect on oneself, the society and the world, in order
>
> to be able to pursue the democratic way of life and to co-shape and,
>
> when necessary, improve/change the democratic society as such.

The "justice-oriented citizen" that Westheimer and Kahne (2014) speak of is

one with the motivation needed to both reflect and take action towards

improvements in civic life beyond themselves. Several scholars have echoed

the same message: critical and self-critical dispositions of literate practice are

essential to democracy and many current-day experts seem to agree that

we're moving in the wrong direction with these dispositions— away from

productive discourse and thoughtful participation.

The remedy to this increasingly challenging circumstance can't be

found in existing pedagogies, according to Lockhart et al. (2021). The

"information literacy crisis" brought on by post-truth rhetoric (Lockhart et al.,

2021, p. 1) coupled with the data that exposes a bleak sense of young people's

ability to "reason about the information on the Internet" (Stanford History Education Group, 2016) has left students highly vulnerable. The current means to address this democratic crisis are disparate at best: Duffy (2014) says we must recommit to teaching rhetorical ethics; Carillo (2018) argues for doubling down on fostering students' metacognitive reading practices; McComiskey (2017) expresses a desire to use the Framework for Success in Postsecondary Writing to move forward. Lockhart et al. (2021) ask educators to look beyond these disparate and inadequate solutions and towards new strategies that meet the new problems. For example, given the new context of the mediated experience with algorithmic-influenced text shows us how reading must be conceptualized anew. If students can't easily discern who is communicating what messages or the motivations behind those messages (Virtue, as cited in Lockhart et al., 2021, p. 3), then we must rethink the act and teaching of reading. Likewise, the expansive elements of a digital ecology (e.g., algorithms, bots, trolls, and applications) are new factors to help readers consider motivations behind a message— making it clear that educators need to help students avoid the tendency to blindly trust that what they read. Ultimately, new pedagogies of reading must also include critical analysis of the technologies that serve to "obscure or reveal the intentions behind the text," to include strategies to problematize search engine biases and as well as acknowledge and seek out our own confirmation biases and selective

attention behaviors that are often fueled by the accelerated speed of information circulation (Lockhart et al., 2021, p. 4-7).

One way or another, the digital tools of literacy play a critical role. For some scholars, the digital context of literacy is, in and of itself, a proponent of democratic values and behaviors. According to Rogers et al.'s (2018) "Introduction to Equity and Digital Literacies," several educational researchers who study digital language and literacy practices perceive them as highly democratic in that they "foster more participatory, collaborative, and distributed engagements" (see also Dobson and Willinsky, 2009; Ito et al., 2009; Jenkins, Clinton, Purushotma, Robison, and Weigel, 2009; Knobel and Lankshear, 2006). Likewise, despite an awareness that technologies work to exclude in damaging ways (Castells, 2009, p. 3), Castells believes that the ability to use technology will continue to be "the critical factor in generating and accessing wealth, power, and knowledge" for social and economic viability (Castells, 2009, p. 93).

The digital tools have, according to some, made more accessible the discursive behaviors and dispositions necessary to maintain a deliberative democracy. While democracy is a particularly fraught term, *deliberation* is a verb, meaning arguing "about things that are in our power and can be done" (drawn from Aristotle, N.E.) which leads to a decision. In democratic deliberation, those decisions about what to do revolve around the preservation of democratic ideals of liberty, equality, and justice.

What's more is that the research underscores the relationship between civic participation and success. Thoughtful civic participation is associated with measurable positive outcomes such as better community and personal outcomes, as well as economic resiliency, mental health, increased sense of agency, and less stress (Hylton, 2018, p. 89). From an administrative point of view, students who are civically engaged are associated with higher rates of graduation, higher GPAs and higher rates of satisfaction with college (see Hylton's review, 2018, p. 89).

J.M. Beach (2018) agrees and makes even more urgent claims to explicitly link literacy education to the well-being of modern society. Beach (2018) believes that schools are failing students, particularly when it comes to literacy instruction. Among equity gaps, grade inflation, the commodification of higher education, and the value placed in feigning intelligence rather than working for it (p. 1-2), students are left with a "knowledge gap" or a lack in *real education* or practical knowledge and the ability to think rationally (p. 3). He names the abilities to make wise judgments and skillfully act (he terms them *instrumental rationality* and *procedural knowledge*) as the "most advanced and difficult form of knowledge" (p. 4). The consequences of the current incompetence affects, according to Beach (2018), not only the individuals themselves, and the professional and economic growth of a nation, but also the "social foundation of political democracies" (p. 5). 21st century literacy instruction must be adapted to suit 21st century literacy goals: think critically

and self-monitor our own thinking to '"actively construct, evaluate, debate, and use their knowledge" in ways that suit our sociopolitical contexts (Beach, 2018).

While *democracy* is a term that will perpetually resist a definitive definition (Crick, 2016) and the tenets of a deliberative democracy have not reached the level of consensus, this study engages the call for open-ended conversation (Crick, 2016, p. 13) around the dynamic among such key concepts. For this study, specifically, the goal is to enact reading (using the digital tools of social annotation) as a means of engaging students in civic participation (as defined by the students themselves, at both the beginning and the end of the intervention) and, specifically, to honor the discursive practices of engaged critical reading as a key component of democratic deliberation.

Social, Digital Annotation

An annotation, broadly, is a "note added to a text" that serves one (or more) of five overlapping purposes: "providing information, sharing commentary, expressing power, sparking conversation, and aiding learning" (Kalir and Garcia, 2021). Annotation— paper-based or online— is an important part of human cognition (Zhu et al., 2020); it serves a multitude of functions including procedural signals, placemarks, and visible traces of a reader's attention (Marshall, 2007; O'Hara and Sellen, 1997). The benefits are widely accepted among teacher-scholars as a key to active reading practices. Even

decades ago (in 1940), the powers of annotation were noted by Adler who encouraged students to use annotation strategies such as: "underlining words; drawing vertical lines, stars, and other 'doo-dad' in the margins" (as cited in Kalir and Garcia, 2021). In alignment with print-based learning materials, the early descriptions and studies of annotation most often focused on hand-written annotation notes made in the margins of printed texts. Most current-day pedagogies still use this analog perspective to teach the methods of annotation (e.g., circling words you don't know, highlighting key phrases, etc...). However, social, digital annotation (sometimes abbreviated as SA, though I use SDA here) is a genre of learning technology that, according to Novak et al. (2012), "affords people the ability to annotate... forms of digital media... for the social purposes of information sharing and knowledge construction" (as cited in Kalir, 2020, p. 248). This effort at social annotation is not exactly new, though the invention of SDA interfaces has undergone multiple iterations to make it work as intended. In fact, SDA falls into the long line of evolutionary changes in the ways technologies are designed to facilitate participatory, collaborative, and interactive method(s) of learning" (O'Dell, 2020, p. 2) rather than just display static content.

The practice of social annotation broadly is supported by Vygotsky's social constructivist views of learning, contending that language and social interaction both play a critical role (Zhu et al., 2020). To that end, web-based annotation harnesses "simultaneous access to a shared document" by

creating "a layer of interactivity on any Web document" (W3C Web Annotation Working Group, 2016, as cited in Zhu et al., 2020). In education, this web-based annotation is broadly used to support social reading, group sensemaking, knowledge construction and community building (Kalir et al., 2020; Marshall, 2007; Plevinski et al., 2017)— all goals laid out in the design of this study.

It's not just academia that seems interested in social, digital annotation. Popular publications have begun using and displaying annotation, too. In fact, Cillizza, a *Washington Post* journalist, claims that annotation is the future of journalism (cited in Carillo, 2018) and many others seem to be following that lead: the New York Society Library with their "Readers make their mark" exhibit and the *Book Traces* and *Annotated Books Online*, a digital project that tracks readers commentary. The *Washington Post* has even published an annotated version of the Declaration of Independence and Congress has published an annotated plain-English version of the US Constitution. *The New York Times*, in 2017, published Margaret Atwood's annotations of *The Handmaid's Tale* episodes and Ta-Nehisi Coate's annotation of *Captain America* (as cited in Kalir and Garcia, 2021). Likewise, but within a separate genre, Genius launched an annotation platform for listeners to comment on the lyrical meanings of popular songs. Kindle, too, has standardized minimal forms of annotation with their "popular highlights" and "public notes" features. Niemanstoryboard.org puts on "Annotation

Tuesday" events and, in conjunction with the National Writing Project,

Hypothes.is has deployed the Marginal Syllabus initiative where educators

form reading groups that meet monthly in digital, annotation-centric

discussion with writers, researchers, and colleagues around a specific text.

Indeed, as Jones (2014) posits, "the entire web can seem driven by a massive

will-to-annotate."

Hypothes.is as One (of many) Tools for SDA

Tools of social annotation are many. This study could have incorporated

one of several SDA interfaces, such as Diigo, Annotate, Genius, or even Google

Docs, but Hypothes.is was chosen for several reasons: usability, the

commitment to a free and open access platform, and the transparent

allegiance to civil and egalitarian discourse.

Function was a primary consideration in the choice to use Hypothes.is,

especially in the visual arrangement of annotation. For example, how

annotations are arranged on the digital page matters. For example, Diigo

annotations display like sticky notes that pop up over a text and their

comments can be public or private, but according to O'Dell (2020), Diigo is

best used as a "repository for web pages and links" (p. 6). Genius works much

like Hypothes.is in that any web page is annotatable and those comments are

collected in a right-side margin on the screen, available to any public user.

Both Genius and Hypothes.is are often considered the most accessible

platforms for social annotation, though Hypothes.is presents an aligned

interface, which Wolfe (2008) argues makes for the least disruption for readers (as cited in O'Dell, 2020, p. 5). Hypothes.is is also compatible with PDF files or any available web page and does allow for private groups to be created for greater privacy control. Further, Hypothes.is is inherently social, inviting the widest panoply of voices to any public reading event.

Further examination of the less-than-visible features of Hypothes.is reveals that the technical backdrop of the tool manages to fit squarely in the anti-Microsoft camp of the open-source movement, committed to a free and open method of information sharing and building. Jeremy Dean, the Director of Education at Hypothes.is and co-founder, makes the overt effort at deviation from typical tech companies clear:

> We're trying to do something different than mainstream tech companies, both for the user and for society. That includes what kind of tech we're building, how we design and build it, how we license the software, how we structure our security and privacy policies, our business model, really everything about how the project works. (Dean, Personal Correspondence, 2018)

In fact, the software code itself is an activist stand apart from typical proprietary software of Silicon Valley. "We've made the choice as a company to not make our software proprietary. Anyone could use the code and build a similar project themselves. That's even encouraged sometimes" (Dean, 2018). The annotations that are crowd-sourced are handled differently than most

software makes room for in that Hypothes.is doesn't claim to own the annotations; rather, they're Creative Commons licensed. As Dean puts it, "your annotations are yours in a way your Tweets simply are not" (as cited in Kalir, 2017, p. 10).

This specific SDA tool also honors multimodality or the concept that meaning is made via multiple interactive modes, such as visual, audio, gestural, tactile, and spatial patterns (New London Group, 1996). The company is still working on the ability to annotate video- and audio-based texts, but at this point, students are able, using Hypothes.is, to add multiple modes to their own annotations (e.g., adding memes, links to videos, or audio files). This sort of modal inclusion speaks to the tenets of critical literacy in powerful ways, too, honoring modes that are commonly indicative of marginalized populations (Selfe, 2009) and breaking free from the traditional academic grip on alphabetic print text and genres. In these ways, Hypothes.is honors the affordances of digital literate spaces where these sorts of various modes are more easily designed, consumed, and circulated widely.

But Hypothes.is isn't just about giving readers more options. As Porter (2009) details, "merely giving readers options is nothing special" (p. 217). Readers have been choosing their paths, even in highly constrained reading experiences (newspapers, etc...) for ages. Much of the affordances of Web 1.0, for Porter, evoke the myth of choice among a sea of technical "bells and whistles." However, the true "revolution of the Internet....[happens] when

users can critically engage what they read…..when they co-produce…when the distinction between audience and writer blurs" (Porter, 2009, p. 218). This is where Hypothes.is enters the picture. It seeks to push beyond those bells and whistles and enable readers to engage in meaningful activity, to choose how they might engage, and to co-create meaning, helping readers who have a lot of experience with "learner-content" interaction add in more "learner-learner" interaction (Gao, 2013, as cited in O'Dell, p. 2).

In addition to the simple and aesthetically inviting set of control functions, Hypothes.is ultimately earned its place in this intervention because of its ideological commitments. No tool is neutral, and digital interfaces "don't always wear their brains on their sleeves, so to speak" (Morris et al., 2013), but Hypothes.is trumpets the social justice mission behind the tool. This platform, rooted in principles of a free and open interface, is designed to be controlled by users not owners— a commitment rooted in recommendations made by the W3C Web Annotation Working Group (2020). Their mission is not purely technological; it's educational as well, espousing a world of social collective intelligence, a record of cognitive processes, and ubiquitous collaboration. Their intention of addressing societal concerns is clear. The landing page for this digital annotation tool states three simple goals: enabling layers of conversation, "building an open platform that works everywhere, based on open-sourced technology and interoperable standards," and being part of a global community that advances human understanding for public good

(Hypothes.is home page). Hypothes.is is an interface that creates the web as it was originally intended— a collaborative space for users to make and share ever-shifting meaning of a digital text.

The Hypothes.is site's "About" page includes an animated video that walks viewers through the history of text: "First, we spoke. Then, we wrote. Then there was the printing press and in just 60 years, over 20 million copies of books and textbooks were produced" ("Introduction to Hypothes.is," 2021). The creators detail the journey of annotated software through Marc Andreessen and Eric Bina who developed the first collaborative annotation interface called Mosaic (in 1993) to launch a discussion of content on every internet page. Since 1993, more than 50 projects tried to reimagine the vision of Andreessen and Bina but were unsuccessful due to many factors ("Introduction to Hypothes.is," 2021). The background music of this video mimics the drum line of Revolutionary era soldiers, fighting for freedom and access to a better world. The project began from a desire to speak truth to power, as evidenced by Whaley's Kickstarter campaign (as cited in Kalir, 2017, p. 9) to challenge the tensions of the "internet as the democratization of power" versus the internet as "yet another, perhaps even more insidious, manifestation" of knowledge-power dynamics, as advertised on their site (see Figure 1 below). In all these ways, Hypothes.is mission aligns well with the big picture goals of this study.

Figure 1 *Hypothes.is Website Mission*
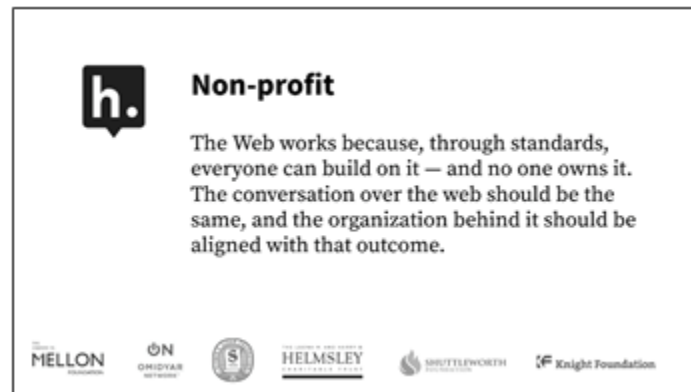
Limitations of SDA and Hypothes.is

Certainly, SDA has not been embraced with open arms by everyone. There are concerns over the graffiti-like nature of unsolicited commentary (as cited in Licastro, 2019, p. 101). As one scholar puts it, the ethical questions can be distilled down to whether it is ethical to publicly write on someone else's page using the digital annotation overlay? Who owns their own words? Whose words are prominently on display and under whose authority? These are large ethical questions that Hypothes.is is asking, and discussing, though the answers are far from settled.

Another key concern is what happens when the comments are no longer productive, meaningful, or generative. Those comments can easily become a tool of harassment, especially for vulnerable composers. Watters (2018), a tech journalist who seeks to hack education by examining its technologies, is a prominent example of someone who has added script to her blog in order to consciously block both comments and annotations. As

Watters explains, part of her decision is to block the rampant sexual harassment and threats of violence that open annotation invites. Watters reveals the vulnerabilities of inviting *all* voices, *all* discourse without moderation, but also makes clear that her choice is about protesting extraction of "value from my work and shifting it to another company which then gets to control (and even monetize) the conversation" (Watters, 2018).

Of course, no technology is neutral. Frohmann warns that digital interaction is mediated by "these entities [that] often dictate the type of communication that takes place in a designated space," selling freedom through "mechanisms of control that are passively consumed and obeyed" (as cited in Beck, 2016, p. 7). To some degree, this is the case with Hypothes.is, too, despite their protests, but it is true of all media (e.g., printed text, digital interfaces, and physical spaces). Like all systems, the details can be both oppressive and freeing. Certainly, the ways digital tools and technologies make up Internet spaces is both democratizing and oppressive— both a liberation and a tool of further limitation and control. But in other important ways, these tools can build in structures that help us imagine a more open and dialogic space. While online politics cannot be separated from "the sociopolitical context from which they emanate and operate" (Fenton, 2008; Siapera, 2008), they just might be a force in shaping those contexts, in turn. Or, as Castells puts it, technology is society (Castells, 2009).

Technological determinism need not be evoked here. Technologies like Hypothes.is are not the panacea some hope it to be, leading us to a better society overall. Scholars widely recognize the damage and oppression caused by uncritically adopting digital technologies that can further the division between groups of people. It's important not to get caught up in "conflating information with empowerment" (McCaughey and Ayers, 2003, p. 285). Digital tools may have been designed to liberate information from solely the powerful, but payment for that liberation was, for example, a sea of disinformation and a total lack of trust in institutions that serve to disseminate information, potentially giving rise to a collection of cultural tribes, all fighting different fights, with no single cause to bring us together rather than the global connections envisioned at the outset. No single digital interface can solve the tendencies of the collective to faction themselves and to be further oppressed.

It's also important not to romanticize the perceived 'openness' and limitlessness of digital tools to bring disparate voices together. Certainly, there are constraints repeated online that shut down access and voice. Scholars such as van Audenbrove et al. (2003) detail limitations like access, moderation of voices, and male dominance as major limitations that deserve a closer examination that I do not have room for here. Most certainly, Hypothes.is, despite all its efforts to expand discursive participation, is still a system that acts as Foucault's author function (1969). Hypothes.is has written

the code, designed the virtual space, and crafted the boundaries of the interface. In that sense, the tool regulates— both by broadening and limiting— discourse in particular ways.

Studies on Social, Digital Annotation

Annotation is not a new concept in any way. Annotation, especially in analog form, has historically presented a record of the social effort at meaning-making. In fact, Medieval manuscripts offer a glimpse into the forces that have come to define annotation for us today. Medieval scholars and consumers of texts used the margins as spaces that welcomed interactive inscription: "The margins of medieval manuscripts often contained bawdy poetry, dirty jokes, anti-establishment sentiment, and obscene and fantastical images: hybrid animals, obscene gestures, monks and nuns cavorting together, sometimes in the nude" (Zorach, 1994). There was an ancient collective approach to gaining knowledge and/or being entertained.

As technologies of reading shifted, so did the practices, and slowly, as texts became available in print, annotation was perceived as an individual active reading strategy of comprehension, often called upon to illustrate reading as an individual constructive act (Bartholomae and Petrosky, 1986). Many studies have addressed the analog annotations of traditional printed textbooks. Marshall, for example, back in 1997, studied more than 150 used textbooks and found that students most commonly annotated with variety of purposes in mind: "procedural signaling, such as indicating importance;

placemarking; problem-working, as with mathematical and scientific questions; interpretation; tracing progress; and incidental markings (like coffee stains)" (as cited in Kalir and Garcia, 2021). We're all familiar with annotation and even prone to find it a useful active reading practice, though the benefits of the idiosyncratic nature of handwritten annotations has ultimately been challenged with mixed empirical results (Kalir and Garcia, 2021).

However, as technology continues to shift into digital territory, annotation has taken on renewed interest among researchers and studies of annotation as a social phenomenon once again have been promising. In many studies, SDA annotation helps re-conceptualize readership as agentic. For example, annotation practice has been found to decenter the instructor's authority over text (Morris, 2019). This possibility is echoed by Lisabeth (2014) who theorizes how social annotation is a "transformative public act as the text being annotated takes a backseat to the collective backchannel." Kalir and Dean (2017), with their "Annotation as Conversation and Interruption," analyzed the exchanges of over 100 annotations form educators at all levels, who added over 6000 words (to the original 5320 words of the article) and concluded that digital annotation challenges the authority of authorship, instead encouraging readers' collective power to write their way into academic text and collapse the distance between producer and consumer. Further, they posit that digital annotation challenges the temporal nature

and processes of traditional textual production and publication. Carillo (2018) theorizes that this shifting conceptualization of readership, afforded by annotation, has the power to counter the mis- and dis-information of the post-truth age.

Many scholars claim SDA annotation is one possible remedy to the challenges of teaching reading in the writing classroom, namely as a way to "see reading" (in response to Scholes' famous line: "if we could see reading, we would be appalled," 2002) and help readers see their own process of reading and thinking. Schneider et al. (2016) studied student annotations and writing using the tool Lacuna and finds this annotation platform gives "instructors more insight into students' perspectives on texts and course materials." Morris (2019) found that collaborative annotation (using Google Drive) helps bridge the reading-writing connections by making those connections visible. Salvatori and Donahue (2017) agree that "annotation can work as a record of reading and a site of reflexivity" (p. 319) that merges the discursive acts of reading and writing together.

Studies on annotation indicate that confidence and motivation rises (Johnson, Archibald, and Tenenbaum, 2010; Nokelainen et al., 2005; Reid, 2014) with annotation practices where students exhibit heightened motivation by, according to Gao (2013), posting more than required. Other researchers have found that annotation has positive effects on critical thinking, comprehension, and meta-cognitive skills (Johnson et al., 2010; Yang

et al., 2013). Licastro (2019) agrees. She studied social, digital annotation by asking students to read two texts that indirectly debated one another. She assigned them to add 5-10 initial annotations and 3-5 replies to one another (using a closed Hypothes.is group for freshman and an open-to-the-public link for upperclassmen) and found that social annotation tools support "student engagement with texts at a deeper level than other methods" (p. 91). Ultimately, openly networked spaces for social annotation have been found to aid in group comprehension (Chen and Chen, 2014; Johnson et al., 2010; Sprouse, 2018), civic literacy (Kalir and Garcia, 2019), peer review and critique (Mendenhal and Johnson, 2010) and that it ultimately motivates knowledge construction (Chen, 2019).

This study is the first that I know of to deploy a design-based research methodology to examine the extent of many of these claims, applied to a particular local authentic context.

Specific Calls for Research

Reading is as old as inscription, beginning with "the invention of characters for use in expressing and recording thought" (Cobb and Kallus, 2010, p. 7); consequently, the study of reading in the field of rhetoric and composition/writing studies (RCWS) ought to parallel the study of writing. However, it doesn't. Reading once enjoyed a strand of the discipline's attention (starting in the 1980s), but that attention declined precipitously 15 years later (Sullivan, Tinberg, and Blau, 2017). The scholarship within RCWS

continues to disproportionately theorize, and teach, the origin of a message; however, the message in circulation, perpetually made anew, shifting with each new encounter and being recreated as new knowledge has been far less consistently examined (in RCWS).

The habits of those that consume (and, consequently, circulate) these messages go even less often studied in the field. In fact, as Jolliffe laments, "reading is like the weather. Everyone complains about it, but nobody does anything about it" (as cited in Sullivan, Tinberg, and Blau, 2017, p. xvii). Part of the problem is disciplinary. Research into reading at the college level certainly exists but has been radically outpaced by research into reading at elementary and secondary levels (Porter, 2018). Consequently, RCWS (i.e., often composition teachers in post-secondary institutions) has a "reading problem" (Jolliffe, 2017) in that instructors lack access to resources that might help them construct a model of reading pedagogies (p. 3). Despite standards that, at least in name, laud critical reading (such as the Council of Writing Program Administrators' recommended standards often adopted and adapted by writing programs like my own), rhetorical reading still looms ambiguous in its classroom application. At best, the issue of reading is ambiguous, but at its worst, the issue of reading in the post-secondary classroom is dismissed as elementary, remedial, someone else's job (often left to Education and/or Literary Studies scholars), fully settled, or obvious (Jolliffe, 2017) and, consequently, deemed unworthy of serious consideration. College RCWS

teachers commonly complain that they have little to no access to professional development around reading or are unaware of the role of reading in the composition classroom because "the act of reading is not part of the common professional discourse in composition studies" (as cited in Sullivan, Tinberg, and Blau, 2017, p. *xix*).

The consequences can be seen in our college-level composition classrooms. While teachers commonly nod their heads in agreement with the assertion that to write well, one must read well (Brandt, 2009, p. 162), there is a lack of clarity on the role of reading and the best practices for teaching reading in the college-level writing classroom. As Carillo (2018) notes, "the stakes of literacy are pretty high" in this current discursive context (p. 4); so too are the stakes of research that honors a full view of the otherwise heavily under-theorized (Carillo, 2018) concept of reading, specifically in its advanced stages. Tinberg (2019) agrees; these core premises of agency and civic participation are at the core of Tinberg's (2019) recent call to action— "we have a moral and civic obligation to teach reading in our writing classroom and to pass on the view that reading is a moral and civic act that we are all responsible to act upon." That teaching necessitates research like this study to demonstrate how and under what circumstances such a pedagogical goal can be achieved.

However, reading alone is not the sole object of study here. Reading as a form of praxis that is essential to thoughtful, democratic deliberation is

pivotal to this study. Gerard Hauser published an essay in *Rhetoric Society Quarterly* (*RSQ*) summarizing the ARS pedagogy working group's discussions, and he delivered the group's call for a manifesto that would recover "the value of rhetoric education as central to civic education" and connect "our disciplinary history and expertise to the character and quality of civic life" (43) (cited in Wible, 2016, p. 359). This rhetorical education (envisioned by Petraglia, Bahri, Walker, Hauser, and the Mt. Oread Collective) must be a joint rhetoric, composition, and communication effort in order to produce citizens "schooled in ethico-political thought, and capable of intelligent, ethically responsible deliberation as well as persuasive speech and writing in any facet of public and private life" (Walker, as cited in Wible, 2016, p. 359), an education that develops students who productively analyze and engage in social meaning-making.

Even scholars who identify as multiliteracy theorists call for research that moves us toward "pedagogical innovation" (p. 63), studies that examine more closely the digital spaces of meaning-making practices (Kalantzis, Cope, and Cloonan, 2010). This call to action is closely tied to an inherent shift in agency, made possible (though not determined by) a shift in digital literacies where students are "increasingly required to be users, players, creators and discerning consumers rather than spectators, delegates, audiences, or quiescent consumers" (p. 64). This study seeks to expand reading research that has mainly focused on individual online reading, independent of social

context, and instead hopes to begin to look at collaborative online reading as a social practice, activity that advances learning and civic participation.

Conclusion

While all of these calls for further thoughtful inquiry fuel my energy for the current project, nothing is more energizing than the chance to improve the quality of education in our rhetoric and composition/writing studies classrooms, particularly around engaged critical reading, reader agency, and the thoughtful discursive habits necessary for civic participation.

CHAPTER 3

PROPOSING A MODEL OF ENGAGED CRITICAL READING

This chapter introduces a complex, yet pragmatic, model of engaged critical reading (ECR)— built by culling together theories, definitions, and discussions— and designed specifically for the RCWS classroom. What follows is a theoretical concept broken up into codable components, each developed from extensive review of the literature, one that serves as the basis for the methods of both designing and studying the SDA intervention.

Model of Engaged Critical Reading

While *reading* may ultimately be too complex a term to define satisfactorily and any definition is sure to evolve, there is a rich and risky tradition in trying to define something so complicated as reading. In fact, the field has undergone a number of major shifts in its efforts to define purviews of reading, according to Sprouse (2018): from a focus on comprehension and efficiency (Brown, 1953; Jackson, 1950), to Rosenblatt's (1969) transactional theory that positioned readers as constructors of meaning, to notions of critical reading within social discourse (Haas and Flower, 1988), to an emphasis on rhetorical reading (Adler-Kassner and Estrem, 2007; Bunn, 2011)— commonly drawn together to paint a picture of reading that is comprised of multiple layers (Sprouse, 2018).[14] In addition to Brent's

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[14] I catalog these shifting definitions while still fully aware of King Beach's warning that adopting any such monolithic perspective on such a complex concept may be, at best, misguided, and, at worst, a mechanism of control that serves to "silence, coerce, and stigmatize others" (as cited in Gere, 2019, p. 2).

theoretical definition of *rhetorical reading* as "the active pursuit of finding elements within discourse that are worth adopting into one's own worldview" (p. 3), this model seeks to define the term more pragmatically, with a list of "complex" and "recursive" abilities and attitudes that students utilize to "critically understand and create meaning through connections" (Horning et al., 2017, p. 7).

Because this study is focused on the advanced (or, at least, post K-12) levels of reading, this model excludes foundational reading skills. The schema originally included multiple iterative skill levels— foundational, critical, and advanced. However, for this study, the assumption is that the students who are experiencing the SDA intervention are, on average, well beyond the foundational level of reading, which is marked by the ability to decode (e.g., matching phoneme with grapheme, having a strong oral base, the ability to match technical, connotative, and figurative phrases and make inferences) (Castle et al., 2018). Further, at a foundational level, students are presumed to comprehend and/or make meaning from those signs and symbols— at the word, sentence, and discursive level— and comprehend how those signs and symbols cohere (Horning et al., 2017, p. 10). At this presumed foundational level, readers have a cognitive schema through which to remember and make meanings that have been culturally agreed upon (Anderson, 2019, as cited in Alvermann et al., 2019); linguistic knowledge (Perfetti and Stafura, 2014); vocabulary; and the skill of "comprehension monitoring" to check their

inferences (Castle et al., 2018), including unpacking the implicit and explicit messages (Vasquez et al., 2010, p. 265). The model you see presented in this chapter begins at the *critical* and *advanced* levels of reading characteristic of college-level instruction.

The foundation that undergirds the concept of engaged critical reading that I am proposing honors the contributions of multiple disciplinary perspectives— positing a gestalt (Baker, 2010, p. 287; Tierney, 2009) or a branching pattern of common descent (as Alvermann et al., 2019, puts it). For Baker (2010), Alvermann et al. (2019) and for this study, those perspectives include behavioral, constructivist, cognitive, semiotic, sociocultural, sociocognitive, rhetorical, critical, and feminist (among many others that I cannot account for here) insights.

From that complex network of theories, I have identified three key components— *skills* (the intellectual competencies demonstrated); *behaviors* (Heath's term for talking about text and appreciating the qualities of language) and *dispositions* (as characterized by qualities that determine how the intellectual skills and behaviors will be used). The following attempt to classify the components (the skills, behaviors, and dispositions) of engaged critical reading are presented as separate and discrete, temporarily depicting them as static, with full awareness that these components are collectively recursive and far more complex and dynamic than any discrete categories can possibly account for.

Skills and Behaviors of Engaged Critical Reading

Skills refer to the intellectual capacities that readers bring to a reading event. These capacities are most often detailed in behaviorist and cognitive theories of literacy, as studied in multiple fields: education, cognitive science, rhetoric and composition/writing studies, literacy studies, literary studies, etc.... Meanwhile, *behaviors* is specified here as "literate behaviors," Shirley Brice Heath's term for the interactive talk about text and self-conscious focusing on language that is essential for readers as they work to access "stores of the mind" (1984). Heath's term *behaviors* is rooted in assertions that language skills are at the center of thinking, learning, and even cognition. The complexity of a student's language— in aesthetic and logical terms, according to Bourdieu and Passeron (2000)— sets up the "capacity to decipher and manipulate complex structures" (as cited in Sullivan et al., 2017, p. *xvi*) broadly.

For this study, engaged critical reading is ideally constituted by evidence of the following skills and behaviors:

- Ability to assess the contexts of meaning;
- Ability to apply knowledge to real-world situations to test validity;
- Ability to negotiate among multiple, competing claims to develop their own unified system of knowledge;
- Ability to engage the confusion and complexity of text; especially immersion in chaos and complex, "ill-structured" problems;

- Ability to engage with the pleasure of the aesthetics of language;

- Ability to read both *against* the grain and *with* the grain;

- Ability to describe their own metacognition; and,

- Ability to identify and evaluate rhetorical moves.

Descriptions of the Skills and Behaviors of ECR

The following eight characteristics comprise the skills and behaviors of this proposed engaged critical reading model.

Ability to Assess the Contexts of Meaning

Several theories, especially since the sociocultural turn in literacy studies, describe the importance of reading for context. For many scholars, all meaning made during a reading event is a product of "situated understandings" (Gee, 2010, p. 185), so readers at advanced levels must understand text-based meaning as context- and purpose-specific.

This context, according to critical literacy theories, includes the ability to assess the historical, political, and economic forces influencing meaning (critical literacies via Freire, 1970; see Baker et al., 2010, p. 17) to understand the frames being employed (Lakoff, 2008, as cited in Vasquez et al., 2010), as well as the positions of privilege from which we read/speak/act (Vasquez et al., 2010, p. 282). Good reading is never neutral (Adler-Kassner and Estrem, 2007), always "sponsored" (Brandt, 1990), leaving the reader with a big and active job to do: analyze and evaluate the ideals, values, and beliefs (Sprouse, 2018, p. 41)

associated with the context of the text as well as with themselves as they meet the text (Adler-Kassner and Estrem, 2007, p. 38).

From a multiliteracies (a term coined by the New London Group, 1996) perspective, reading is a product of understanding a different sort of modal context. The modes of representation (e.g., tactile, audio, visual, oral, etc...) function in conjunction with one another and represent varied means of knowing and learning the world. From this perspective, readers learn and know the world through a more expansive sense of what qualifies as text and the ways the modes interact to create meaning— all necessitating an advanced awareness of the contexts of meaning.

Ability to Apply Knowledge to Real-World Situations to Test Validity

Readers must develop and practice metalinguistic approaches to meaning-making. One such approach is "applying creatively" or taking knowledge and understanding gained from a text and testing it for validity against their own real-world situations (Kalantzis and Cope, 2005), essentially finding an anchor to the ideas presented in a text via their own life experiences (Roskelly, 2014). If, as Dewey insists, experience is our primary guide, no truth told within a text can become part of a belief system without some effort at applying those text-based claims to the reader's experience. While Perkins et al. (1993) classifies this sort of validity testing as a disposition, this model deems it a skill wherein the reader "anchor[s] ideas to experience and seek[s] connections to prior knowledge" (p. 7).

Any time the student brought in their own observations/experiences or ideas from another text or an understanding outside the text to bear on the meaning or to test the validity of the claims made within that text, this code was applied. Student examples of this code include:

I'm in the military and there's this program called the TSP program, added to our 401k program. The program is that you have however much of a percentage of your check to this retirement program and you get it when you're older, plus the interest built up for the past 40 years. However, I literally give 0% because I just don't trust someone with my money. I save my money in my bank account and spend it with the expenses I want. It just doesn't sit right with me someone saying they'll watch my money.

I have seen this topic around a lot lately with current election. A lot of people do not like either Trump or Biden and are considering not voting for either, and a majority of the responses from the left are "not voting for Biden is a vote for Trump."

Ability to Negotiate Among Multiple, Competing Claims to Develop their Own Unified System of Knowledge

Brent (1992) describes the task of a reader to relate text-based symbols to their own stores of knowledge— about language and about the world— in order to craft a coherent understanding (p. 49). Part of that repertoire (such as references to other texts, social and historical norms, or the culture around

the work is a response to yet another addition to an unending conversation (referring to Burke's parlor scenario, as cited in Brent, 1992, p. 28). Ultimately, the reader must reconcile their own unified system of knowledge in relationship with the text and meanings of a current reading event in order to determine what is worth believing and to what extent.

Piaget's (1976) theory of balancing accommodation and assimilation is a helpful way to understand how discourse shapes knowledge design via the negotiation of competing claims. Piaget's terms help untangle the tension between *assimilation,* or holding on to old knowledge while accepting new knowledge, termed *accommodation*, or the ability to modify what we know. Readers are persistently navigating the tension between accommodation (incorporating new knowledge into their repertoire) and assimilation (holding on to pre-existing knowledge) as they read, according to this definition of engaged critical reading (ECR).

If a student wrestled directly with opposing ideas within a single text or across texts, I called this *Negotiating Competing Claims.*

Ability to Engage the Confusion and Complexity of Text, Especially Immersion in Chaos and Complex, Ill-Structured Problems

Ira Shor characterizes one of the biggest problems we face in education and our culture more broadly is the misconception that "a good student answers questions but doesn't question answers" (Shor, 1992). For those 'good' students, knowledge can seem fixed. In opposition to the surface

learning that many scholars believe constitutes the majority of our current reading pedagogies (marked by students memorizing key words for short-term assessment rather than engaging the "big ideas"), Sullivan et al. (2017) posits deep reading as an ability (and a willingness) to embrace "intellectual uncertainty, chaos, and uncertainty inherent in "troublesome knowledge" (p. 143) around complex, ill-structured problems.

Wardle (2012) describes the issue this way: students must be able to engage problem-exploration, not answer-getting skills. In this way, reading should cultivate puzzlement (Wineburg, 2001, as cited in Lattimore, 2014) and for this sort of interrogation (or, puzzlement) to occur, students must read complex texts that are not neatly self-contained (Bartholomae and Petrosky, 1986, p. *iv*), but provide students the opportunity to engage in difficult, complicated ideas via text. Students need practice with naming, defining, and wrestling with ill-structured problems because that is the sort of thing that facilitates 'expert' problem solving (Geisler, 1994a).

Oftentimes, a student asked a question of the text, complicating a claim the author has made or acknowledging the chaos of intellectual confusion, or making judgments under uncertainty. Examples of students' annotations include:

Is being self-sufficient a civic duty?

The subtitle really caught my eye. The first thought that popped up in

my mind is how would you test if people are "uninformed"? What

would be the standard? Would it ever be completely unbiased?

Ability to Engage Talk-about-Text and the Pleasure of the Aesthetics of Language

Shirley Brice Heath is the reason for titling this category skills *and behaviors*, rather than relying on the term *skills* alone. Heath (1984) argues that literate behaviors are a necessary addition to the research on literacy (yet heretofore ignored in favor of studying literate skills alone). This culturally-bound phenomenon marks a key addition to concepts of literacy in that *behaviors* describe what it means to "become literate," not just deploy the skills of literacy. It is beyond the scope of this study to engage in the debate over shifting attitudes toward intellectualism and whether our desire to foster mainstream literate behaviors is (or is not) a problem, first, with the conceptualization of literacy rather than the behaviors of literacy. However, this study draws from Heath's extensive research into the value of literate behaviors among published authors as well as various communities of literate engagement, such as: strong metalinguistic awareness of language itself and a willingness to engage the uses of language as a topic of inquiry and examination. The behaviors include: carefully considering word choice, the aesthetics of expression, the origin of words, as well as considering how a command of sentence forms and genre conventions all effect meaning

within a text— all aspects of understanding the ways writers use language as an effective means of expression (Heath, 1984, p. 5). Further, according to Heath, self-conscious talking about text, interaction "around a text" (1984, p. 9) that focuses on the ways ideas are presented, is a key behavior of literate practice. Advanced literate behaviors, furthermore, are a product of readers who have the ability (and the motivation) to "focus on not only *what* pieces of writing mean but *how* they give meaning" (emphasis original, Heath, 1984, p. 12).

While Heath's research stays focused on literature (or, at least, on narrative) as the object of literate behaviors (in most cases), Harris (2003) echoes such a focus (particularly in the RCWS classroom) on behaviors. Harris (2003) helps articulate the behaviors of what this project has termed engaged critical reading for pedagogies that stay true to the examination and production of "how ideas get shaped in and refracted by language....a focus on use in context" (p. 582). This focus requires us to engage students in the behaviors of examining language use more closely, learning to gain more control of their own language consumption and production (Harris, 2003, p. 591) or else we run the risk of them continuing to be "the spectators of criticism" (p. 582).

According to Heath, it is these instances of talking-about-text that sponsor associative types of thought, or the interpretive skills of "reasoning

about the actions, assumptions" (1984, p. 15) that foster the intellectual complexity of developing ideas honored by the ECR model.

Heath's concept of behaviors are rounded out with a description of Pierre Bourdieu and Jean-Claude Passeron's claim that language is more than an instrument of communication. Rather, the structures and rich complexity of language and vocabulary provides practice with manipulating complex structures "whether logical or aesthetic" (as cited in Sullivan, Tinberg, and Blau, 2017, p. *xvi*). A focus on the complexities of language structures, then, is a key component to gaining complexity in a student's thinking. Further, while the field has largely set pleasure and aesthetics aside (Sprouse, 2018), it's not gone entirely undiscussed. For example, Rosenblatt's "aesthetic stance" privileges the power of indulging in the pleasures of reading well-styled text (as cited in Sullivan et al., 2017, p. 147).

In this study, when a student acknowledged the pleasure of a particular word choice or a unique turn of phrase. At times, they note the pleasure of a particular expression or the clever crafting of genre conventions. This "talk about text" clearly evidences a focus on *how* a text makes meaning. Student examples included:

I think the last paragraph is a great way to close the reading.

Cool phrase.

Ability to Read Against the Grain and With the Grain

Students must also have the ability to read both *against the grain* by critically interrogating and evaluating the perspectives and accompanying motives presented in text (Kalantzis, Cope, Cloonan, 2010, p. 74), and to read *with* the grain (Bartholomae and Petrosky, 2008; Elbow, 2008) by accepting conditions under which assertions presented in the text *may be* true.

In this study, annotations were coded this way when students echo the author in agreement or entertain the validity of the ideas presented in the text *or* directly disagree with the author/ideas expressed in the text by interrogating the motives, interests, and perspectives behind the ideas presented. Student examples include:

Plato's suggestion was spot on.

Sounds like a strong argument for an epistocracy.

Ability to Describe their Own Metacognition

The term *metacognition* was coined by psychologist John Flavell in the 1970s and describes how people "manage and guide their thinking processes— including both emotions and mental biases" (Beach, 2018, p. 4) in order to "control of mental processes...to be self-evaluative....to reflect on prior thinking" (Perkins et al., 1993, p. 8).[15]

Metacognition is key to much of learning. Yancey et al.'s (2014a) work with reflection as a form of assessment powerfully demonstrates the field's

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[15] Perkins et al. (1993), however, categorizes metacognition as a disposition rather than a skill.

commitment to teaching students to use the language of metacognition; this sentiment is applied specifically to reading by Carillo (2018) who names metacognition and reflection as a key component of her call for a mindful reading approach. Metacognition is listed in the standards of writing as a process (NCTE's "Principles for the Postsecondary Teaching of Writing") and the habits of college-ready writers (as described by the CWPA and NWP's "Framework for Success in Postsecondary Writing"). Consequently, in alignment with FYC best learning practices, metacognition is listed as one of the skills of ECR.

In this study, this code Included student notes about the ways they manage and guide their thinking, reading, and reading processes. Student examples include: (1) a student annotation that mentions talking to her boyfriend about a text to help make sense of the ideas, and (2) a student annotation that overtly describes their reading process, such as this: "I believe this is super important when it comes to reading. It's difficult to get really engaged in what you read when you are not enjoying yourself" (Reflective Log #7).

Ability to Identify/Evaluate an Author's Rhetorical Moves

While Heath's *behaviors* come close to accounting for the identification and evaluation of rhetorical moves, this category emerged as a separate component while coding students' annotations. The coding process— or the way that process illustrated students' behaviors around text— unearthed a

gap in this list of skills and behaviors. Students made overt efforts to call out

and, at times, to evaluate the author's rhetorical decisions. That move was

significant and not yet accounted for, even with Heath's description of literate

behaviors.

Students must be able to read like a writer, including the ability to

identify the author's rhetorical choices, consider alternatives to those choices,

and evaluate those choices (as cited in Sprouse, 2018, p. 41). Further, Haas and

Flower (1988) describe the value of readers reading rhetorically, constructing

an informed rhetorical context for what they read, as a significant means of

understanding that text (and its context). The popularity of assigning a

rhetorical analysis paper in both high school and in FYC has made students

highly aware of, and eager to speak to, the identification and evaluation of

author's rhetorical choices. Fostering this rhetorical awareness is often a key

component of FYC[16], especially in modeling how students might make

effective rhetorical decisions for themselves.

While this code is closely related to engaging the aesthetics of

language, it is not always rooted in pleasure. Rather, it's an acknowledgment

and, at times, an evaluation of rhetorical moves based on their

persuasiveness. Student examples include:

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[16] Roskelly is one such scholar who argues for this component, though there are so many (including nearly all RCWS textbooks) that citations seem futile here.

There has been a lot of misinformation online throughout the years, but it would have been nice if the author gave us an example of this from the mid-90s.

Using pollution as a metaphor for the spread of disinformation through our media feels poignant. It really paints a picture of how widespread this problem is.

Dispositions of Engaged Critical Reading

A student's skills and behaviors alone cannot fully account for the work being done as a reader; therefore, naming and defining those *other* more attitudinal and perhaps psychological features of engaged critical reading is a necessity. While many scholars have mentioned qualities akin to dispositions (such as Dewey's "good habits of mind," 1930, or Siegel's "critical spirit," 1988), dispositions of reading are often treated as more of an afterthought than a central component (Perkins et al., 1993). The model of engaged critical reading proposed here, however, presumes that a student's dispositions toward text and reading are essential.

The concept of *dispositions* refers to those individual, internal attitudinal qualities that determine how the intellectual skills and behaviors will be used (Driscoll and Wells, 2012, p. 5) in service of learning or guiding cognitive behavior (Perkins et al., 1993). Many RCWS educators know of these favorable dispositions (those that foster "good thinking," according to Perkins et al., 1993) as the eight habits of mind posed by a coalition of three major

professional bodies (NCTE, NWP, and WPA) that strongly influence RCWS

scholars and educators: persistence, metacognition, curiosity, openness,

engagement, creativity, responsibility, and flexibility (Council of Writing

Program, 2011).[17]

These eight habits of mind help name important dispositions of

reading, but the aggregate definition of *dispositions* presented in this model

draws from Motivation Theory (Deci and Ryan, 1985; Guthrie and Wigfield,

2000) and the Affective Turn (Ahmed, 2010) to craft a full*er* portrait of

dispositions as they pertain to engaged critical reading. The affective turn (a

term coined by Patricia Clough, 2007) in humanities and social sciences

accounts for the role of the body and its emotional dimensions in learning

and meaning-making, working from the premise that learning is an

inherently emotional activity (Anwaruddin, 2016; Carillo, 2018). While this

study can't fully account for the rich and complex experiences of the fully

embodied way that readers are positioned in relationship to texts, the

definition of *engaged critical reading* proposed in this chapter draws partly

from its attention to "the range of emotional... responses readers have to a

text" (Anwarrudin, 2016; Ahmed, 2010). This model assumes that emotional

responses are the starting point for intelligent behavior (Rosenblatt, 1983),

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[17] It's not entirely clear where each of the eight habits of mind were drawn from by these major organizations, but there is some overlap with Perkins et al.'s (1993) list of seven master dispositions: being broad and adventurous, sustaining intellectual curiosity, seeking to clarify understanding, being planful and strategic, being intellectually careful, seeking and evaluating reasons, and being metacognitive.

and the key ingredient to enable (and disable) change (Jacobs and Micciche, 2003, p. 2); therefore, emotional reactions are central to the reading experience (Carillo, 2015, p. 8-9). Likewise, motivation is also a critical component of engaged reading and is more fully articulated via three specific angles: self-efficacy (i.e., a belief in one's ability to read), intrinsic motivation (i.e., enjoyment of reading for the sake of reading), and valuing reading (i.e., a belief that reading is important, useful, and beneficial) (Guthrie and Klauda, 2015).

To be clear, despite the effort to compartmentalize all the components of ECR, this model resists a strict skills-dispositions divide. While the components of this model attempt to account and categorize the components of ECR as separate and discreet, for the sake of coding and observing patterns, the divide is far less discreet than this model implies. The skills, behaviors, *and* dispositions of the ECR model are co-determinate. With that caveat in mind, the collection of above theories on modern rhetoric, affect, and motivation account for the specific dispositional components attributed to engaged critical reading:

- Demonstrate a feeling of empowerment and responsibility for making meaning of a reading (i.e., an agentic approach to reading);
- Demonstrate a feeling of empathy, or a feeling *in* the other (often the 'other' is the author) and an awareness of affect/emotion when encountering text;

- Demonstrate a purposeful approach to any reading event;

- Demonstrate a motivation to do the strong, aggressive, labor-intensive work of reading for problem exploring or reading as a novice;

- Demonstrate a state of mind that approaches texts flexibly, from various stances, with a desire to experiment and play with new ideas; and,

- Demonstrate a favorable attitude and willingness toward praxis.

Descriptions of the Dispositions of ECR

The following is a description of each of the six characteristics that comprise the dispositions of engaged critical reading, including student sample annotations to show the application of these codes.

Demonstrate a Feeling of Empowerment and Responsibility for Making Meaning of a Reading

This specific dispositional component of ECR describes a feeling of empowerment and responsibility for making meaning of a text (Bartholomae and Petrosky, 2008), often described using the term *agency* (Carillo, 2018). While this study can't explore the full universe of research on agency as a rhetorical construct, the term refers to the active and empowered nature of reading, or the set of social relations that constitute action, one that all actors can take part in, not an inherent attribute of an individual (Herndl and Licona, 2007). This claim can bring with it some trepidation. After all, if agency is not located in the individual, why bother fostering such a thing in our RCWS

classes. However, the rebuttal to this claim can be found in Geisler's (2004) assertion that there is reason to ask students to "put their hands on the planchette" (in the fashion of her Ouija metaphor), in that regardless of their control over a rhetorical situation, they still need a foundation in ethical thinking, they still need to do the legwork for preparing for the performance of rhetoric, and that the alternative is unthinkable (i.e., pretending rhetoric isn't real and/or simply walking away from the challenge). While Geisler is specifically speaking to writing as agentic, the same can reasonably be applied to reading. As readers, agency means that they must be willing to participate in the "conversation of mankind" (Bruffee, 1986), willing to add to, not just witness that rhetorical exchange, and experience a sense of responsibility to be informed about the issues (Vasquez et al., 2010, p. 266). Thus, this component of ECR privileges the goal of students acknowledging and embracing their role as knowledge makers in reading— one of our most challenging tasks in higher education (Harrington and Wheeler, 2020), especially as applied to reading.

For this code to be applied, students must have shown a willingness to engage in the "conversation of mankind" by taking on the responsibility of meaning-making for themselves rather than being passive recipients of others' knowledge.[18]

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[18] I have no example of this component of ECR because it proved a challenge to identify specific instances of demonstrating empowerment.

Demonstrate a Feeling of Empathy and/or Affect

A growing body of research accounts for the way emotions play a significant role in meaning-making and choice-making. The growing momentum for collapsing the rational-emotional dichotomy in reasoning renders reason and emotion as "mutually dependent and mutually constructive" (Crowley, 2006, p. 48), "complementary rather than antagonistic processes" (Storbeck and Clare, 2007, as cited in Carillo, 2018, p. 40) and provides a strong basis for honoring the emotional experience of reading. When it comes to reading, the reader must be affected by the text and appreciate the value of emotional responses; not only must they be affected, but they must have an awareness of affect/emotion of self when encountering text (Brent, 1992; Rosenblatt, 1983). While the range of emotional responses varies, one response that is key is that of pleasure and joy (Sullivan et al., 2017). Emotional reactions are tricky and a perpetual sticking point. Indeed, students can't be overrun by emotional judgments, but also cannot expel emotional reactions. They need, according to Brent (1992), what Booth advocates for: the "fact-value split" by learning to factor in their emotional reactions without being controlled by them (Brent, 1992, p. 116).

This category also includes empathy. Empathy is closely related to emotion, but warrants a bit more nuance. Empathy is "an affective state, caused by sharing of the emotions or sensory states of another person" (Hein

and Singer, as cited in Carillo, 2018, p. 38). It is through empathy that a reader experiences the connection with the author through the text, a sense of an on-going conversation worth having, fostered by acts of observing and/or imagining another's emotions (Carillo, 2018, p. 38). To distinguish empathy from sympathy, Carillo (2018) explains that feeling *for* marks sympathy as an emotion that recognizes a divide between sympathizer and object of sympathy. Empathy, however, is marked by feeling *in* or having an emotion similar to the one expressed in the text. Much has been done to study the empathetic response of readers of fiction, but this model proposes that empathy isn't solely reserved for fictional texts and must be included in a model of ECR.

Among RCWS scholars, empathy is a strong object of study— one often deemed critical to teaching thoughtful civic discursive habits. Guttman and Thompson argue that people disagree because they cannot grasp the suffering of others and, by that logic, disagreement could more readily be resolved if citizens "become able to understand the circumstances of one another's lives and/or achieve empathy with one another" (as cited in Crowley, 2006, p. 43). In that way, scholarship around empathy (Alexander et al., 2020; Carillo, 2018; Micciche, 2007) help forward pedagogies of social justice via discursive habits. This study borrows directly from Mirra (2018) who describes a form of empathy that is key to developing civic participation:

critical civic empathy.[19] According to Mirra, empathy is the foundation for a successful democracy— something far more critical than simply being nice or following the Golden rule (historically the focus of K-12 curricula). Even President Biden has weighed in on the topic, declaring empathy the "fuel of democracy" in his Memorial Day address (2021).

Beyond what rhetoricians say about empathy, the concept is firmly rooted in research among cognitive and social psychologists. According to Hodges and Meyers (2007), *empathy* is the broad term used to describe the range of responses that one has to another's individual experience (as cited in Pfattheicher et al., 2020, p. 2) and it comes in multiple forms yielding a variety of benefits: cognitive empathy (i.e., taking the perspective of others) has been linked to reductions of intergroup conflicts and prejudice, whereas affective empathy (i.e., a concern for and an understanding of vulnerable others) has been shown to promote altruism and caring (Batson et al., 1997; Sassenrath et al., 2016; Todd and Burgmer, 2013). This sort of caring is "the first sign of civilization," according to Margaret Mead and a healthy motivational factor in engaging in social behaviors (cited in Pfattheicher et al., 2020, p. 2).

Student examples of annotations that demonstrate affect (which happens when students show that they are affected by the text) and

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[19] Critical empathy is a term that informs the notion of critical civic empathy. Critical empathy is "the process of establishing informed and affective connections with other human beings, of thinking and feeling with them at some emotionally, intellectually, and socially significant level, while always remembering that such connections are complicated by sociohistorical forces that hinder the equitable, just relationships that we presumably seek" (DeStigter, 1999, p. 240).

empathy (an affective state, marked by sharing emotions with another person), include the following:

I love this.

I found this shocking as well.

The fact that so many Americans would be unable to pass the citizenship test is unsettling to me.

Demonstrate the Motivation to do Labor-Intensive Work

Motivation Theory plays a significant role in the dispositions of engaged critical reading. Reading motivation, or an individual's "personal goals, values, and beliefs with regard to the topics, processes, and outcomes of reading" (p. 45) has been repeatedly identified as a key predictor of reading literacy (Guthrie and Wigfield, 2000), accounting for significant variance among comprehension (Guthrie and Klauda, 2015). As such, the International Reading Association's position statement lists "the development and maintenance of a motivation to read" as one of the key prerequisites for deriving meaning from print (International Reading Association, 2000). This dispositional component of ECR refers to the intrinsic and extrinsic motivation or the personal interest (if not enjoyment or excitement) an individual experiences (Deci and Ryan, 1985).

Wardle (2012) and Keller (2014) describe the problem with students' motivations to read this way: students often have an answer-getting disposition— marked by seeking the *right* answers, a form of surface learning

that is "averse to open consideration of multiple possibilities" (as cited in Sullivan et al., 2017, p. 150; Keller, 2014). Keller (2014) finds that many college students read in "tactical ways" (pg. 130), expending the least amount of energy and time to find the most easily satisfying answer in their reading. Students have been taught to deploy "fast, shallow, and testable" habits of reading in order to satisfy the worksheet and test-based culture they've come to know (Keller, 2014). By contrast, a problem-exploring disposition is marked by "curiosity, reflection, consideration of multiple possibilities" and a willingness toward multiplicity, where "multiple possibilities" are considered through "recursive trial and error" (as cited in Sullivan et al., 2017, p. 150). Such a disposition implies a willingness to do this labor-intensive work; some refer to it as a persistent effort to wrestle with text (Elbow, 1998) or read like a novice Sommers and Salz (2004)— with an eager awareness to understand, to grow, and to develop a coherent belief system. This eagerness to grow means that readers must embrace "intelligent confusion" and uncertainty inherent in complex problems (Sullivan et al., 2017); to do the aggressive, labor-intensive work of reading (Guthrie and Wigfield's Reading Engagement Theory, 2000; Nystrand, 2003; Park, 1982; Alexander and Fox, 2004); to be motivated for problem exploring (Geisler, 1994b; Sullivan, Tinberg, and Blau, 2017; Wardle, 2012a); or, adopt an attitude of tentativeness (Roskelly, 2014) in order to make sense of the incompleteness that comes with reading challenging texts (Bartholomae and Petrosky, 2008). Readers must be willing

to take intellectual risks (Harrington and Wheeler, 2020) with a problem-approaching disposition (Wardle, 2012b).

The motivation that this ECR component refers to, though, can't be simply housed in grade-seeking or satisfying some momentary external requirement (e.g., a discussion post or finding the 'right' answers for a test or being prepared to write a paper). Rather, the motivation proposed here is more personally driven, more based in understanding/solving some problem that the student can relate to. This form of problem exploring is marked by "curiosity, reflection, consideration of multiple possibilities, a willingness to engage in recursive process of trial and error, and toward a recognition that more than one solution can 'work'" (Wardle, as cited in Sullivan, Tinberg, and Blau, 2017, p. *xvi*).

As applied in this study, sometimes I saw a student working to summarize concepts in their own words or tie concepts from a reading to a class theme, as exemplified when one student connected Wolf's title of "social good" to the course theme of "civic participation" (Reading Event #1).

Demonstrate a Purposeful Approach to any Reading Event

This disposition is rhetorical at heart. Novice reading habits often depict a transactional approach (Slack et al., 2004) to the text (Nilson, 2015)— where the reader feels compelled to merely soak in the details of the text. The transaction involves absorbing information rather than fully engaging in discursive exchanges with particular goals in mind. To remedy this tendency,

Carillo's *mindful reading* is, in part, about having a distinct and personal purpose for reading (useful or important to their own work) (Carillo, 2015; Langer, 1989; 2000) to avoid these novice habits of viewing the text as a conduit meant to simply exchange information. Further, Perkins et al. (1993) calls this disposition being "planful and strategic" and describes the actions of such a disposition as formulating goals and making and executing plans.

As applied, this code marked annotations where a student named their purpose for reading. Examples include:

The first part of the text, I paid extra close attention to the participants and procedure portion. I wanted to understand who participated in the study and where these studies were done.

As a sociology major, I have spent much of my class time focused on the facets of society that are discriminated against and suffer unequal treatment. So as I was reading about this proposed epistocracy, I kept thinking about how it would affect the people who already have so little power.

Demonstrate Flexibility of Mind

Another key disposition of reading is to keep a state of mind that "flexibly approaches texts from various stances" (as cited in Hartman, 2001, p. 138; Langer, 1989; 2000) with a willingness to be persuaded (Crosswhite, 1996). This means that readers need to develop a personal epistemology that allows for context, relativity, "malleable constructions of knowledge," moving away

from a less mature, fixed belief system (Baxter-Magolda, 2004; Porter, 2018).

Perkins et al. (1993) refers to this disposition as adopting a "broad and

adventurous" attitude, including a willingness to identify assumptions,

examine alternative points of view, generating and reviewing multiple

options, and having the "desire to tinker with boundaries and play with new

ideas" (p. 7).

To apply this code, I looked for evidence of malleable constructions of

meaning, noticing and entertaining new ideas, changing your mind, or

demonstrating willingness to update belief system. For example, when

students claimed they've never even considered *x,* that's having a flexible

mindset. Even when students noted how reading a particular text reinforced

the belief they had, I called this "flexibility of mind" because they allowed for a

change in their belief system. Or, when students said "I never thought of it

this way" or something to that effect, I considered this to be an example of a

flexible mindset, as approached to a fixed mindset. Examples of this code, as

applied to student annotations, include the following:

> I see both points here, I don't want to read something that is so
>
> confusing that I won't be able to make any sense of it, but by text
>
> challenging me, I am forced to stay on my toes and read alertly.
>
> You gave me a new perspective with your comment, and even made
>
> me think about the corrupt systems.

Demonstrate a Favorable Attitude and Willingness Toward Praxis

The last item in this list of dispositions is particularly important to this study. A willingness toward praxis is a disposition that this study is directly interested in understanding, especially the relationship between reading and civic participation. Praxis is a process where theory and skill are enacted, practiced, embodied, realized as essential components of knowledge production (Zeller-Berkman, 2014). a reader's favorable attitude and willingness toward praxis is tied to advanced processes of reading among several scholars (Carillo, 2018; Vasquez et al., 2010; Yancey et al., 2014a; Zeller-Berkman, 2014).

Both literacy studies and RCWS scholars call for a reader's favorable attitude and willingness toward praxis as it is tied to advanced processes of reading (Carillo, 2018; Zeller-Berkman, 2014; Vasquez et al., 2010; Yancey et al., 2014a). For example, Yancey calls for citizen writers to use their skills (for her, skills in writing) toward action (as cited in Wan, 2014, p. 20). As a reader, one must have the desire to use what they've learned to make an intervention in the world that is innovative and creative, that incorporates the learner's interests, experiences, and aspirations (Kalantzis, Cope, and Cloonan, 2010, p 74). Reading for praxis encourages an ability to *do*, not just understand or say, exhibiting a willingness to take action (Vasquez et al., 2010, p. 266).

There are many forms of praxis-based learning and praxis-oriented reading habits, but this study narrows in on praxis as it pertains to acts of civic

participation. This particular kind of call to praxis-based pedagogies is not new; Beach (2018), in fact, calls for such a focus in his proposed reform to literacy instruction in higher education, insisting that "21st-century literacy needs to enable human beings to not only *know better*, but also *know how* to use their knowledge more effectively in order to make reasoned judgments, communicate rational arguments, and take deliberate action" (p. 24). This new call for wisdom set into motion ties agentic reading to the key actions necessary to resistance against troubling discursive patterns (Carillo, 2018).

In application, students often noted something they'd like to do or would like others to do as a result of what they've read. At times, they ask what to do next. Other examples of this code, as applied to student annotations, include:

> After reading Wolf's intro, asked "we can be active in the future, but what can we do right now to help?"
>
> I feel like now that I understand the way things work, I can be more politically involved.
>
> This is my first year voting and I'm making sure my voice is heard.
>
> In this way, this feature of ECR speaks to the importance of helping

students use information and ideas from the texts they encounter in thoughtful, discursive exchanges.

Notes on the ECR model

This study is most certainly not the first to find a way to reconcile these disparate components of reading. Scholars have worked to collect specific components that make up a complex reading event many times over, coming to varied conclusions and using a variety of terms, but the above lists constitute *this* study's proposed collection of skills, behaviors, and dispositions that constitute engaged critical reading after reviewing a large body of work across myriad disciplines.

It is the layered effect of multiple components of this model that often make up engaged critical reading. The sophistication of reading at this level is a product of reading simultaneously on several levels, building "multi-faceted representations" (Haas and Flower, 1988, p. 170). In that way, it's not just the collection of components that constitutes advanced reading; rather, it's a collection of a variety of these components— depending on task, purpose, and context (Haas and Flower, 1988).

It's important to end this conversation (for now) by acknowledging that these collective attributes of reading are idealized. It would be unreasonable for any educator to imagine mastery of engaged critical reading over a lifetime, much less a 16-week semester. The 'expert reader' implied by this collective list of attributes simply doesn't exist. Engaged critical reading is an intention, not a place one finally arrives. Rather, what I'm calling engaged critical reading is a lifelong process. I cannot expect my students to exhibit all

the qualities of advanced reading in all contexts, at all times, exhibiting mastery with all the above noted attributes. Instead, I want my students to be open to the intention, the journey of learning and practicing these attributes over a lifetime.

What is Missing in the ECR Model

Much has been excluded from this model in service of limiting the scope of this study. Originally, the ECR model included a column for "Experience of ECR" to honor the importance of having access to rich, complex texts, and experience with the practices of reading at each appropriate stage of development. For example, to be successful, readers must enjoy a safe environment, have repeated access to developmentally-appropriate texts with a variety of tasks (Castle et al., 2018), and prior practice adapting to a variety of reading tasks (Castle et al., 2018), genres, styles, and degrees of difficulty (Henry, 2009). Further, readers must have some prior knowledge to bring to the text (akin to Piaget's concept of assimilation) in order to place meaning in some form of context (Freire and Shor, 1987) as well as extended prior experience with practicing metacognition (Sullivan et al., 2017) and a reasonable control and confidence with tools of reading that they bring with them from those prior experiences. Heath (1984), in fact, underscores the importance of both repeated experience and favorable environment in learning to become literate and Rosenblatt's inspiring model of a reader, especially of literature, reminds us of the importance of

experience, too. She says that the reader is like a musician, but the instrument they play upon is himself, drawing from his "present concerns, anxieties, and aspiration," a "recasting of experiences" (p. 304-305) to bring an "active evocation" to the text. In fact, "without sufficient experience, [the reader] can evoke nothing from the page" (Rosenblatt, 1960, p. 305). However, studying those experiences (prior to the intervention) and environments through which literate behaviors were fostered/encouraged is beyond the scope of what can be accounted for (with any great detail) within this study.

This model leaves out many of the presumed skills that students bring with them into a college classroom, as well. There are many presumed strategies that students bring with them into the college classroom. As Haas and Flower (1988) detail, students can often identify topic sentences and other parts of a text, as well as paraphrase parts, but that leaves a lot of analytical and critical room for advanced reading. Those presumed levels of comprehension are not detailed in this definition of engaged critical reading for the sake of isolating those qualities that are more advanced.

Beyond experiences and presumed skills of reading practiced before college, there are important elements *not* covered by this ECR model. For example, "a richly stocked repertoire of schemata" (Brent, 1992, p. 106) is of great value to any reading act. This idea, borrowed directly from Iser, speaks to the way the reader builds meaning in response to the "familiar territory" within a text (e.g., the familiar genre, social norms, references to other texts,

etc…). Yet, that repertoire necessarily exists beyond the scope of this research project because it's composed of experiences that I cannot account for, cannot know, and an element where I cannot affect change. This study is interested in the repertoires of reading that students gain from engaging in the "textual economy" of producing and consuming texts in pursuit of particular answers (Brent, 1992, p. 107), but not in the repertoire that students bring to the reading events of this course.

This model also under-theorizes the value of the medium used for reading and the value of analyzing how the medium shapes the message. For example, Microsoft Word's corrections and suggestions value "certainty and conviction over openness and humility" (Sullivan, 2014, as cited in Carillo, 2018, p. 114), shifting the experience of the text for all who encounter it. That sort of shaping of the message is important, but beyond the scope of this study.

This study intentionally does not look at reading solely or even primarily for the sake of writing. Deborah Brandt, in T*he Rise of Writing: Redefining Mass Literacy* claims that writing has displaced reading as the primary form of daily literacy experience for many people in the United States. She contends that while English teachers and scholars often "think of reading and writing as mutually supportive and interrelated processes," they too often ignore significant differences in their sponsorship histories (Brandt, 2014, p. 4). This study contends that the line of demarcation between reading and writing, especially as both are situated in the circulation of discourse, are less

clearly defined. That connection is an important thread of research, but it's not the target in this study.

Another noticeable omission to this ECR model are skills of digital literacy included in the Digital Citizenship Curriculum (developed by Common Sense nonprofit, 2019) which includes literacies around serious contemporary issues including "cyberbullying, online privacy, hate speech, news literacy, and more" (as cited in Carillo and Horning, 2021, p. 10). I'd add to that list, reading specifically in multimodal ways, such as reading big data, graphics, memes, and infographics that are circulated far and wide in contemporary media environments.

In some ways, the incomplete record of these skills, behaviors, and dispositions is unavoidable and can be attributed to the "invisible" nature of reading (Scholes, 2002, p. 166); in other ways, the incomplete record is due to the research methods applied to college-level reading (i.e., often involving a single purview rather than accounting for the wide network of cognitive, embodied, social, cultural, and behavioral elements of reading). This study can't hope to resolve such a tangled concept, but can commit to collecting important details for a fuller purview of readership.

Conclusion

With the components of the engaged critical reading model firmly established, I turn to an in-depth description of my methodologies for

designing the intervention and methods of data collection in the next two

chapters.

CHAPTER 4

PLANNING A DESIGN-BASED RESEARCH STUDY: DESIGNING A

PEDAGOGICAL INTERVENTION

This chapter addresses the methodology used to intervene in the problems of reading and reading pedagogies in the FYC classroom. To help find a systematic and rigorous approach to this study, I narrowed in on a methodology marked by innovative, flexible, student-centered pedagogical design and analysis— design-based research (DBR). In this chapter, I detail the methodological tenets particular to this study to illustrate *how* the examination of social, digital annotation (SDA) was set into motion (i.e., the design of the intervention). Specifically, the design components of the intervention include a detailed description of the contexts of the study, including student participant demographics, and the design of the intervention, as well as the theoretical commitments and pedagogical goals that guide the intervention— all to support students' engaged critical reading.

DBR is most commonly used in the field of Education, and while the tenets of this methodology align well with my own field (RCWS), I find it necessary to modify in strategic ways, as discussed in this chapter.

Design-Based Research Methodology

This study deployed a methodology not yet widely adopted by (but well-suited to) the field of rhetoric and composition/writing studies (RCWS)—

design-based research (DBR). DBR is a systematic and flexible methodology, designed to mimic the intersection between theory and practice common to engineering, often applied to educational settings where honoring the context and the variables are paramount. While many scholars have used the term *formative experiment* to describe the approach used in this study, particularly in researchers' efforts to understand literacy, I opt for the term *design-based* because it is the preferred term (Reinking and Bradley, 2008, p. 15) to describe studies dedicated to the *design* and *re-design* of the intervention in order to advance theoretical knowledge (Barab and Squire, 2004, p. 6) while honoring the local and transcontextual application of the findings.

Despite the lack of attention to this methodology among RCWS scholars, the tenets of DBR align with the field's philosophical relationships with pragmatism (i.e., classroom-based research, excellence in teaching) as well as flexible, inclusive, rigorous research paradigms to: "...bring about change in educational environments through creative, innovative instructional interventions grounded in theory and guided by systematic data collection and analysis" (Reinking and Bradley, 2008, p. 6). In this way, DBR aligns well with the teaching and research values of RCWS.

The *design* of this design-based research is key. Researchers who practice DBR formalize a process of experimental, classroom-based inquiry already common among RCWS teacher-scholars: they design a pedagogical

intervention, constructed from theoretical foundations, to examine how such an intervention might help students (and other practitioners) move beyond a specific, yet unsolved, pedagogical problem. DBR researchers then rigorously examine the outcomes of that intervention, in pursuit of achieving that pedagogical goal. This sort of structured study of students, teaching, and learning environments relies on thick description of the contexts (social, academic, etc...) that fostered and/or inhibited the pedagogical goal(s) and scheduled cycles of iterative reflection and analysis on the design itself, privileging a method of study that is flexible enough to change the design of the intervention as it's being deployed. The DBR approach further situates findings within the complicated contexts and conditions for achieving that goal rather than pretending that the study can yield a simple answer: that an intervention either does or doesn't work (Bradley et al., 2012). Much like the research approaches common to RCWS scholarship, DBR formalizes the ethical fulcrum of the study as student learning and well-being (as opposed to, for example, the pretense of a static, variable-free research environment).

This study takes the tenets of DBR— namely then tenets of DBR to advance theoretical knowledge (Barab and Squire, 2004) by engineering interventions in educational settings (Bakker, 2018; Cobb et al., 2003) to address complicated issues of literacy (Fowler-Amato and Warrington, 2017; Reinking, 2011)— but recontextualizes its principles to best suit RCWS and its unique dynamic between local FYC classrooms and their more global FYC

university-level programs. Though this is atypical to most DBR studies, I am not solely a researcher working with a cohort of teachers, asking them to enact the intervention and collecting data from *their* classrooms to gauge the outcomes of that intervention, as is most typical among DBR research design. Rather, I am the researcher *and* the teacher, maximizing on the myriad roles I play. Researchers within RCWS, as the commonly used term *teacher-scholar* implies, often play multiple roles and functions across varied, though related, contexts— those who are simultaneously teachers, writing program administrators, researchers, and active members of multiple professional organizations. As a product of playing so many roles, any research is put into use in myriad contexts— with an eye toward how the work we do furthers students' skills and confidence with literate acts across all FYC contexts. As many in the field do, I am accustomed to playing several concurrent roles that affect students and faculty and colleagues in the field. Playing so many concurrent roles impacts the inherent simultaneous applications of any scholarly work I do. Specifically, my role as an FYC teacher and my work as a scholar impacts the network of thousands of FYC teachers and scholars across the world. DBR scholars use formalized processes to prove how a *local* intervention informs more *global* circumstances, yet this study begins with the assumption that studying literate acts, such as reading, at a local site is inherently part of a larger transcontextual network that is immediately applicable to the global community of FYC teacher-scholars.

This claim is not mine alone. To Brandt and Clinton's (2002), local literate practices inevitably and inherently inform global literacies and vice versa (Brandt and Clinton, 2002). Their challenge is to return to the dismissed sense of global literate features, if only enough to better understand how literacy is indeed informed by local contexts and by global contexts simultaneously. Further, the transcontextual nature of research, according to Serviss and Jamieson (2018), asserts that local-site-based studies (like this one) can be designed in such a way as to invite transcontextual application. The push and pull of the local-global relationship remains central to this design-based research study.

In fact, it is the flexibility and the formalized iterative and experimental approach to designing pedagogical interventions that gives RCWS scholars a new methodological approach to speak more confidently to potential transcontextual applications of any research design. From this perspective, the intervention designed in this study is rooted in a local, authentic context, but still speaks meaningfully to the larger global context simultaneously. That may, in fact, be the only way we can honor the local nature of literate acts and the larger network of FYC teacher-scholars who engage those acts. These values align beautifully with those already set into motion by educational scholars who use DBR; in fact, in these ways, DBR is the ideal methodological approach to study SDA to foster engaged critical reading in the first-year composition classroom.

As researcher *and* practitioner of this study, my positionality is particularly prominent. The goal is to be transparent, not to pretend that who and how I am in this world can be set aside for the sake of objectivity. It can't. I am a cisgendered woman, who easily presents as heterosexual, white, and middle class. These qualities limit my purview in obvious and unavoidable ways; however, some other personal qualities are less visible, sometimes intentionally so. I am a political liberal who is deeply committed to constructive dialogue across and within differences of opinion. For me, this passion to pursue reading (and the receptive contexts of rhetoric, more generally) is born from a complicated experience with deeply-entrenched psychological and discursive lessons learned early in my life: to be a woman is to remain mostly silent, to keep your opinion hidden, to conform, and to value tradition and sameness above all else. My goals to the contrary aren't about correcting specific instances of misinformation exactly (though that's part of it), but rather setting into motion a value of reading as rhetorical invention and the lifelong pursuit to expand/challenge our beliefs through engaging with *othered* ideas.

Despite the adaptations of DBR to a new, though similar, disciplinary perspective through my own inescapably narrow lens, I remain committed to the five key defining characteristics that serve the goals of this methodology (and this study) best: choosing an authentic context for study, identifying the problem, designing the intervention, based on clear theoretical

commitments of that intervention, and staying focused on a specific goal (Reinking and Bradley, 2008). The remainder of this chapter is organized around thick descriptions of these five methodological goals.

Authentic Contexts: University, First-Year Composition (FYC), and Online

First, this section provides contextual transparency, including the place and the participants that were a part of the intervention. Data particular to the relevant contexts in this study are presented here.

With a rich, though tenuous, history in the academy, first-year composition (FYC) has evolved into the writing-based course it is today— one that is distinguishable from a literature course or a communications course along disciplinary lines (i.e., FYC courses typically read argumentative texts rather than literary texts and don't make speech writing or speech delivery a priority). While uniformity isn't the primary goal, FYC is most often enacted with a relatively stable set of outcomes (sponsored by the WPA, 2014). I am studying my own online composition classrooms, as part of a long RCWS tradition, in order to draw conclusions that speak to issues of FYC broadly.

The University

This intervention took place at my home institution. This institution is a mid-to-large public research, urban institute founded in 1912 that prides itself on "leadership in high-quality education and professional training, public service, advancing research and knowledge, and state-of-the-art health care" ("About"). This HSI-serving university is composed of 13 schools and colleges

and offers over 140 undergraduate and graduate programs. Of the latest admitted class of first-year students, 52% were students of color and 54% identified as female. Current enrollment is at roughly 24,910 total students, with an acceptance rate of roughly 67%, according to *US News*. At this university, the student-faculty ratio is 17:1, 36.7% of its classes have fewer than 20 students, and the average freshman retention rate is 70%. Finally, the middle 50% of admitted freshmen have between a 3.23 and 3.93 GPA and scored between a 1070 and 1260 on the SAT, 21-27 on the ACT ("About").

Like most universities of similar stature, retention rates are a challenge. See Table 2 for the latest retention rates for freshmen returning for a 2nd fall term (2019-2020), as published by the university, in reference to the specific campus (of four total campuses) where this study was done.

Table 2 *Retention Rates, Varying Demographics*

All	73%
Resident	74%
Non-Resident	64%
Non-Minority	71%
Minority	74%
First Generation	71%

Data retrieved from https://www.cu.edu/cu-data

The FYC Course

Like most public universities, FYC is housed in the English department and makes up a part of the core curriculum that aligns with national trends in FYC. Nationally, FYC is a massive enterprise. It is estimated that in 1994-95, over four million students were enrolled in over 160,000 sections of freshmen composition, and the faculty that teach these courses number more than the colleges of engineering and business combined across America (Crowley, 1998). The course that is the focus of this study is English 2030: Core Composition II. Typifying national models of FYC (i.e., with a shared set of outcomes, principles, and research-based classroom practices), this course is the second in a two-part series of core composition— deemed core by the university, and therefore, required for all students, no matter their major. The focus of this course is conducting academic research and negotiating the rhetorical components within a variety of circumstances for writing. The official catalog course description is as follows:

> English 2030 is a core writing course designed to prepare you for future persuasive writing and the research processes that inform that writing. During the semester you will use invention strategies, researching, drafting, rhetorical theories, documentation, and collaborative learning to produce well-written, appropriately documented text. You will also learn to practice critical thinking, reading and writing necessary for

your other college courses and for your thoughtful participation in the

world beyond school. Prereq: ENGL 1020

Further, the six outcomes for this course align with those suggested by the

Writing Program Association for FYC courses: Rhetorical Knowledge and

Purposeful Writing, Revision and the Writing Process, Argument and

Analysis, Critical Reading, Research, and Technology and Multimodality (WPA,

2014).

In the Fall 2020, I taught three sections of English 2030 which served as

the site of the intervention. These three sections of ENGL 2030 were delivered

asynchronously online, using the Canvas LMS. Each section had 21 students to

begin the semester, but 58 of those students were enrolled by the end of the

fall 2020 semester (due to attrition). Please see Appendices A and B for full

description of the course outcomes, course schedule, major project

descriptions, and the full student digital reflective log prompts. In the second

macrocycle (Spring 2021), three new sections of the same course (ENGL 2030)

served as the context for this intervention. In most ways, these three sections

resembled the first, though the social conditions were altered slightly. The

university was still under COVID protocols and so student choice was limited,

but by the Spring 2021 semester, more students understood and chose their

preferred delivery format after having experienced the sudden 2020 shifts.

The chaos of COVID protocols had become both more settled, more routine,

and more tedious. Further, changes in intervention design were made in

macrocycle 2 as a result of multiple iterative microcycle reflections (discussed at the end of this chapter).

The dominant pedagogical tenets for this FYC course are based on a collection of key principles in the field: I teach the rhetorical nature of writing, placing rhetorical negotiation as the central outcome of the course. Another anchoring principle is Beaufort's (2016) description of "high-road transfer" of rhetorical knowledge from the classroom to myriad writing situations well beyond academia in order to "awaken curiosity," motivate and engage students in the "intellectual touchstones" that ground the semester-long learning. Further, this course is designed around metacognition related to "deep structures" (Beaufort, 2016) or key concepts applied, by the student, to extant circumstances where students take part in a series of opportunities to discover and apply those deep structures.

Course Assignments

The major projects that help organize and assess the material presented in this course are not unusual in a 2nd-semester FYC course like this one where performing academic research becomes a prominent outcome. In a series of three major projects, students in this course choose a research topic, pose inquiry questions, compile research related to that topic, do an analysis of a specific text around that topic, and apply that learning by constructing a response to a real-world rhetorical situation in a way that

seeks the alignment of the common rhetorical constituents— exigence, audience, rhetor, and medium (Bitzer, 1968).

Each assignment (for full major project assignment prompts, see Appendix A) is introduced with a text-based assignment sheet, along with images (usually samples of past submissions) and oral explication (i.e., a video) of the assignment goals. See Appendix A for a description of the three major projects that made up the context of the course that was adapted to better serve students' engaged critical reading habits.

Online FYC Environment

Online learning environments are newly emerging as a space of inquiry. In fact, in just the last several years, roughly 200 new chapters and journal articles on online writing instruction (OWI) alone were published (Harris et al., 2017). Likewise, my home institution and department has an emerging interest in studying and improving the learning experience in online spaces amid growing concern that equity gaps are expanding and rates of success are disproportionately low within online learning spaces. In 2020, 33% of all the English courses in my home department were offered online. Despite growing demand among students for courses offered entirely online, our DFW rate (referring to the number of students who do not successfully meet core competency standards) reflects a growing concern. Between 2015-2020, our DFW rate for first-year composition (FYC) online courses was 35.4% in the first FYC course in the two-part sequence (compared to 15.4% in on-campus

courses) and 28% in the second FYC course (compared to 11.9% in on-campus courses).[20] We can make any number of inferences based on these numbers, but the one that is most pertinent here is that students are struggling to pass much more so in our online FYC courses. Despite the struggle, the number of students enrolled in online learning spaces is rising rapidly. For details, see Figure 2 for online enrollment growth at this institution since 2013.

Figure 2 *Online Enrollment Figures, 2013-2020*
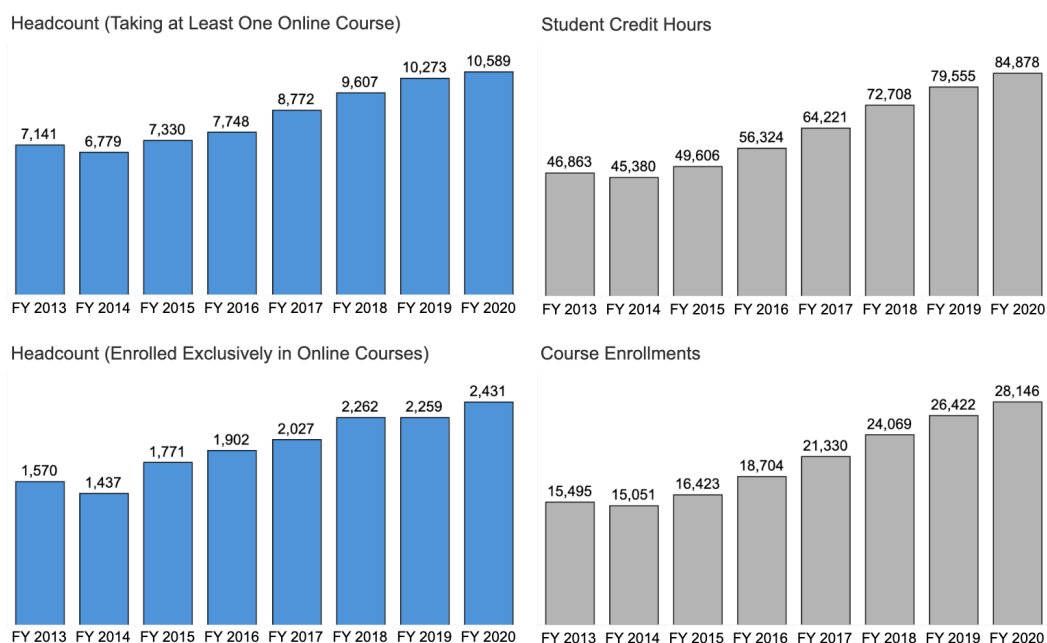
Caption: data retrieved from https://www.cu.edu/online-enrollment

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[20] As Assistant Director of Composition, I have a hand in collecting this data each year. It is not published anywhere else.

We aren't alone in this concern for the quality of online learning. Online learning is now a mainstay of mainstream education and this space is new enough that it warrants increased research attention. Further, the COVID-19 safety protocols that moved nearly all education into online and remote online learning environments has only hastened that call to action. While these safety protocols will, sometime in the future, have less control in determining our learning environments, I suspect the desire to build upon what we've learned about remote, hybrid, synchronous, and asynchronous learning spaces will endure.

My effort to provide quality online writing instruction— in this and any context— is informed by both scholarship and several years of experience. Consequently, the design of this intervention aligns with the College Composition and Communication Online Writing Instruction (CCCC OWI) principles, wherein researchers encourage educators to teach OWI courses as "applied rhetoric courses that use [accessible] digital technology[ies] to mediate interaction between instructors and students" with audience as the primary concern (DePew, 2015, p. 462). The screenshot below (Figure 3) illustrates the home page of the Canvas course shell that students see immediately upon entering the course.

Figure 3 *Image of Canvas Course Shell Home Page*
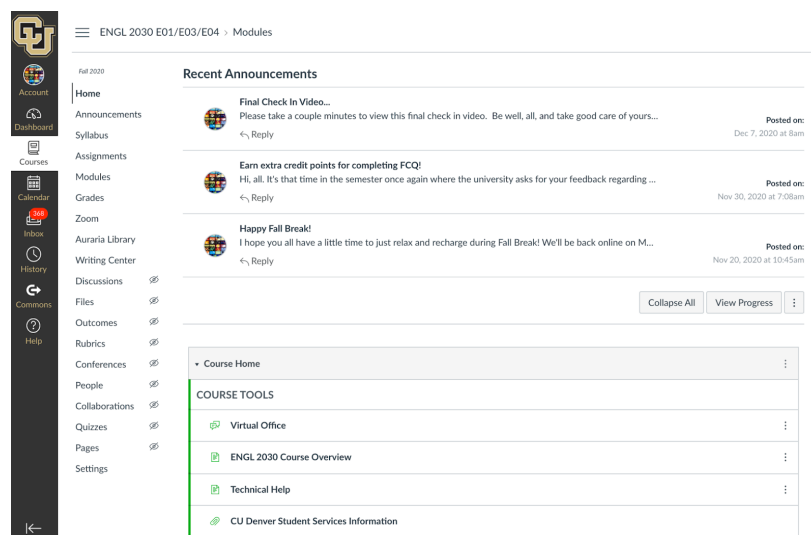
The contexts chosen for this study speak to the value of focusing on an authentic context where intervention is highly warranted and success is nowhere near guaranteed— as well as typify contexts of FYC instruction across the nation.

Student Participants

To begin the semester, I surveyed students and received results from 133 total students (across two macrocycles). From those results, I know that the students experiencing this intervention are by majority female (83 total) with students who identify as male accounting for 34% of total participants (46 total). Over 73% of the students (Fall 2020) and 43% (spring 2021) in this study fall between age 17-20, though several (29 total) are between the ages of 21-25.

Additionally, all students were asked why they chose the online course format in order to understand their motivations for online learning:

Q 5: Despite the limitations imposed by the health mandates this semester, you had fewer options related to course delivery format. Still, you chose to take this class as an online course*. What is the primary reason you're taking this course online (specifically not meeting via Zoom)?

Flexibility was the primary reason cited for taking an asynchronous online course (beyond the standard core competency requirement imposed by the university, of course), as has been cited in multiple studies (see Wu and Hiltz, 2004). See Figure 4 for a word cloud of the reasons collected in this survey for engaging via online instruction.

Figure 4 *Word Cloud of Student Responses*

Flexibility is often key to the decision to enroll in an online course. The students at this university are often deemed non-traditional[21] in that they are often working full-time or holding down multiple jobs, taking care of family, and managing their own health issues. A handful of students also cite good experiences with online classes in the past as their primary reason for choosing this learning environment again. In my experience with online teaching (over 10 years), this panoply of reasons is typical of most semesters, except for the significant increase in the number of students that cite health risk as a primary reason (COVID was a huge factor in this study).

When asked about their initial confidence with reading, students showed a humble competency, claiming to be "mostly successful" (See Figure 5).

Figure 5 Student Responses to Their Confidence with Reading

Q6 - This course is about both reading and writing. We'll talk a lot about your writing this semester, but I'd like to ask ...   Page Options ⌄

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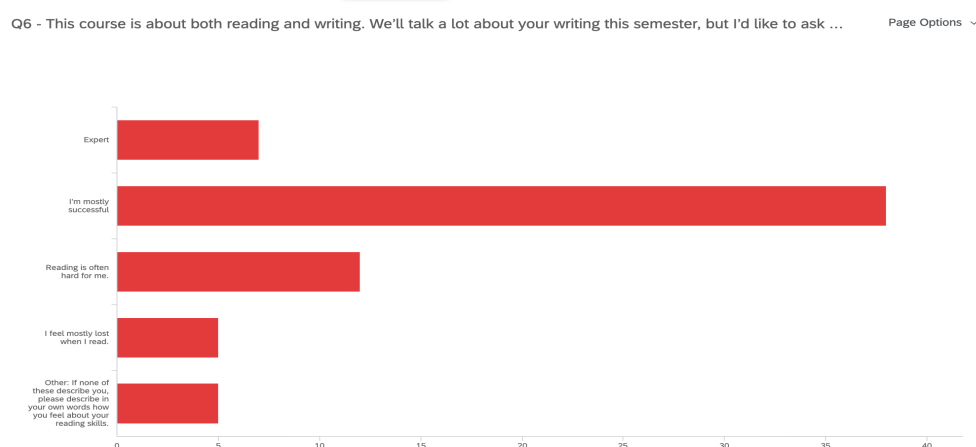
[21] I resist this term, however, and assert that there are far more non-traditional students that make up the new tradition than acknowledged in much of the scholarship.

Students see success in their reading abilities, which is a great way to begin

the intervention, but in many cases, the research tells us that this humble

competency exists in response to less-than-ideal descriptions and

pedagogies of reading (as discussed in chapter one).

Problem to Address: Engaged Critical Reading in FYC Courses

As detailed in chapter one, the issue is that despite all the theory that

characterizes reading as active, complex, praxis-based intellectual work,

many students in FYC courses seem only willing/prepared to decode

meaning. The ultimate goal— for students to practice and gain in the skills,

behaviors, and dispositions attributed to engaged critical reading, especially

as preparation for praxis related to civic participation— seems beyond many

students' awareness or abilities (despite their initial humble confidence) and,

what's more, there seems little study of how RCWS instructors in higher

education best enable students to learn *engaged critical reading* (see

chapter three for detailed explication of this term).

Designing the Intervention: Using SDA to Annotate

Reading has not been given the same attention as writing in RCWS,

but this study takes a different tack— recognizing reading as rhetorical

invention (Brent, 1992) and situating active, rhetorical reading as central to

the pedagogy of an FYC course in order to overcome the barriers so often

reported among post-secondary instructors around surface, shallow thinking

(Sullivan et al., 2017, p. 151). Specifically, I designed a pedagogical intervention

to include social, digital annotation (SDA) using the Hypothes.is interface as a central part of my online classroom curriculum for five separate reading events throughout the semester. Students were also asked to respond to a series of reflective log prompts that both helped me re-design the intervention in the midst of its deployment as well as support the development of their own metacognition around reading. Each new intervention component (within the reading events, such as the annotations and reflective logs) was designed to help students practice the skills, behaviors, and dispositions attributed to engaged critical reading.

A New Theme

The theme of the course was also amended to include rhetoric and research *for civic participation*. This theme was not visible when students registered for the course, unfortunately, though the practice of theming is not unusual in many FYC programs. Given the social circumstances of the time students are coming to terms with their own role in their communities, the theme is appropriate, though it necessitates discussion. Of course, this discussion is too fraught with historical import to adequately address all aspects of the choice, it's helpful to first concede that rhetoric has historically been linked with citizenship— sometimes in admirable ways, sometimes not. One such complexity is the definition of *civic participation*, a definition I chose not to post myself, but rather, I asked students to articulate their own definitions, both at the opening and at the closing of the semester.

Another such complexity of this course theme is how one might responsibly highlight the appropriate ways to enact civic participation. For guidance, I relied on Wan's *Producing Good Citizens* which underscores the complexity often missing when educators "link literacy education to citizenship formation" (Wan, 2014, p. 22). The intervention follows Wan's advice in this regard:

> [W]e should create spaces where our citizen-making through the teaching of literacy is a more deliberate activity, one that enlivens the concept of citizenship by connecting classroom practices to other instances of citizenship production that happen outside of the classroom, such as those in the legal, political, and economic realms. (p. 178)

In alignment with the theme of the course, I slightly altered assignment descriptions to adapt the new course theme of civic participation. For example, with the Exploratory Research Project, I suggested major categories of inquiry to include questions about political systems, political movements, political philosophies, any exigent issues— local or national— discussed in politics today, or the ways information circulates. Since this first project sets the topic into motion for each individual student, altering the scope of this first research effort was enough to change the theme for every project thereafter.

The Role of Hypothes.is

  Beyond changes to the theme of the course, the intervention was designed to engage students in social, digital annotation practices using Hypothes.is. There are several social annotation platforms available (e.g., HyLighter, Annotea, Diigo, etc...), but this study uses Hypothes.is for several key reasons. First, the purpose and mission of Hypothes.is is detailed in the Literature Review, but the key student-facing features include the fact that Hypothes.is is a free and open sourced social annotation tool. It is unlike other tools that make annotation possible, but not social (such as Adobe PDF, Google Docs, MS Word). Hypothes.is is internet-based and allows readers to engage with the text in its original public space, with original formatting and features of a digitally-born text. For this study, such an interface was important for allowing students to study the context of a text in collaboration with other readers. Further, Hypothes.is allows for a variety of ways to engage in text-based annotations (creating or viewing): using Bookmarklets, using a plug-in, or simply adding 'via.hypothes.is/' to the start of any URL. All annotations then appear as an overlay (like a transparency), minimally disrupting the original text. See Figure 6 for a sample Hypothes.is public page.

Figure 6 Image of a Hypothes.is Public Page
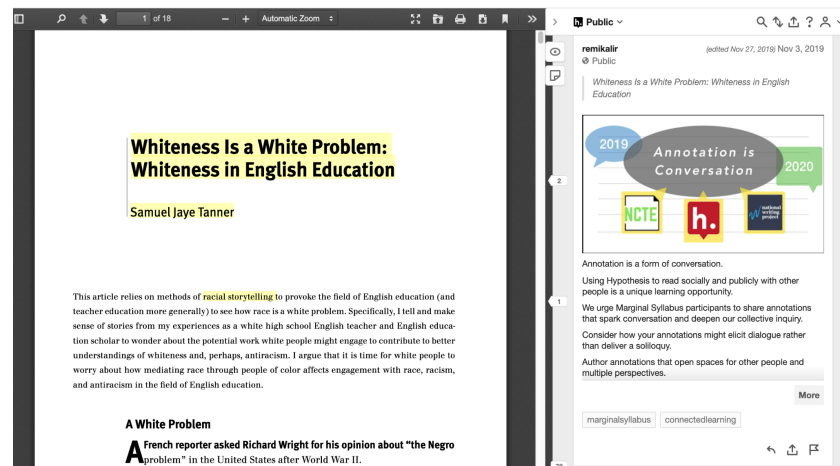
These annotations default to a public sharing option (though users can create private groups); however, students cannot individually choose whether their annotations are private or public. This study intentionally made all annotation efforts public. While anything public is a risk and could invite trolling, Hypothes.is has addressed concerns over inappropriate and hateful comments by moderating posts and allowing users to flag troubling comments.

The Texts Chosen for Intervention

This intervention necessitated scripting *reading events* (Rosenblatt's term, 1978; Heath's term, 1983) that are highly efferent (given the context), but not immune to aesthetics (a quality Heath and Graff both champion). For this study, I assigned seven specific reading events (in addition to the reading that students choose on their own, based on their own topics of inquiry) based on the assumption that students would do content-based reading, or

reading used to develop ideas, discuss those ideas and consider the connections among ideas related to the theme (Adler-Kassner and Estrem, 2007, p. 40). Texts in this study aren't merely the anchors for ideas that I believe students ought to explore; that's certainly important, but the texts are likewise "the object that collaborators discourse about" or the specific place of interaction between human (and non-human) actors (Duffy, p. 7, as cited in Lisabeth, 2014, p. 242). The texts were chosen because they are rich and complex (Graff's suggestion, as cited in Felumlee, 2018, p. 14), but also because the content helps introduce students to the ill-structured problem of responsible participation in a deliberative democracy. They ask "serious intellectual questions" (Beaufort, 2007, p. 158) that involve "complex and rich problems" (Wineburg, 2001) of real exigent import, meant to match students' "zone of proximal development" (Vygotsky, 1978) and foster "intelligent confusion" by offering opportunities to value caution, humility, and open-mindedness necessary to tackle the confusion, uncertainty, and chaos (i.e., "troublesome knowledge") of complex, ill-structured problems (Sullivan et al., 2017, p. 145). For a complete table of all the texts chosen for this intervention, along with summaries and justification for each text, please see Appendix B.

Students were asked to perform during each reading event via Hypothes.is in specific ways, as has been deemed best practice in previous studies of SDA (O'Dell, 2020; Nobles and Paganucci, 2015; DePalma and

Alexander, 2015): to post an initial thread on three separate occasions and reply to at least two peers' annotations.

Assigning Reflective Digital Logs

In addition to reading and annotating using Hypothes.is, students were asked to reflect on the practice of reading throughout the semester. Not only is reflection the key component of pragmatic approaches to teaching and learning, but it's also central to critical theories of education. In fact, according to Freire, reflective action "prevents one from being a passive recipient of knowledge" (as cited in Sande and Battista, 2021, p. 178). In that tradition, students were asked to respond to seven reflective log prompts (See Appendix C for full prompts):

Collectively, the intervention added to this existing typical FYC course the use of Hypothes.is to annotate a specific set of texts that explored civic participation across a series of five reading events and encouraged metacognition about reading (not just writing) via their Reflective Log submissions.

Theoretical Commitments

Because design-based research is dedicated to testing as well as generating "evidence-based claims about learning that address contemporary theoretical issues and further theoretical knowledge in the field" (Barab and Squire, 2004), the design of this intervention was rooted in two key theories that provide both anchor and aspiration. Both theories,

taken together, provided a thoughtful touchstone for the principles of the intervention design (Reinking and Bradley, 2008); namely, these theories depict reading as a form of rhetorical invention and rhetorical invention as fundamentally social, perhaps best summarized in a syllogistic form:

Major premise: Rhetorical Invention is best characterized as a social act (LaFevre).

Minor premise: Reading is a form of rhetorical invention (Brent).

Conclusion: Therefore, reading is best characterized as a social act.

Theory #1: Rhetorical Invention as a Social Act

LaFevre's *Invention as a Social Act* (1987) best cements the first of two theories that I both draw from and speak back to in this project. LaFevre's theory counters what she calls a Platonic view of invention— one that is focused on the solitary individual's introspection as they search, alone, for the "truth...sought through purely individual efforts" (p. 1). This trend to imagine invention as solitary, according to LaFevre, is a product of three primary influences: that of literary studies' focus on New Criticism (and the study of texts absent context), the legacy of the Romantic tradition and solitary inspiration, as well as the deeply entrenched values of capitalism, individualism, and invention of the American culture. The problems with these influences, as they pertain to our efforts in the RCWS classroom and scholarship, are multiple, but center around misconceptions of invention, and consequently, a confused approach to the best conditions for learning and

reading. LaFevre's response to this mistake is to conceive of invention as inherently social. With "social" referring to "that which is oriented to take into account the behavior of others" (Weber, 1949, as cited in LaFevre, 1987, p. 33) and "act" referring to something that "involves symbolic activities and often extends over time through a series of transactions and texts" (p. 38), LaFevre reconstitutes invention "as occurring when individuals interact dialectically with socioculture in a distinctive way to generate something" (p. 33).

While reading specifically is not LaFevre's primary focus, her expansive definition of a social and discursive view of rhetorical invention makes space for a study like this one that narrows in on reading. Further, LaFevre (1987) doesn't focus specifically on pedagogical interventions that bring her theory of social invention into view, but she does honor that need with her guidance (i.e., "Practical Implications for Teacher") at the end of her book. That desire to find practical instantiation for a theory of social invention is where this project enters LaFevre's (1987) conversation.

Theory #2: Reading as Rhetorical Invention

This study's rhetorical commitments frame all other curricular decisions related to reading assignments. To briefly review the broad framework, this study works from a premise that rhetoric is best practiced when it is conceived as an ecology network where all constituents of a rhetorical situation are interwoven and dynamic (Edbauer, 2005), where "everything is connected to everything else" and, therefore, "everything matters" (Mau,

2004). A part of that ecology, a part not yet fully accounted for, is the reader/act of reading. Doug Brent (1992) helps correct that invisible node in the network of rhetorical ecologies by classifying reading as a form of rhetorical invention.

Brent draws from literacy scholars such as Pratt, Fish, Rosenblatt, Iser, and Richards and weaves them in with theories of rhetoric (namely Booth and Burke) to account for both the production and consumption of discourse— as equivalent components of invention. If rhetoric is the symbolic negotiation of knowledge production (an epistemic process), then it is epistemic for both speaker and listener/author and reader alike. This social interplay of knowledge mediation is well theorized on the author/speaker's position in the rhetorical process, but oddly less certain on the listener/reader's position in that same constellation of meaning-making, yet Brent's rhetorical point of view includes both producing and consuming discourse as reciprocal acts— with neither as "logically subordinate to the other" (p. 1).

Brent's (1992) rhetoric of discourse consumption is specific to how readers come to be persuaded. If the writer is asking how to frame an argument, the reader is doing something different when she asks: "when should I change my mind?" or "how might I sort through the bids made for my assent?" (Booth, as cited in Brent, 1992, p. 13). A rhetoric of reading not only accounts for the understanding of another's meaning, but the reader's

process of updating their own worldview/belief system as a result of coming into contact with another person's worldview via text and actively choosing which "babbling" voice to tune in to, believe, and with "what degree of conviction" (p. *xii*). A rhetoric of reading, then, sees reading as "an active attempt to find in discourse that which one can be persuaded is at least provisionally true, that which contains elements worth adding to one's own worldview" and accounts for the ways that readers choose meanings to accept as effectively persuasive (p. 3). Brent (1992) is essentially applying a series of long-established theories of the social nature of meaning-making to a particular discursive practice (i.e., reading). But it's worth noting that the theories evoked here are far more vast than is warranted in this space.[22]

The gap, then, that this study seeks to address lies in pragmatically enacting this theory of reading as rhetorical invention in an authentic, social learning environment using specific tools— notably, digital tools that afford the social nature of reading— to test whether those tools can help students practice the skills, behaviors, and dispositions of engaged critical reading.

Together, these two theories frame this project and provided opportunity to work *from* and *towards* the meaningful application of these results beyond my local context.

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[22] Rhetorical theories of Booth, Burke, and Bakhtin figure prominently in Brent's (1992) claims, and shape theories of reading, but this chapter cannot account fully for that larger frame.

Orientation Around a Specific Goal

Part of what makes DBR so uniquely well-suited to a study like this one is that it's overtly driven by a specific pedagogical goal, then guided by the research questions, to reveal the ways the local context and findings might help others— the larger FYC network, in particular— achieve similar goals (Reinking and Bradley, 2008). The pedagogical goals of this intervention were (1) to foster the practice and advancement of engaged critical reading and (2) to generate pragmatic pedagogical tools for teaching engaged critical reading in rhetoric and composition/writing studies classrooms. The goal is not unique, certainly to RCWS scholars, yet the treatment of social, digital annotation via Hypothes.is as a tool to achieve those goals using a DBR approach is specific to this study.

These goals begin locally, in service to student learning at my own local site; however, the potential reach of the findings in this study can inform far more than the local classroom. From a transcontextual point of view, this single effort is representative of wider FYC desired outcomes and, to that end, this intervention ambitiously seeks to add to the expansive body of knowledge among the practitioners and rhetoricians, especially among FYC classes, who are eager to theorize the consumption and re-circulation of discourse within the field of rhetoric and composition/writing studies (RCWS).

Iterative Analyses of Intervention Design

Commonly, among DBR scholars, iterative analysis is built into the design process in order to gauge and change, in the midst of deploying the intervention, the intervention in response to student needs. The processes of iterative analysis built into this design-based research study aren't easy to describe in prose form. To help, see the visual graphic (Figure 7) to place the complex and iterative microcycles and their impact on the design of the intervention below.

Figure 7 *Microcycles of Iterative Design*
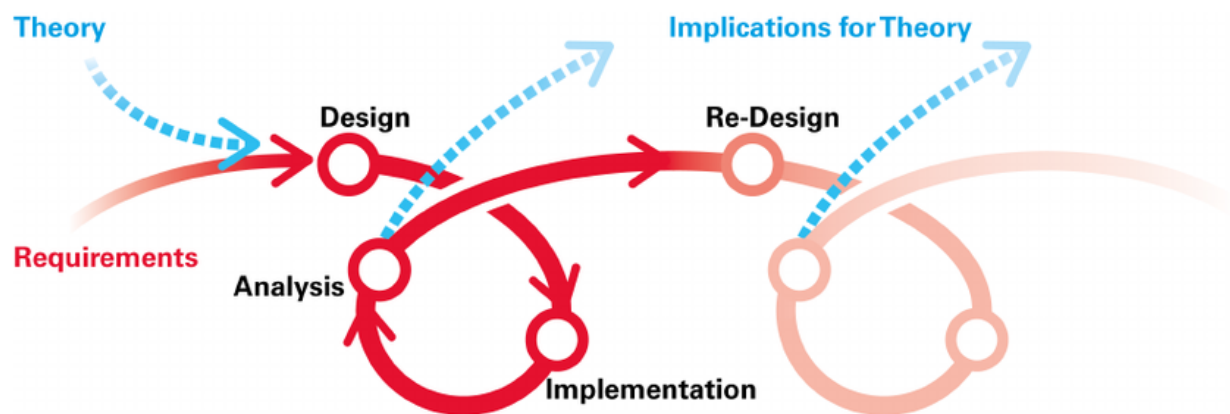
Image Borrowed from Cortes and Warr (2021)

This chapter has described several components of this graphic already: the theory that both informs and is informed by this intervention, as well as the initial design of the intervention. However, what follows is a detailed account of the cycles of iterative analysis built into the larger design, and re-design, of the intervention while the study was in progress.

Analysis During Intervention

The responsiveness to the context of the study and its flexibility by design allowed me to put student learning and well-being at the center of the intervention. In this way, DBR privileges the attentive researcher who stays tuned to participants even during the study's design implementation and allows for changes that best suit student learning. During the primary intervention phase of this project (Fall 2020), I reflected on the design and its success with a focus on four key questions that helped maintain my focus on student learning and the contexts that do/do not foster such learning: (1) What factors, based on data collection and iterative data analysis, enhance or inhibit the intervention's effectiveness in relation to the pedagogical goals?, (2) How can the intervention be modified in light of these factors, (3) What unanticipated positive or negative outcomes does the intervention produce, and (4) Has the instructional environment changed or been transformed as a result of the intervention? (Reinking and Bradley, 2008).

To systematically address these questions, I followed a protocol of iterative microcycles (Gravemeijer and Cobb, 2006) "of invention and revision" (Cobb et al., 2003, p. 10), or dedicated times where I intentionally and systematically stopped to reflect on the above four prompts. These structured points of intentional iteration are primarily driven by chronology (i.e., the submission schedule of students' reflective digital logs and annotations,

mapped below), occurring at the end of Weeks 2, 4, 6, 9, 11, and 14, as illustrated in the Figure 8.

Figure 8 *Schedule of Iterative Microcycles, Data Collected at Each Point*

Microcycle 1 — Week 2: Definitions of civic participation, Reflective Log #1, Reading Event #1 (pre-intervention), Reading Event #2

Microcycle 2 — Week 4: Reflective Log #2-#3. Reading Event #3

Microcycle 3 — Week 6: Exploratory Research Project, Reading Event #4, Reflective Log #4

Microcycle 4 — Week 9: Reflective Log #5, Reading Event #5

Microcycle 5 — Week 11: Critical Analysis Project, Reading Event #7

Microcycle 6 — Week 14: Reflective Log #6

Reflective Research Journal

The record of such iterative microcycles materialized as a reflective research journal, a key to constructive and reconstructive nature of improving instructional practice (Whitcomb, Borko, and Liston, 2009, as cited in Petit-Hume, 2017). To address each individual iterative microcycle, I kept an extensive record during macrocycle #1 and, from that reflection, modified the course in significant ways throughout the semester. In fact, this reflective researcher journal was kept throughout the entire research process (beginning 7.31.2020) as a Microsoft Word file. This file totaled 70 pages of text (over 20,000 words), with entries organized chronologically. Each entry served as a personal debrief— with particular entries dedicated to the four

intentional iteration prompts (listed above) of iterative cycles. For example, a small piece of one such iterative cycle reflection was as follows:

> What factors, based on data collection and iterative analysis, enhance or inhibit the intervention's effectiveness in relation to the pedagogical goals?
>
> Inhibit: There is a competing interest, at times, between the writing practices I want to put into place and the reading practices. They are both so time consuming, so laborious. And, likewise, so interconnected, but one class trying to focus on both as primary seems a bit much. My next iteration might need to draw those connections more clearly. (Microcycle #4, End of Week 9)

In addition to this formal reflection at scheduled intervals, several entries served as an informal reflection, contemplation, and discursive wrestling with proposed changes. Like Vasquez (2016), I found this reflective journal space critical for on-going negotiation of the multiple roles I played in this study: researcher, practitioner, professional development provider, co-learner, and student. For example, juggling the myriad roles of novice researcher, instructor, and designer made for pretty eclectic posts at times:

> I feel compelled to work on my literature review and introduction and details of methodology. I hope that's an appropriate instinct to have at this stage. I feel like I must make progress, piece by ever-tedious piece and the data is too new to make progress in that way.

I've started my hard copy spreadsheet which helps me keep track of identifying features of each student: their nicknames, their preferred pronouns, their topics of interest, identifying life circumstances (e.g., returning to university after 30 years or military service, etc...), things I ask them to work on, or any warnings I might want to keep in mind. I'm adding an element to the course that I hadn't considered before, but came up in students' needs in the Introduction posts: the need for support and Dr. Rich Rice's well-timed comment in the GSOLE Online Rhetoric Webinar to make use of synchronous and asynchronous modalities (inspired by Mick and Middlebrooks' "Synchronous and Asynchronous Modalities" chapter). I can't require synchronous meetings (that's set aside for "remote" designated courses). So, I added on-going Zoom-based office hours. (8.21.2020)

This reflective space became one where I could react emotionally, explore pedagogical doubts, and brainstorm alternatives:

Final touches to the first two weeks today in my Canvas course shell. I'm fretting over how to prompt the annotation assignments. Do I ask them to simply "read" the text? To "read critically"? To read for what purpose? Do I assign that purpose or do they identify a purpose? Am I asking them what their purpose might be? How can I expect it to be anything other than "cause you assigned it"? (8.16.2020)

The storm outside is beautiful, wild hail, rain, the color of snow and a loud battle of ice against the roof. I love storms. They remind me to be reflective even about the context. Because context matters, I'm still exhausted, weary from grief and the need to transfer among disparate tasks too often. (7.31.2020)

In addition to these ongoing journal entries, I examined student reflective digital logs (seven total), student annotation moves (pre- and post-intervention), student projects (Exploratory Research, Critical Analysis, and Final Responsible Advocacy), and unsolicited student comments (e.g., technological troubles, ongoing COVID issues, etc...) at each juncture.

From all this effort at reflection on the design of the intervention, several notable modifications were made during macrocycle I. The most notable modifications included reducing the number of reading events and reflective log prompts assigned to students. Another key modification was the inclusion of multiple check-in videos (posted in Announcements) to address emerging issues, confusions, and help establish a clear sense of a community of learners who were comfortable sharing their ideas on readings that gained complex momentum.

Macrocycle II

In addition to several microcycles of design reflection and re-integration, Spring 2021 served as the 2nd macrocycle of the intervention. Based on the data observed during the 1st macrocycle (Fall 2020), several modifications

were made to the course and the intervention: I swapped out the text for the 2nd reading event (using Hypothes.is) because most students identified that text as one of the biggest challenges and, while challenge is good, I'm afraid they were challenged because the text is unclear and comes into the conversation too early. Likewise, because the texts get saturated with digital annotations, I used new readings in a few other instances, as well. I also revised the Critical Analysis misinformation project to focus on mind mapping and reflection of critical reading because too many students failed to grasp the concept. Finally, I added a podcast to engage more multimodal texts that address the course theme. Students were able to annotate the transcript of this podcast while listening.

Commitment to Ethics and Rigor

The ethical principles that both RCWS and the DBR methodology share is a commitment to feminist research perspectives and this study has designed the intervention to honor that commitment. For example, I intentionally designed students' reflective log prompts to challenge predetermined coding schemas (discussed in chapter six) and tried to account for how my position of authority impacts students' behaviors and self-reported dispositions in my own reflective researcher's log. Further, the well-being of the students (as participants) was at the center of this design and implementation of this intervention. The research data mattered, of course, but nothing mattered more than the students' health and progress.

Their voices were invited along the way, particularly their insights into the components of ECR. For example, student annotation habits and reflective log entries led to the addition of the code named *Identifying/Evaluating Rhetorical Moves* and student's voices are included heavily in the findings.

Likewise, the rich description of the context for this study acknowledges that learning spaces are highly complex and demand a methodology that honors authentic ways to better understanding a learning ecology, or the "complex, interacting system involving multiple elements of different types and levels," carefully examining how those elements function together to support (and impact) student learning (Cobb et al., 2003, p. 9). That sort of complexity requires processes of reflection and iteration (detailed above) as well as a commitment to a flexible, pedagogically-centered research protocol that preserves the context of analysis (as cited in Nickoson and Sheridan, 2012)— all illustrated in the particular design-based research approach taken in this study.

Along with the ethical commitments that run alongside common RCWS practices and DBR methodologies (e.g., to feminist participatory strategies and pragmatism), this study is designed to adhere to standards of rigor, as well, though those standards are not yet mainstream enough to assume they're accepted by all. This study paid close attention to rigor through systematic validity— wherein theory, research, and practice are explicitly aligned (Colwell, 2013; Hoadley, 2004) and the research site was

carefully selected in a way that doesn't preemptively guarantee the success or failure of the intervention (Reinking and Bradley, 2008). Additionally, because I'm not interested in blindly advertising for a particular practice or digital tool, I tried to maintain a healthy skepticism of the intervention (per Brown, 1992; Colwell, 2013). As a researcher, I remain deeply committed to studying engaged critical reading in higher education, and hopeful that pragmatic pedagogies can help realize this objective, but the goal is far too complex to imagine simple answers.

Conclusion

This chapter has explored the methodology of DBR, as it suits the FYC context among RCWS teacher-scholars, for both local and global application. The context for this study and the intervention designed to address a particular problem commonly cited among FYC teacher-scholars was described in detail to illustrate the authenticity of the context within which this intervention was enacted. In the chapter that follows, I will discuss the collection and analysis of the data yielded from this intervention.

CHAPTER 5

CONDUCTING A DESIGN-BASED RESEARCH STUDY: DATA COLLECTION,

CODING, AND ANALYSIS

Having detailed the design of the intervention for this study, this

chapter focuses on the methods for analyzing the data collected during and

after the intervention— including the sources of data collected and the cycles

of coding and analysis after the intervention was complete. A detailed

account of *how* the results were generated, coded, and interpreted follows.

Methods to Analyze the Intervention

In addition to the methodology used to design (and re-design, based

on iterative microcycles of reflection, as discussed in chapter four) the

intervention, specific methods of data collection and analysis were followed in

order to study the outcome of the intervention. The flexibility inherent to

design-based experiments allows for multiple methods of data collection, as

long as the intervention, pedagogical goal, and a commitment to high

standards of data collection remain central. With these methodological

values in mind, this study combines the qualitative data of surveys with the

descriptive qualitative data of reflective digital log entries, content of

students' annotations, and transcribed interviews with four specific

exemplary cases to gain complex insight into whether, and if so how, social,

digital annotation has any effect on students' practicing the skills, behaviors,

and dispositions attributed to engaged critical reading.

Sources of Data

I collected a variety of data to saturate the model (Creswell, 2007, p. 67)

with diverse but interdependent (Reinking and Bradley, 2008, p. 45) artifacts

to give as clear a picture of the intervention and its effect on the pedagogical

goal as possible. This wide set of data, though, is not without necessary

boundaries. Each data source helps illustrate the following objectives:

characterizing the instructional context, establishing baseline performance or

conditions prior to intervention, identifying factors that enhance/inhibit

movement toward a specific pedagogical goal, documenting the effects of

instructional moves (aimed at enhancing the effectiveness of the

intervention), identifying and seeking explanations for unanticipated effects

and outcomes, determining extent to which an intervention has transformed

a learning environment, identifying the conditions under which an

intervention does or does not work well toward developing theory/improving

practice, and comparing and contrasting the effects of an intervention

(Reinking and Bradley, 2008, p. 48-53). Such myriad and concurrent goals

necessitate large sets of data, including: surveys (before and after

intervention), seven student reflective logs, annotations (before intervention),

annotations using SDA (during intervention), and LMS-based discussion

posts. To strategically manage such a large data set, I divided data into two

categories: broad data (e.g., surveys, discussions, etc...) to be examined

through a wide scope lens, and based on emergent patterns, four exemplary

cases for in-depth analysis of reflective logs, annotations, transcribed interviews, and survey responses.

Table 3 *List of Data Sets, both Broad and Exemplary*

Broad Data *Most of the following data was aggregated across all three sections of ENGL 2030 (fall 2020). However, some data is aggregated across both macrocycles (noted below).*	Data drawn from **Exemplary Cases** *Based on patterns that emerge from the aggregated data within those three sections, I selected 4 specific exemplary cases— ones that typify the emergent patterns to analyze those patterns in depth and over time.*
- Baseline survey (both macrocycles) - Final survey (both macrocycles) - Annotations (prior to intervention) - Annotations via Hypothes.is (during intervention) - Reflective log entries - Canvas-based discussion of one reading event (during intervention)	- Student reflective log entries (seven total) - Annotations via Hypothes.is (during intervention) - Interviews

Surveys

Students across both macrocycles (Fall 2020 and Spring 2021) participated in two Qualtrics-based surveys— one at the beginning of the intervention (to establish a baseline) and one at the end of the intervention (see Appendices C). In addition to asking about experiences with annotation and reading, more generally, this initial survey alerted students to the research goal and sought to protect the students, especially those who didn't

want to be included (Miles et al., 2014). To that end, all students were informed of the purpose of the study in the first week of the Fall 2020 semester and asked to consent to their participation in the study:

> Before we get to the survey questions, I must ask for your consent up front. Please confirm that you willingly agree to participate in this study (or not) and that you consent to allow your course materials to be used in the study. These materials include: your survey results, your Reflective Logs (part of the course), and our Final Projects (part of the course).
>
> NOTE: Any information you supply will never be published with your name or identification number. Your confidentiality will be protected. Also, your decision to participate or not to participate WILL NOT in any way affect your grade in this course.
>
> Do you grant consent for the researcher to use your contribution to your course annotations, course projects, survey responses, and course discussions (with all identifiable features of your identity deleted/revised)?

If students selected "no" in response to this prompt, I asked for their name and excluded their material from the data sets. All but two students offered consent to use their work.

The initial survey included 133 total respondents across two macrocycles and the final survey included 99 total respondents across two

macrocycles. See Appendix D for both pre- and post-intervention survey questions. These survey questions were reviewed by my dissertation co-chairs in advance of implementation and changes were made in response to their concerns over consent and exact, but not leading, language.

Annotations

After establishing a baseline for annotation habits (Reading Event #1), students were assigned five separate reading events where they were asked to use Hypothes.is as a tool for social, digital annotation while reading. An example prompt of a reading event during the intervention looked like the following in the Canvas LMS (see Figure 9):

Figure 9 *Canvas Prompt for Social Annotation*

On several occasions, students were asked to reflect on annotation and their reading habits in a variety of ways that helped them articulate the kinds of annotations they and their peers were most likely to make. This sort of reflection replaced direct instruction of the 'right' way to annotate. That absence of direct instruction was intentional. This study sought to examine the consequences of deploying social, digital annotation as a means to achieve the components of engaged critical reading. Rather than tell students exactly what moves to make, this examination determined what and how SDA fostered student-led approaches to engaged critical reading.

A report of student annotations in each reading event was generated using Jon Udell's annotation collection tool (See Figure 10).

Figure 10 *Udell's Annotation Collection Tool*
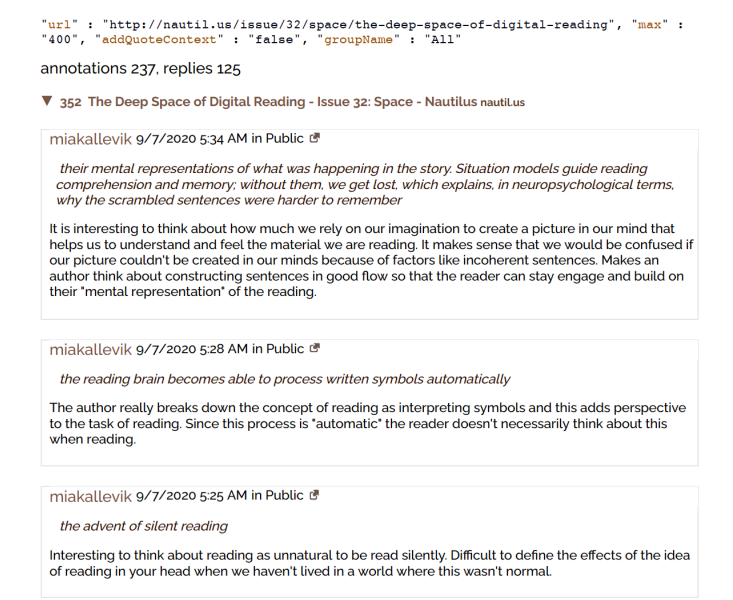
This HTML file displayed annotations in reverse chronological order and included the student username, student-selected excerpts from texts, student annotation, and the time and date of annotation (see Figure 10). These reports were loaded into Atlas.ti for initial rounds of coding (coding protocols are discussed later in this chapter).

Further, data related to annotations made via Hypothes.is was collected using Crowdlaaers, a visualization tool designed specifically for use with Hypothes.is. This tool serves as a "public service tool for capturing and reporting Open Web Data for Learning Analytics, Annotation, and Education Researchers. This real-time dashboard visualizes group – or crowd – discourse layers added via Hypothesis open web annotation to online documents" (Perez and Kalir, 2021). This analytical tool collects data about participants, threads, and total number of annotations, etc… related to specific texts. See Figures 11-13 for sample pages of this data.

Figure 11 *Sample Data Collection Pages from Crowdlaaers, Overview*
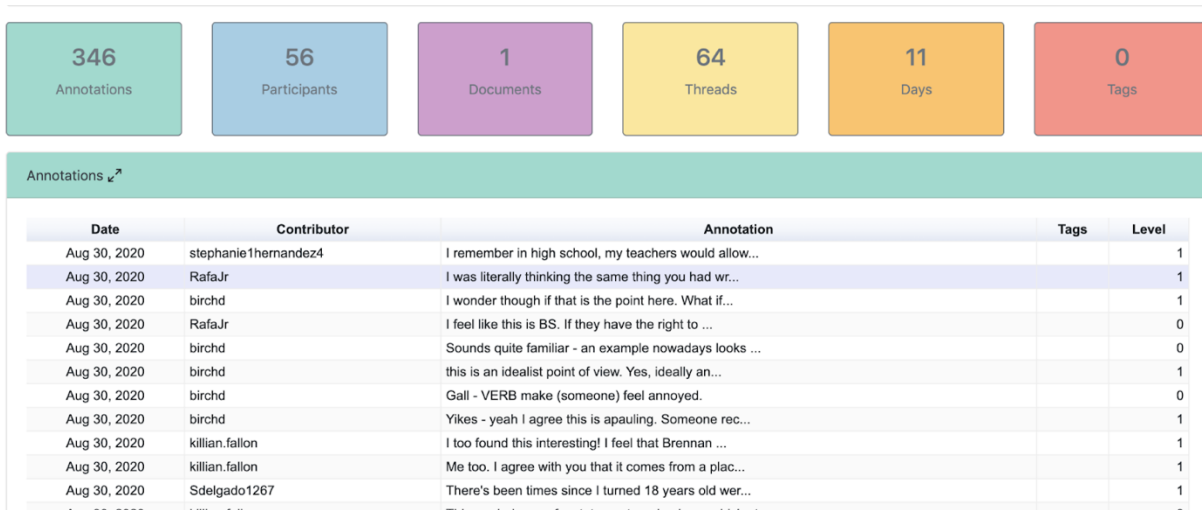
Figure 12 *Sample Data Collection Pages from Crowdlaaers, Analysis of Annotations (by participant)*
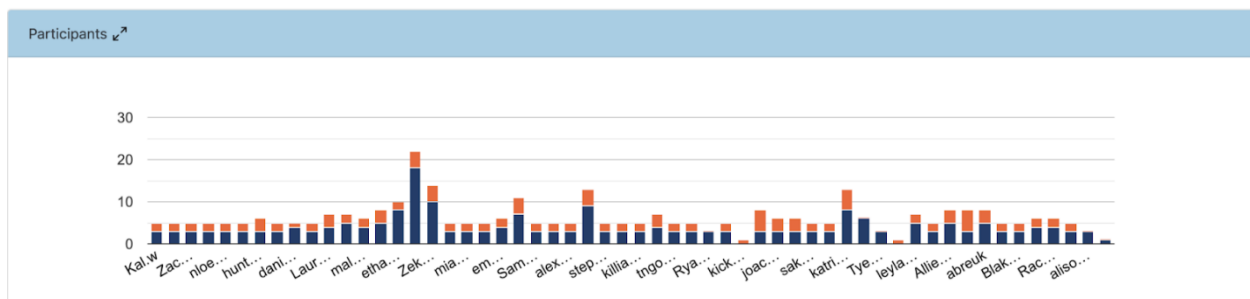
Figure 13 *Sample Data Collection Pages from Crowdlaaers, Analysis of Threads*
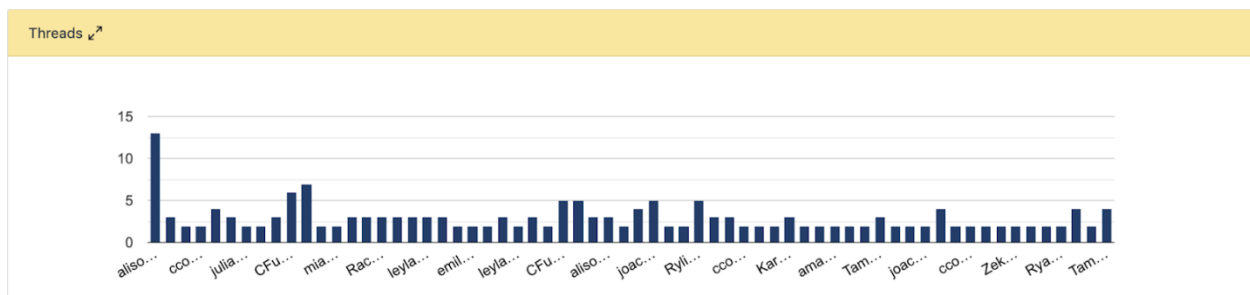
While Hypothes.is' Terms of Service attribute a Creative Commons CC0 Public Domain Dedication to all public annotations, I have opted to re-create those annotations anonymously. Students' Hypothes.is usernames often mimic their full names, so all have been intentionally deleted and replaced with "Student #__." All other references to student annotations and reflective log comments (beyond the four exemplar cases, which are anonymized) are broadly referred to as "one student" or perhaps "another student."

Reflective Logs

Students submitted short (between 300-500 words) responses to specific prompts on seven occasions (see Appendices B for full prompts). The prompts were designed in advance and deployed as part of the course objectives. In that way, this data source was an integral part of the intervention— not just a means to gauge the intervention's impact. The reflection itself was pivotal to the students' experience with practices of engaged critical reading.

These logs were submitted in various formats (PDF files, Word files, etc...) to the Canvas course shell and were assigned at key intervals during the intervention. Once collected, each data set (the collections of submissions of a single reflective log entry) was loaded into Atlas.ti for initial coding.

Interviews

Studying the multilayered, complex, and nonlinear cognitive processes involved in reading at any level, much less an advanced level, is an enormous

challenge for any methodological approach. Despite the challenge, to better capture the learner's detailed perspective (a point of view traditionally left out of educational research), this study relied on interview data to help detail the patterns that emerged from student annotations and reflective log entries.

Interviews are a helpful qualitative approach to gain in-depth insight and begin to understand the lived experience, and the meaning *the students* make of that experience, particularly in ways that don't easily show up in other forms of data. The approach I took to these four interviews is based on Seidman's (2019) in-depth phenomenological-based interview philosophy, rooted in four basic tenets of phenomenology: focusing on the temporal and transitory nature of human experience, *their* subjective understanding, *their* lived experience, and an emphasis on meaning in context (Seidman, 2019, pgs. 16-19). The four students I chose to interview were based on the interesting and notable ways that each student experienced the intervention of social, digital annotation and/or the "clarity and robustness in which they illustrate the broader findings"— as evidenced by their reflective log entries and personal communication collected throughout the intervention. Their experience is not anomalous. Rather, these four "empirical anecdotes" (Broad, 2012, p. 204) were chosen because they in many ways typify the results of the data, but in other ways, they provide far more context to the experience of using SDA. They are typical in that each of the four interview cases are a complex blend of positive and negative reactions to the intervention. They

expressed skepticism toward the *social* nature of social, digital annotation, but they also experienced meaningful gains in their reading processes. They also represented varying degrees of success with the course material overall. I wanted to interview the four cases to better understand their experiences with the intervention, especially their dispositions toward SDA.

Originally, I emailed the four students I'd identified as representative of the emerging patterns in the data to gauge their willingness and interest in meeting for an interview. I offered the students a $50 gift card to honor their time. The initial inquiry email read as follows:

> Hello, [student name]! I have a request of you. At the beginning of the semester, I mentioned that I'm currently working on a study involving reading habits, related to social, digital annotation (the Hypothes.is app we've been using) and civic participation. You've been working super hard on this and your perspective has been super valuable to me. I'd love to focus in on your experience with this journey a bit more in my study.
>
> I'd love to know, first, if that's alright with you (remember that I *will not use your name* or any identifying features in my writing) and, if so, are you willing to meet for a follow-up interview via Zoom. I'd just be asking you to fill in a few more details of your experience with the reading in this class.

I imagine the interview would take about 45 minutes and I can pay you $50.00 for your time with a gift card of your choice. Would you be willing to meet via Zoom some time between December 7th and December 18th? If so, just propose 1 or 2 specific times and I'll make it work.

Thanks for considering this request, [student name here]. I look forward to hearing more about your experience.

The four students I originally asked agreed to meet. We set up dates/times for a Zoom call just before the final week of the semester (Week 15). At the beginning of each interview, I provided context and asked for each student's consent:

Some kinds of research start with an assumption that we know the answer and then we test a group of people against that presumed conclusion. But that's not what I'm doing. That's not bad, but it also doesn't always allow for participants to teach us something we didn't even know to ask.

So, I'm doing the kind of research that acknowledges that we (teachers, researchers, and admin) don't know nearly enough about the role of reading in how we develop knowledge and ultimately how we act in the world. That's why I'm talking with you today....because your experience matters so much to how we understand reading.

I do need to let you know that I'm recording this interview, so that I can have a transcript of our conversation. When I write about this, though, I will not include any key identifying features (your name, name of school you attended, your grade, etc…). Do I have your consent to record this Zoom call?

My goals were, as Seidman (2019) asserts, to explore the meaning of "people's experiences in the context of their lives" (p. 21). While Seidman insists on a three-interview series to achieve this goal, his primary emphasis is on avoiding a single, context-less interview (where the interviewer and interviewee don't know each other in advance). I conducted one interview with each of the four cases and still consider this in accordance with Seidman's approach because I (the interviewer) and the cases (the students) had already developed a relationship over the semester and had gotten to know each other repeatedly through written exchanges typical of an online class.

As researcher, I acknowledge that any interviewer acts as a dynamic force in meaning-making in many ways (e.g., designing questions to begin, structuring the order of questions, coding and interpreting data, etc…). Thus, the role of the instrument (me, interviewer) cannot be dismissed (Lincoln and Guba, 1985, as cited in Seidman, 2019, p. 28) and, of course, the very process of describing experiences through language is a process of making meaning (Vygotsky, 1987, as cited in Seidman, 2019, p. 24) in and of itself. With those

dynamic and complicated forces in mind, every effort was made to keep the subject's experience, told through their language, at the center of each interview.

These interviews were designed (in part) to address Seidman's three-part semi-structured phenomenological approach: gauging participant's context of experience, the details of their lived experience and the meaning they make of that experience upon reflection. I attempted to address each of the three parts in a single interview. Because these interviews were only semi-structured, the interview included only 3-4 common questions to address the governing principle of a "rational process that is both repeatable and documentable" (Seidman, 2019, p. 25). The rest of the questions were issued in situ, during each separate interview, and in response to each student's expressed experiences. Each interview began with a parallel three-part guide designed in advance so that this format remained consistent (see Table 4 below):

Table 4 *Interview Protocol*

Context of Experience (life history) Goal: to put participants' experience (as it relates to this study) into the context of their life history (Seidman, 2019, p. 21)	**Details of Lived Experience** Goal: focus on concrete details of participants' present lived experience in the context of this study, recalling of everyday experience is the basis of meaning-making that is prompted in part III (Seidman, 2019, p. 22-23).	**Reflection on Meaning** Goal: participants reflect on meaning of the experience (from part II) in order to "discover the extraordinary" in the recalling of the ordinary (Van Manen, 2016, p. 298, as cited in Seidman, p. 23).

Following Keenan's (2017) description of the phenomenological, semi-structured interview approach, these interviews intentionally moved away from the idea of a "pure" positivist interview that honors strict adherence to a single set of questions and, instead, approach the interview as an opportunity for an interaction wherein both interviewer and subject share their narrative versions of the phenomenon under study. In this approach, the study was less concerned with reducing bias and moreso concerned with making my role in the study highly visible. Keenan's approach allowed me to listen to the subject's lived experience and use that experience to ask the right follow-up questions (Keenan, 2017). While I can't confidently claim that I asked the "right" questions, valuable data from these interviews is described in greater detail in the chapters that follow.

While protecting the students' identity is the first concern, I've chosen to use a pseudonym rather than abbreviations or any other generic identifying signifier in order to better capture each student's unique individual identity, proud cultural heritage, and uniquely valuable insight into their role as student, citizen, etc.... I chose a pseudonym that marked each student's heritage and gender (as I interpreted them), without bearing any resemblance to their real name.

Background of Interview Case #1: Hadeel

Hadeel is a full-time undergraduate student who presents as a Middle Eastern female, majoring in psychology and minoring in neuroscience. She was not new to asynchronous online learning before this class, but claims that this class was the only online class she ever "thoroughly enjoyed" because it "felt like I was in the classroom" (Personal Interview). Hadeel works full time. In fact, we met via Zoom during her lunch break. When Hadeel was just a girl, her parents left their native country and moved to the US to help guarantee a better future for her and her siblings. She didn't speak a single word of English at the time, but worked hard to learn how to communicate with others in school around her. Now, she speaks and reads in four languages: English, Arabic, French, and Spanish. Clearly, Hadeel is a motivated learner. She attributes her motivation to her parents' sacrifice on her behalf. In her words, "knowing just how much my parents gave up to give

us opportunities here has always been motivation for me" (Personal Interview).

She's gotten a lot from her parents' sacrifice, indeed, but also has inherited a deep distrust of political systems in America and an ambivalence about voting or any other sanctioned form of civic participation. In her words, "growing up in a foreign household, I have always been raised with the belief that we, as citizens, do not really have a voice in our politics.....that corruption and money truly led the way" (Personal Interview) in America and there was no reason to bother with voting; Hadeel believed that no one in this country wanted to hear the voice of an immigrant and this was the truth she spent the semester questioning.

Hadeel is and has been an avid reader and she loves to write. She even describes reading as an opportunity to walk a "new secret path" (Reflective Log #2). She's familiar with annotation, even claims to love annotation because that's how she learned English all those years ago. She uses annotation strategies regardless of whether annotation is assigned overtly and can't even imagine reading without annotation. In all her early descriptions of annotation, though, and why it's beneficial to her, she primarily describes annotation as a vocabulary strategy— mostly enacted by circling unfamiliar words.

Background of Case #2: Adryan

Adyran presents as an African American male. He is a full-time Business Marketing major (looking to work in social media marketing specifically), but hasn't gotten into those major classes just yet, and has taken just a few online classes before this one. Adyran struggled in this class. I attributed much of his struggle to a lack of participation. He believes that online learning equals a significant drop in motivation to learn or participate. He often didn't show up to our course shell and/or didn't complete the work assigned. And while he did pass the course, he didn't pass with a high grade and worked hardest at the end of the semester to get a grade that counted as passing. Adryan described himself as a "pretty good student" who has struggled with the transition to remote learning. He was eager to get back to a more traditional classroom and seemed less comfortable offering many additional personal details— in class and in our interview.

For Adryan, reading is like a puzzle (Reflective Log #2), where you have to piece together endless small parts to see the bigger picture. For him, the readings in this class were "more complex than anything I've read before" (Personal Interview) and he felt underprepared with effective strategies for getting through the reading. He was a fan of the annotations, though, and felt like Hypothes.is— despite his lack of confidence with how to annotate a text generally— helped him understand the complex texts.

Background of Case #3: Sharita

Sharita is returning to school after a few years away to pursue her goals of videography and photography. She is a psychology major with a minor in victim services, particularly working with victims of interpersonal violence. Sharita presents as an African American female, works full time, attends classes full time, and has been hit particularly hard by the pandemic. She'd already lost many family members and, at the time of our interview, she was nursing her boyfriend (who had also just lost an uncle to the virus) through severe COVID symptoms. Her fierce determination through coursework was a running theme throughout our interview and all her classwork, honestly; she was genuinely in this class to learn, not just to fulfill requirements. She attributes her ongoing motivation to her mother who grew up living on the streets and dropped out of high school when she got pregnant with Sharita. It's her mother's insistence that Sharita learn for the sake of finding her passion and her place in this world, not just to get a grade, that has made a lasting impact on her.

This class was hard for Sharita. It took up most of the time she had to dedicate to school. She had expectations for an English class that included more technical, more traditional goals (e.g., grammar and citation instruction), so she felt caught off guard at the amount of work involved with this class and the way knowledge was presented as contingent at every turn. She expected (maybe even hoped for) more rule-based writing lessons which

led her to push herself to see that "there were more than just the technicalities of writing and reading" (Personal Interview). Sharita claimed early on to love writing, but to struggle significantly with reading (a common complaint among students) and even likened reading to the feeling of "running without moving" (Reflective Log #2). Sharita was one of the few students, though, who found any reading or writing in a digital milieu particularly challenging. She prefers text on paper and the use of a pen to annotate. She's suspicious of any social media or digital platform, admittedly because of the current, highly polarizing media environment and her growing distrust of all messages.

Sharita is also very uncomfortable with the expectations of academic reading. She says that "maybe it's just the way I was raised, I don't know, because I've always been the type of person to have like in person conversations and it's reciprocated a lot better for me" (Personal Interview) and digital reading caused her the most anxiety. The theme of this class heightened that fear of reading for her. She felt overwhelmed with her life circumstances, with her business and with her high expectations of herself. When she realized this class would focus heavily on reading complex texts, she was afraid.

Background of Case #4: Kassidy

Kassidy is a full-time student who presents as an Asian American female. Kassidy is a transfer student who had attended a large, midwestern

public university prior to returning home and to CU Denver after experiencing a sexual assault. She spoke of her effort to find a place of peace and a return to her family support system to help get her life back on track. Kassidy is a Public Health major who had not taken an asynchronous online class before this one. Despite describing herself as an introvert, she'd never tried online learning before and came to find the environment worked really well for her. Given Kassidy's personal attributes, this isn't a surprise. Kassidy is a highly motivated— self-disciplined, and goal-oriented. She has always felt confident with reading and generally has "excelled in English classes," but acknowledges that reading causes her to feel a lot of stress because it's so hard to do (Personal Interview). She likened reading to floating on water— something that is a helpful escape from life at times, but also something that leaves you feeling exhausted and stressed (Reflective Log #2).

Kassidy felt a distinct lack of confidence around political conversations and was nervous to read anything about politics. She'd never heard the term *civic participation* before this class, but grew to be pretty engaged with the concept by the end of the semester.

These four subjects and their detailed interview responses were transcribed using a denaturalized process (Nascimento and Steinbruch, 2019) that allowed me to preserve their original oral language habits that can be helpful in interpreting attitudes toward SDA. Their responses helped fill in the gaps left in the other, broader sets of data. To exemplify this approach to

relying on interview data to represent a larger data set, I rely on Brandt's (2012) *Literacy in American Lives.* She explains her methodology as, first, aggregating large-scale data (for her, that data was 80 interviews) and then illustrating key representative patterns through exemplar cases. As Brandt does with her own research, I use the words of these four students to illustrate broader patterns from the data in the findings chapters that follow (chapters six-eight).

Cyclical Coding and Analysis after the Intervention

While iterative analyses occurred *during* the intervention (discussed in detail in chapter four) to help redesign the deployment of the intervention in response to students' emerging needs, extensive coding and analysis of the data occurred *after* the intervention in order to gauge the effectiveness of the intervention.

Coding in a project like this is tricky, but like Saldaña (2016) suggests, this study sought a pragmatic center (p. 3) to the interpretive act of coding in order to choose the most advantageous approach: choosing the right tool for the right job and, to add, at the right stage of the research. Further, I found Dr. Fowler-Amato's words helpful in this respect: "coding is the development of a relationship with the data" (Personal Communication, 2021). That relationship was complex and evolved repeatedly. This project, above all else, sought a flexible relationship to the data at each stage.

Round I

In the first round of coding (using Atlas.ti software), I identified codable instances mostly within established provisional codes (with flexibility based on student input) and focused on seeking and defining predetermined characteristics of engaged critical reading in students' private annotations, digital annotations, and their reflective logs. These provisional codes were generated from preparatory investigation (Saldaña, 2016, p. 168) into research findings collected from a variety of fields and disciplines, but remained flexible enough to be "revised, modified, deleted, or expanded to include new codes" when appropriate (Saldaña, 2016, p. 168). I coded the content of student annotations, surveys, and reflective logs based on (1) understanding the contexts and circumstances of the intervention and (2) the components attributed to engaged critical reading (as collected from a variety of theoretical positions into one cohesive set of skills, behaviors, and dispositions, as described in chapter three). Specific process codes, noting specific observable actions (Saldaña, 2012), were used in round #1 (see Table 5 below).

Table 5 *List of Specific Codes*

Contexts/Circumstances of Intervention	Skills and Behaviors attributed to ECR	Dispositions attributed to ECR
- Definitions of *civic participation* - Experience with annotation - Confidence with reading (before and after) - Dispositions to learning - Relationship between reading and praxis - Factors that affect learning - Positive reactions to intervention - Negative reactions to intervention	- Ability to assess context of meaning - Ability to test validity - Ability to negotiate among competing claims - Ability to acknowledge confusion and complexity - Ability to engage language aesthetics - Ability to read with and/or against the grain - Ability to demonstrate metacognition - Ability to identify/evaluating rhetorical moves (added while coding)	- Demonstrate empowerment and responsibility - Demonstrate empathy/affect - Demonstrate purposeful approach - Demonstrate motivation to do labor-intensive work - Demonstrate flexibility of mind - Demonstrate willingness toward praxis

Because engaged critical reading is a complex act, each discrete code

is not discretely bounded. Therefore, there are instances of simultaneous

coding (Saldaña, 2016, p. 6) here, too, where two or more codes are assigned

to the same datum because more than one action is occurring at the same

time, of the same weight. At other times, I had to discern if one action

superseded another. In fact, many annotations could not be coded with a

single component from the above lists. When a single student annotation

exhibited more than one component, and one component did not supersede another, it was coded with 2 or more identifying elements.

However, the coding task was more complex than the above a priori codes imply. Participant voices were a welcomed challenge to predetermined attributes of engaged critical reading in this study, so the codes, when called for, were modified based on participant's reflections on their own and their peers' habits of annotation. Soliciting this input was carefully prompted to avoid leading, yet still specific enough to help generate thoughtful reflection that supported my pattern seeking. For example, a reflective digital log prompt might look something like this:

(1) What do you see in your and your peers' annotations that are common (referring to a specific reading event)? (2) Compared to your own annotations, what is different or new about your peers' annotations? (3) How many different ways do students annotate the text, in your opinion (list those ways here)? (4) What kinds of annotations did you choose to reply to and do you see a pattern in your choices?

Ultimately, it is the conversation between these students' reflections and the predetermined codes that constituted a full account of the coding schema.

This first round of coding offered broad stroke insights that would be examined and tested in later rounds of coding. In this first round, only the

most faint signs of the "bones of analysis" (Charmaz, 2014, as cited in Saldaña, 2016, p. 9) were made visible.

Round II

In the second cycle of coding, I began to question these initial patterns of engaged critical reading, allowing for flexible shifts to fill gaps in my own predetermined codes of ECR. While the process coding was adequate for coding student annotations, another form of coding was added to the coding process to more thoughtfully describe student patterns: pattern coding (Saldaña, 2016; Miles et al., 2014). For example, in the second round of coding, I collected all student excerpts related to both the negative and the positive reactions to the intervention and further examined patterns within those broader codes. Though not part of my initial coding schema, I found that students' negative reactions to the intervention clustered around particular categories, such as "distraction" and "risk of exposure."

Another example that necessitated this additional round of coding was how I came to group together instances of the code *Demonstrate a Willingness Toward Praxis*. That general a priori code helped me group instances of data together, but too many questions were left unanswered. So, I used pattern coding to label groups of student-reported data (Miles et al., 2014; Saldaña, 2012) to better understand *in what way* students felt willing to act as a result of the text.

Further, other curiosities guided the objectives of this second round of coding. For example, I coded all student materials for instances of dispositions toward praxis, but that left me asking questions of student's interest and motivation: what kinds of praxis did students express an interest in? In this second round of coding, I took broader codes and broke them into their own sub-categories using pattern coding (and coding with pen and paper rather than a relatively inflexible software program).

Additionally, in this round of coding, the aggregate data was collected, visualized, and analyzed for emerging patterns beyond what the original intervention could have foreseen. See Figure 14 for an example of how data was culled together and visualized for further analysis.

Figure 14 *Image of Data Representation in Round II*
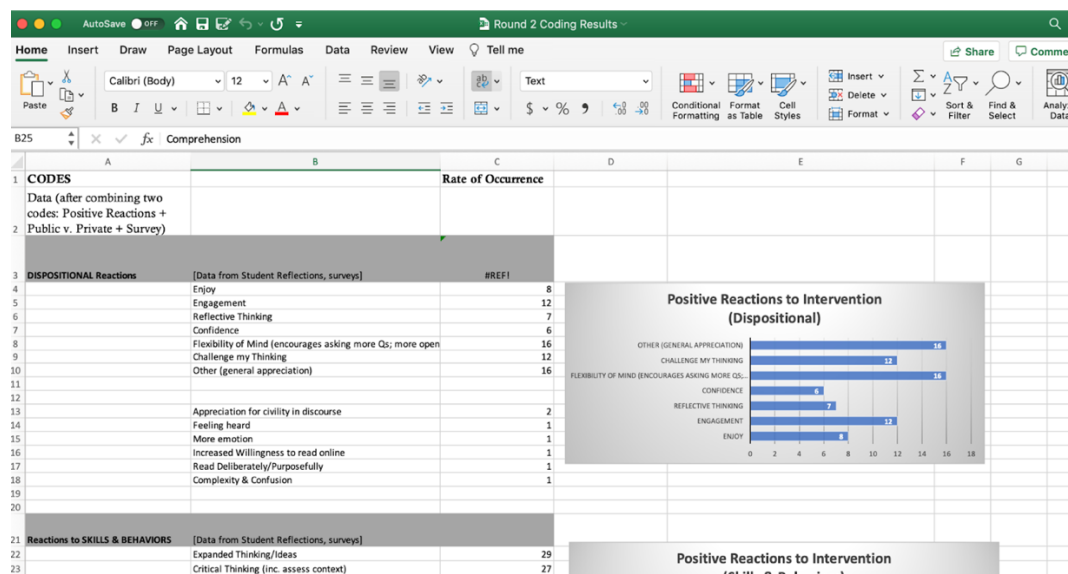
Round III

In the third round, coding validity was enacted with three experienced Teaching Assistants who came together to check the validity of the ECR codes as well as the validity of applying and clarifying those code descriptions. We met on May 26th, 2021, face-to-face, on campus; each TA was handed a printed packet, including: a list of all ECR components (codes) along with a brief description and examples of each code, anonymized student sample annotations (i.e., two students' private annotations of the Wolf text, plus four pages of Hypothes.is-based annotations from two separate reading events: "Deep Space" and "Moral Obligations," as well as two sample reflective log submissions (Reflective Log #3 and #5). We did not get through all the material but did accomplish most of what I set out to do.

After I briefly introduced them to the project and the pedagogical goals of the intervention, I described each code and allowed the TAs to question and clarify the distinctions among the skills, behaviors, and dispositions of ECR. I asked them to individually code one student sample at a time (see Appendix E for full TA Coding Workshop agenda). When all TAs were done, we came together to compare their code applications and discuss differences. Those discussions sometimes yielded further consensus (i.e., sometimes, TAs changed their initial code application) and sometimes those discussions revealed unreconciled gaps in either the definitions of the codes

themselves or the application of those codes. Not all differences of opinion could be reconciled (nor was that the goal).

This workshop was recorded (audio only, using QuickTime, with consent granted verbally) and details of each TA's coding effort are hand-written, but sample pages are included as Appendix G. These sample pages represent the fairly consistent alignment (though not universally consistent) among the application of codes.

One key outcome of this workshop was in the challenge in differentiating among certain code pairings. For example, the TAs struggled to discern between the codes *Testing Validity* and *Assessing Context*. Even after discussion over the differences between these two codes (as I saw them), there was confusion in application, indicating that a more robust definition is necessary. Additionally, the codes *Demonstrate Motivation to do Labor-Intensive Work* and *Demonstrate Purposeful Approach* were hard to differentiate. The question over whether a particular annotation was more about effort or motivation left me questioning the ways we code dispositions generally.

Broadly, this workshop proved that most of the initial components of ECR are identifiable in student annotation habits and can be consistently applied to individual annotations. Despite this hopeful sense of validity, I was challenged to clarify a number of the predetermined codes of engaged critical reading and to outright re-think certain codes. For example, I altered

my description of *Testing Validity* to help articulate its distinction from *Assessing Context*. Further, I found instances of *Demonstrating Empowerment and Responsibility* whereas before (in round I of coding) I couldn't see any clear instances of that disposition.

Retrospective Analysis

After macrocycle I (Fall 2020), macrocycle II (Spring 2021), and three initial coding rounds were complete (by June 2021), an iterative and complex retrospective analysis of data (Gravemeijer and Cobb, 2006) began. This retrospective analysis involved going back and revisiting the entire sets of data (across both macrocycles, when possible) with a fresh, reflective mindset (Gravemeijer and Cobb, 2006) in order to collect emerging patterns or themes across all sets of data. According to Colwell (2013), this holistic and retrospective approach involves examining the consequences of the intervention and the relationships among complex variables after the intervention is complete to generate assertions from data that reaffirm, refine, or add to existing theory (Gravemeijer and Cobb, 2006).

Like all things DBR, this retrospective analysis happened in iterative, hard-to-isolate (and, therefore, hard to describe as separate) phases, though Duffy (2001) and Colwell (2013) help me articulate six distinct phases. I collected together all my notes from every possible perspective of the intervention (the Canvas course shell, my own researcher's log, students' reflective logs— all coded for intervention-specific details) and continued to

write thick descriptions of the questions, patterns, curiosities, etc… that I saw in that collection (Phase I). I then printed reports from Atlas.ti that organized codable instances across both macrocycles (e.g., all codable instances of *Positive Reactions to the Intervention, Negative Reactions to the Intervention, Willingness Toward Praxis*) and I printed the survey data so that I could mark those reports in the margins, seeking out notable recurring patterns and anomalies, connections, and discrepancies (Strauss and Corbin, 1998) (Phase II). Additionally, in Phase II, I reviewed and transcribed recorded interviews with students and listened/took notes on the recorded TA workshop (from coding round III). In Phase III, I created digital records (Duffy, 2001) of those patterns and anomalies using Excel, and crafted tables and charts that helped visualize the emerging patterns. I put those charts in visual relationship to other charts, repeatedly, until I saw notable categories (Phase IV). Following that long phase of data organization and reorganization, I narrowed in on particular categories that spoke to the research questions across all data sets (Phase V). These categories yielded three specific themes (each theme is a separate chapter of findings) and, deviating from Duffy (2001) and Colwell (2013) a bit here, I took those themes and re-visited all the major sets of data in order to check the occurrence, to collect instances of those themes (qualitative and quantitative instances), and checked them against my research questions. Once I had an articulable collection of data to support these themes, I checked their viability with my

dissertation chair (Phase VI, according to Duffy, 2001). For samples of handwritten coding and analysis of data, please see Appendix G.

Analytical Rigor

Most importantly, my attitude toward the data and the analysis remain critical to understanding these cycles and the interpretations yielded from the coding processes. One key means of maintaining rigor in design-based research studies is to cull together data from multiple sources using multiple methods (Reinking and Bradley, 2008). Data collection is intentionally widespread so as to adhere to standards of rigor in qualitative methods, including multiple sources of data for triangulation (Creswell, 2007; Reinking and Bradley, 2008) or the "combination of two [...] sources in order to study the same social phenomenon" (Tashakkori and Teddlie, 1998). Essentially, the variety is what contributes to the rigor of triangulation and this study remains committed to a variety among data sources, theories, and methods. Additionally, this study remained committed to the participants' own efforts at analysis, as well. Students' definitions of the goals and their reflections challenged my codes and coding schema to help ensure that data reflects what was important to them— a form of rigor that is grounded in staying true to participants' insights. This study's attempt to derive meaning from a variety of places and contexts help "produce findings, interpretations, and recommendations that are more trustworthy, and convincing, and thus more

rigorous" (p. 56) is complex and a challenge to describe clearly, but nonetheless central to the design.

Of course, rigor also often implies generalizability and objectivity. The generalizability of the results of this study align with Bannan-Rittland's (2003) adapted definition where the primary goal is to generate "insights usable, actionable, and adoptable" (as cited in Reinking and Bradley, 2008) in transcontextual ways, specifically applicable to the breadth of FYC courses who struggle with the same pedagogical challenges. Regarding objectivity, being truly objective in research is an impossibility (Harding, 1986). So, instead of claiming objectivity, this study aims for the pace set by Blakeslee et al. (1996), "as researchers, we must exhibit a greater willingness to learn with rather than from or about those we are studying" (Blakeslee et al., 1996, p. 142). For this current effort, that means employing a requisite amount of objectivity, especially with data collection and analysis, but an even stronger goal of reflexivity, transparency, respect, and flexibility.

Conclusion

The deliberate design of the intervention, the iterative analysis throughout the intervention (to shift design components as necessary), followed by three rounds of coding, and the in-depth retrospective analysis (in six phases) of the emergent patterns from both the quantitative and qualitative data— all resulted in three key findings or themes, organized, and discussed in detail in the next three chapters.

CHAPTER 6

FINDING I: STUDENT REACTIONS TO THE INTERVENTION

Upon deep retrospective analysis of emergent patterns across all data, collected from both macrocycles, three primary thematic categories emerged. The categories of findings represented in these next three chapters are meant to approach those emerging patterns within the data from separate perspectives. This first category of findings relates to students' emic view of the intervention, exploring both positive and negative patterns in their reactions to social, digital annotation. The second category of findings—students' shift in skills, behaviors, and dispositions of engaged critical reading— presents an etic view of the data, illuminating patterns that result from my coding of student annotations directly. Finally, the third category of findings speaks to students' own evolving opinions on the relationship between reading and SDA (the reading we've done and the act of reading more generally) and their motivation towards civic participation. This emic view also explores students' dispositions toward meaningful action beyond this class.

In this chapter, I discuss the first emergent theme: the overwhelmingly positive student reactions to the social, digital annotation (SDA) intervention and the smaller, but significant, collection of negative reactions. This discussion answers a wide call among researchers for a student-centric focus on the impacts of social, digital annotation (O'Dell, 2020), particularly around

perceptions and impacts of the tool on their reading and writing. In response to that call, the findings in this first category of student reactions to the SDA intervention are drawn from students' own direct reactions to the intervention, collected from their reflective logs, post-intervention survey responses, and interview transcripts of the four exemplar cases.

<div align="center">**Positive Reactions to Intervention**</div>

Student reactions to the intervention of social, digital annotation was overwhelmingly positive. The great majority of students reported seeing the benefits of this form of annotation on their reading habits and goals. There were 177 codable instances (named *Reactions to Intervention*) taken from the collection of student reflective logs and survey responses, representing a range of positive reactions from a majority of students. That range is explored in the following sections.

Skills and Behaviors

In this section, students' positive reactions to the intervention, specifically in response to the skills and behaviors of ECR, are detailed.

Social, Digital Annotation Aids Comprehension

Whether the language is simply dominant in students' prior educational experiences or not, the most common positive response to the intervention was the claim that Hypothes.is helps them understand text better (most used the term *comprehension*, see Figure 15). Of the 177 total

codable positive reactions to the intervention, 58 of those instances refer to comprehension as the primary reason they found the tool productive.

Figure 15 *Graph of Positive Reactions to Intervention*

Positive Reactions to Intervention (Skills & Behaviors)

Category	Value
EXPANDED THINKING/IDEAS	29
CRITICAL THINKING	27
SEE OTHERS' POV	17
COMPREHENSION	58
MAKE CONNECTIONS	22
FORM, JUSTIFY, ARTICULATE MY OWN OPINION	25
RETENTION	13
PRAXIS	11
SLOW DOWN	7

■ Positive Reactions to Intervention (Skills & Behaviors)
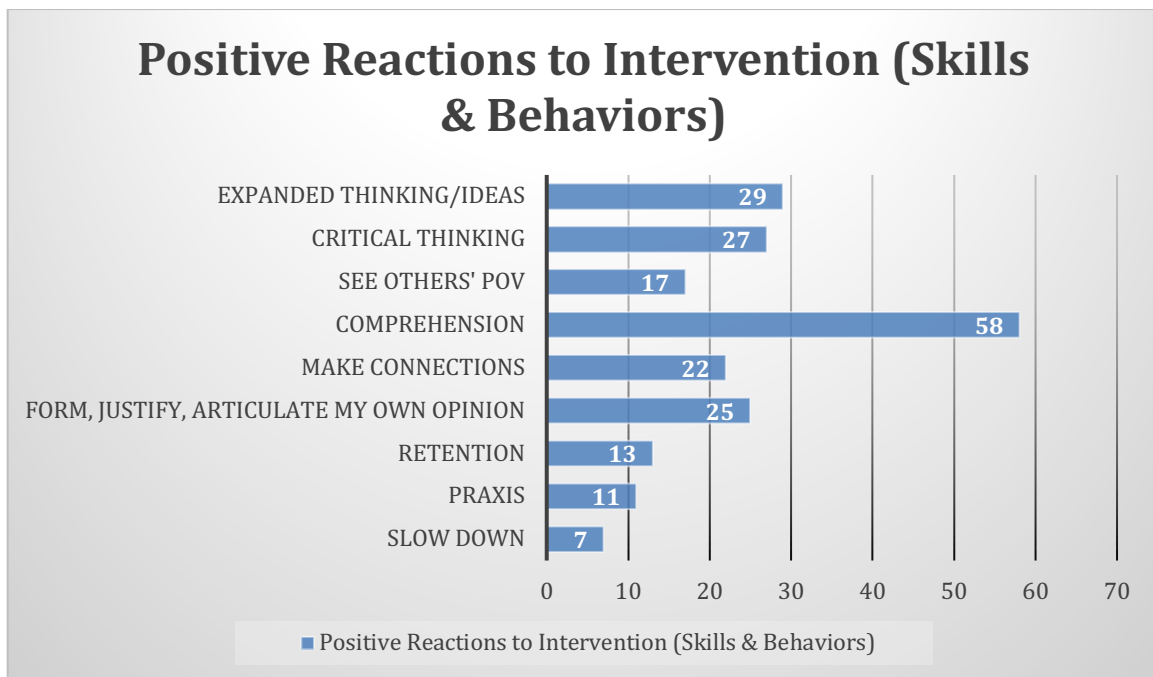
Specifically, students say that they found themselves looking at the other students' comments to better understand the text and their peers' interpretations of the text. In fact, many students found that those peer annotations were particularly helpful when the text was most challenging: "their ideas on the text combined with my questions really made the text itself not only easier to understand, but even more interesting" (Reflective Log #3).

Students mostly claim that Hypothes.is helped them increase their comprehension, too, in that they were asked to articulate their ideas fully, often breaking up the task of understanding a complex text into more manageable chunks, explaining that "writing things out can help me understand better" and "organize my thoughts" or "break down sections....to piece together meaning" and "get to its bones" (Reflective Log #4). As one student put it, "the more I annotate, the more connections I can make which in turn allows me to understand further" (Reflective Log #4). Other reactions were more general, but unmistakably positive: "Honestly, sometimes without [these] annotations, there's no possible way for to comprehend a text" (Reflective Log #4).

Social Digital Annotation Improves Retention/Helps Track Thoughts

Many students noted that Hypothes.is helped them keep track of their thoughts far more than private annotations. Writing down their ideas in the way encouraged by Hypothes.is "makes me think about what I just read or else I'd forget" (Reflective Log #7). Many alluded to the power of externalizing thoughts in order to put those ideas back together again at the end of an extended period of reading. In fact, many said that the ability to track their thoughts was the key advantage of using Hypothes.is for annotations. Not only did the annotations provide an externalized memory during a reading event, but across multiple reading events, too.

While students were not directly asked to compare their Hypothes.is-based annotation to their private annotations, many did. A code was created in response to this trend, called *Private vs. Public*. In many students' opinions, their private annotations seemed cryptic (even to themselves) and primarily involved identifying vocabulary terms (but not always defining them). The students reported that the private and largely symbolic annotations (e.g., highlights, underlines, squiggly lines, etc…) were not a good way to keep track of ideas or retain ideas for future use.

The retention of ideas throughout a reading event (and across reading events) was significant. In fact, Hadeel spoke to this reaction in her interview and notes that she saw great value in being able to "go back in the text and find" her annotations easily and track how her ideas had changed from her first reading of the text.

Beyond seeing the evolution of a reader's own ideas from one reading to the next, keeping track of their ideas helped students use the important ideas/words/lines in other tasks (e.g., writing). To one student, annotations gave them something to "go off of when I come back to the text after my initial read" (Reflective Log #4). Many students appreciated that they'd one day want this information again (e.g., to cite in a paper, to argue with a friend, to see how their ideas have changed). This added to this study's concept of praxis in that students saw value in keeping track of text in order to *do* something with that text later. Some students kept track of ideas/concepts

that they'd want to pursue for greater understanding at another time. With these social annotations, they felt confident that they could go back to part that they "would like to learn more about" (Reflective Log #4).

For many students, SDA created a stronger connection with the text in the first place, leading to greater recall. SDA "helps [to] absorb more information....and to have a constant interaction with a text [which] creates a unique experience that is easier for me to recall in the future" (Reflective Log #4). This sort of [social, digital] annotation was helpful for understanding, for sure, but moreso, for "putting [those ideas] into a personal practice" like the development of personal meaning (Reflective Log #4). That personal meaning-making aided memory, as evidenced by one student who said that "I'm surprised by how much I can remember about the articles we've read over the semester, and I know it's because of the annotations I made. I can recall many of the comments I made, which reminds me of what I read. Annotation helps my memory" (Reflective Log #7).

Dispositions

Beyond the skills and behaviors, students relied on each other for help with a more comprehensive understanding of the text and its meaning. The 2nd most common description for the benefits of using Hypothes.is, from the students' own point of view, speaks to the dispositions of engaged critical reading. Students reported some version of the way Hypothes.is helped expand their thinking/ideas and bolster a flexibility of mind. This was,

expectedly, articulated in a variety of ways, but all articulations point to similar themes. Those themes are discussed more fully in Figure 16.

Figure 16 *Positive Reactions to Intervention (dispositions)*

Positive Reactions to Intervention (Dispositions)
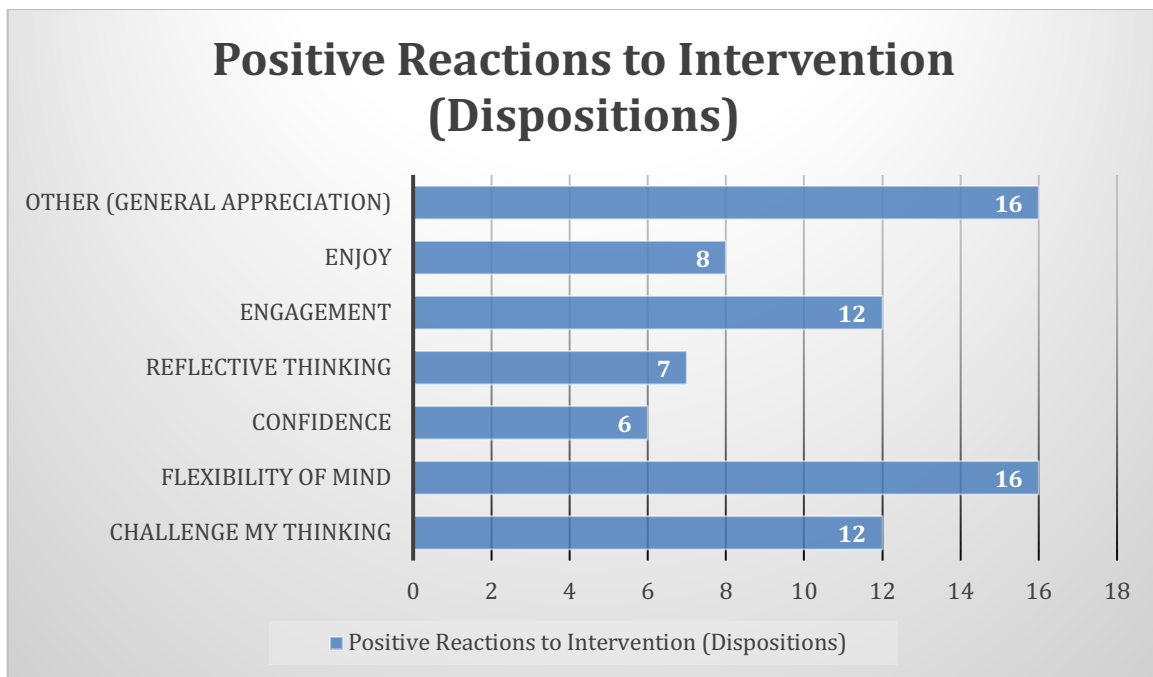
SDA Increased Engagement and Enjoyment

Not only did students see the value of Hypothes.is on comprehension, but also on their engagement with the text: "I think it creates a deeper level of comprehension because I am more engaged in the text" (Reflective Log #3). One student attributed their efforts at social, digital annotation as helping them to reference or think "about these texts more in other conversations and assignments" because the social annotation helped them "form a deeper connection" the text (Reflective Log #4).

At times, this increased engagement presented as a comment on enjoyment. For example, "I enjoyed being able to gauge how my peers felt…which was very cool to read" (Reflective Log #3), or "It was also fun and engaging to be able to discuss opinions and ideas in the article" (Reflective Log #6). Or, again, as one student described the experience, "I personally enjoy seeing what other peers have to say about certain ideas….I think it adds perspective" (Reflective Log #3).

Many students found "annotating with a group much more engaging than annotating by myself" (Reflective Log #6). Their interest was piqued by the opportunity to read their peers' thoughts. According to one student, "I began reading texts and posting [annotations] not just because it was assigned but because I was genuinely interested in what my peers had to say" (Reflective Log #7). Another added to this sentiment, "it was exciting to read through an article and dive into the thoughts of other students in the class" (Reflective Log #7) and many found that this opportunity to read other readers' ideas or questions "initiated a deeper level of engagement" (Reflective Log #6).

For others, SDA provided a sense of accomplishment, "I also liked the sense of gratitude and accomplishment that came when others responded to my annotations" (Reflective Log #6), or fostered a feeling of responsibility to their peers: "I got more into the text and had a lot more opinions on it

because I knew I would be communicating with other people through them and I would need to respond to other people" (Reflective Log #7).

SDA Increased Confidence

Kassidy was hesitant with SDA— in her reflective logs and her interview. Still, despite her hesitation, her confidence was bolstered when she read an annotation that proved that "I'm not the only one who thinks that" (Personal Interview) and she appreciated annotations that challenged her interpretations. Her peers' annotations invited her to go back into the text to ask "did I read that right?" which helped her resolve to commit to her own original interpretations of the text.

The fact that students had to articulate their opinions more fully seemed to be a catalyst for this bolstered confidence: To one student addressing the reason for their increased confidence, "I would say all of the conversations we have had over the semester is that I know that my fellow classmates will totally understand my opinions and try to elaborate by sharing their opinions as well so that we can have a nice conversation about it" (Reflective Log #7). For others, the confidence was in their ability to read a complex text at all. For one student, breaking down the complexity into smaller chunks was key: "Before this class, I would skim an article and instantly become overwhelmed and decide to skip on reading it. Now, I am able to look at a difficult text and think to myself 'this is doable'" (Reflective Log #7).

The flip side of increasing confidence was decreasing barriers to that confidence, like fear. Many students express fear of reading and writing in the beginning of a course like this one. One student expressed overtly that, after repeated practice commenting on other students' annotations, "I am proud to have overcome my fear" (Reflective Log #7). I suspect that repeated exposure to SDA helps reduce commonly reported fears of college-level reading by providing a new way to engage other readers in the collective meaning-making process.

SDA Expanded Thinking/Helps Formulate Opinion

Of all the positive reactions to the intervention, 29 total codable remarks qualified as "expanding thinking." As one student put it, "when I read normally, I have blinders on, but when I read and annotate, I *think* more" (Reflective Log #4). This was indicative (though articulated in various ways) in several reflective prompts and, for many students, the social nature of this platform caused them "to think differently," not just more (Reflective Log #4).

Hypothes.is seemed to help students be open-minded to what the text means and how others are making meaning of the information: for some students, SDA was key to critical thinking *because* it helped them stay open to what other people might think about the ideas in the text: "Reading others thoughts and ideas deepens my personal understanding and can even introduce ideas I didn't think of" (Reflective Log #4). Reading and talking to other readers helped because "their thoughts have made me think in a

different perspective" (Reflective Log #4). Reading other's comments, or seeing others' perspectives, helped students "make connections I otherwise would not have" made (Reflective Log #3). Some reported the experience as newly refreshing, "hearing other people's opinions has been really refreshing and provides a new perspective that I can bounce my own thoughts on" (Reflective log #5) while others appreciated the chance to get out of their own heads: "the different perspectives [offered to us via Hypothes.is annotations] have allowed us to branch out beyond our personal opinions and views of the given articles" (Reflective Log #6). Many students echoed the sentiment that seeing others' opinions on a text was key and accessible via social annotation. Specifically, some students pointed to the real-life examples that many students offered in order to illustrate a point made by an author (Reflective Log #6) as most helpful in understanding and forming opinions about a claim.

For several students, the fact that these annotations gave them a way to discuss a text, a specific set of assertions, in a civil manner, contributed to their ability to hear others' perspectives. "While I didn't agree with all of my peers, it was nice to hear what they had to say on the matter and interact in a way that is civil" (Reflective Log #6).

For many others, the real benefit to SDA was the call to articulate their thoughts for public consumption. Some students attributed this benefit more specifically to being called to write out their own thoughts for others

consumption: "Despite my seemingly dislike of annotating, using Hypothes.is has been showing me the benefits of writing out my thoughts. For one, I am more likely to think through the material in different contexts …to form a respectable opinion" (Reflective Log #4). Another said, "having to explain my thoughts to others made me analyze my thoughts about the material even more" (Reflective Log #6). Some likened this process to teaching others, my understanding was enhanced "by explaining or teaching the concept to someone else" via social annotation (Reflective Log #7). At times, students attributed the expansion of thinking to the call to type out ideas in a way that is comprehensible to others— often far more "thorough and detailed" (Reflective Log #6).

Hadeel practiced annotations via Hypothes.is that felt far more meaningful to her as she went along, including questioning the author more, dissecting passages more thoroughly, and challenging herself to truly "get it." For Hadeel, the performance of Hypothes.is was a catalyst to challenge herself since that challenge was on public display (Personal Interview).

Annotating alongside others noticeably helped students not only reflect on why they think what they think, but also sometimes change their original opinion when they encountered a well-defended interpretation (Reflective Log #4). In fact, there were 16 instances where students spoke directly to the way that SDA fostered flexibility of mind— a key disposition of engaged critical reading.

SDA fostered a more deliberative reading process for many students where engagement led to new ideas, "annotation...forces me to engage on a deeper level with what I'm reading. It inspires my thoughts to do deeper and come up with thoughts and ideas I had no idea I had" (Reflective Log #4). With the social annotation, one student noticed that they "read more deliberatively" and helped them constantly reflect on whether they agreed with something or how they could take a specific thought further.

Other Positive Reactions

In addition to positive reactions specific to components of the engaged critical reading model— the skills, behaviors, and dispositions— students noted other reasons to feel positive about the SDA intervention.

SDA Built Community

Community-building wasn't the goal of the intervention, but it was a prominent pattern among the positive reactions to Hypothes.is. Despite being an avid annotating reader, Hadeel really liked the "structure of Hypothes.is" and the way that structure made the class feel more personal. Hypothes.is made the class feel "like we were really interacting with each other and interacting with you" (Personal Interview). Although she'd experienced discussions in Canvas in other online classes, she felt like the addition of Hypothes.is made the class more personal.

As another student put it: "The act of responding to others' comments on an article, and seeing other's responses to mine, ends up feeling much

more like a fluid conversation" (Reflective Log #6). Many claim to have

focused on interacting with peers because "it adds to the reading experience

much more" (Reflective Log #6). This is general praise, indeed, but it speaks to

the desire for more interaction, increased opportunity to build communities--

an especially challenging task in asynchronous online courses.

SDA Improved Strategies of Reading

When asked to describe their strategies for critical reading (on the pre-

and post-survey), annotation ranked as a top *Strategy of Reading* before the

intervention (13 total on pre-survey). Many students reported having

annotated a text in prior coursework and some found value in those

annotations, though "re-read" was, by far, the most common reported

strategy of reading.

Figure 17 *Strategies of Reading (pre-intervention)*

Figure showing "Strategies of Reading (pre-intervention)" horizontal bar chart:
- RE-READ: 30
- HIGHLIGHT: 10
- LOOK UP UNFAMILIAR WORDS: 14
- SLOW DOWN: 7
- TAKE NOTES: 8
- ANNOTATE: 13
- TALK TO OTHERS: 3
- SUMMARIZE/PARAPHRASE CHUNKS: 6
- IDENTIFY CONTEXT: 3
- READ OUT LOUD: 3
- LOOK UP MEANING ONLINE: 8
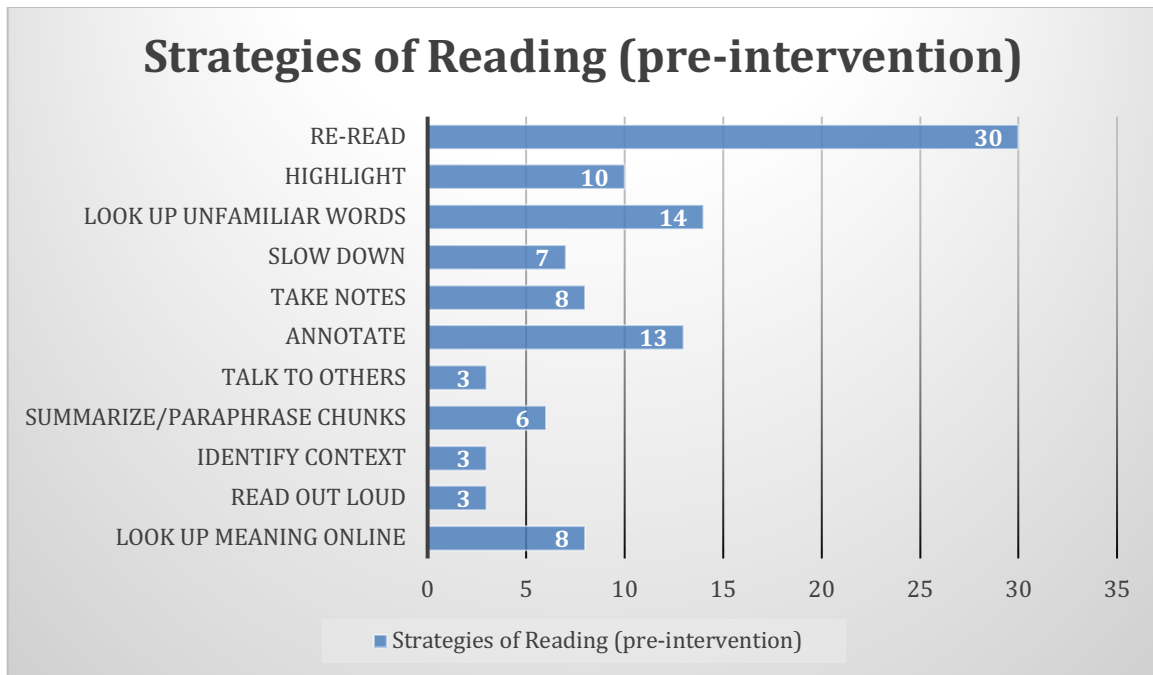
By the end of the course, however, in the post-intervention survey, more students ranked annotation as a key priority in reading strategies (17 total), and, most notably, further nuanced some of the moves made in their annotations: such as highlight, paraphrase/summarize, take notes, seek context, and have conversation with others (moves evidenced in their SDA-based annotations).

Figure 18 *Strategies of Reading (post-intervention)*

Strategies of Reading (post-intervention)

Strategy	Value
OTHER (ASK TEACHER, COME BACK LATER, SCAN...	9
RE-READ	14
LOOK UP VOCBAULARY WORDS	8
ANNOTATE	17
CONVERSATION WITH OTHERS	3
ANNOTATION (SPEC. HYPOTHES.IS	6
SLOW DOWN	4
SEEK CONTEXT	2
LOOK UP MEANING ONLINE	2
CATEGORY 3	2
TAKE NOTES	2
BREAK TEXT INTO CHUNKS	4
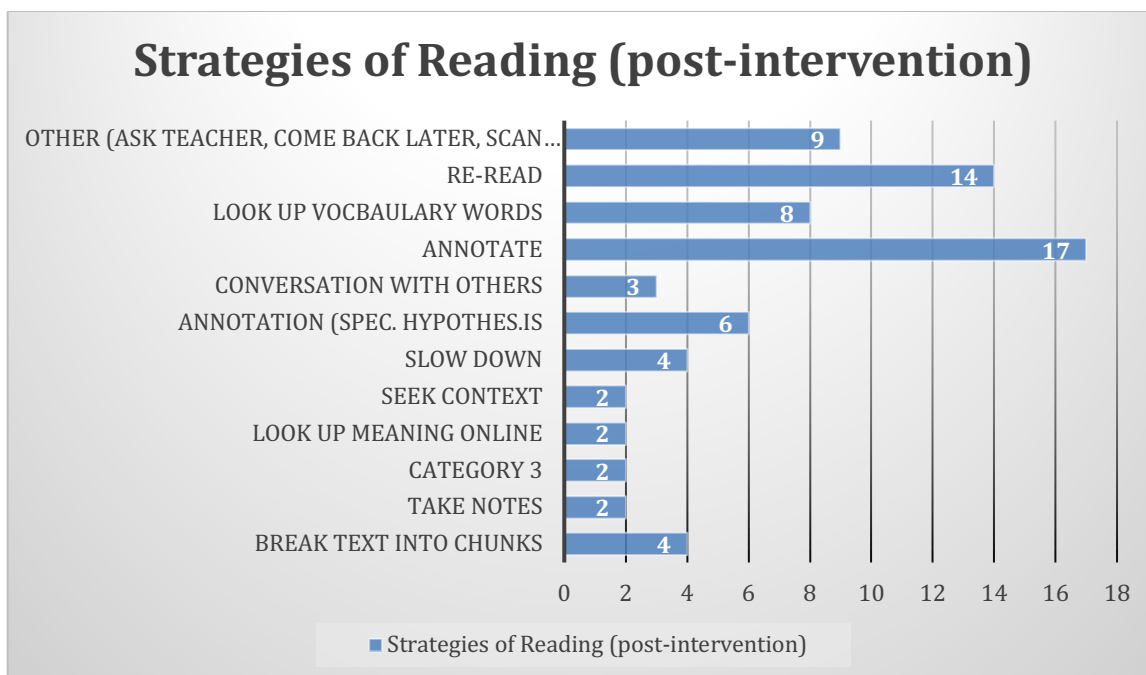
The quantitative shift in reported reading strategies is a bit underwhelming, but the students' own words and habits of annotation were far more telling. Many students attributed the improvement in their reading processes to the way that social, digital annotation increased the active nature of reading. One said, "Without annotating like this, I could 'read' an entire chapter of a book without retaining a single ounce. [This type of annotation] has helped me become a very active reader and I am very thankful for it" (Reflective Log #4). After several instances of social annotation, one student expressed gratitude for the chance to "branch away from highlighting" (a strategy many students brought to the private annotations of

first reading event) and instead focus on commentary, asking questions that further my understanding of the text (Reflective Log #7).

A common theme was how Hypothes.is encouraged them to slow down: Hypothes.is often has the effect of "pausing to write or highlight" more often, so in turn….finding reason to engage in the "deep thought" needed to make "more connections" (Reflective Log #4). Another student echoed this claim, and said that with Hypothes.is, they "paused to think about what [are] reading more than" if they weren't using the tool (Reflective Log #4). They also felt like SDA helped them focus, claiming that Hypothes.is increased comprehension mostly because "I focus on what I am reading more" (Reflective Log #4).

Students also reported asking more questions of an unfamiliar idea/claim rather than giving up on the text entirely (Reflective Log #6) and felt emboldened to articulate their ideas, and back them up more fully as a reading strategy.

Overwhelmingly, students articulated that annotation was an important reading strategy (80% of respondents) when directly asked. Additionally, SDA was brand new to most students: 69% of survey respondents claimed that their reading strategies were new as a result of this class.

Figure 19 *Response to Question: Is annotation an important reading strategy?*

Figure 20 *Response to Question: Are your strategies new?*

Social Digital Annotation vs. Private vs. Annotation

Any student comments that directly compared personal to public annotation habits were coded as *Private vs. Public*. After coding student reflective logs (coding round I), then using pattern coding to determine more nuanced themes within that coding group (coding round II), the data proves that some students preferred private annotations (discussed to some degree later in this chapter, in *Negative Responses to Intervention*) because they felt more comfortable keeping some ideas private; however, far more students found social annotations more beneficial than the private annotations they were already accustomed to.

Hadeel said that, with her private annotations, she mostly focused on vocabulary words to look up and, after looking back at her initial annotations, she was disappointed to see that she'd often written "the first thought that came to mind even if it didn't correlate with the text" (Personal Interview).

Figure 21 *Image of Hadeel's Annotations (pre-intervention)*
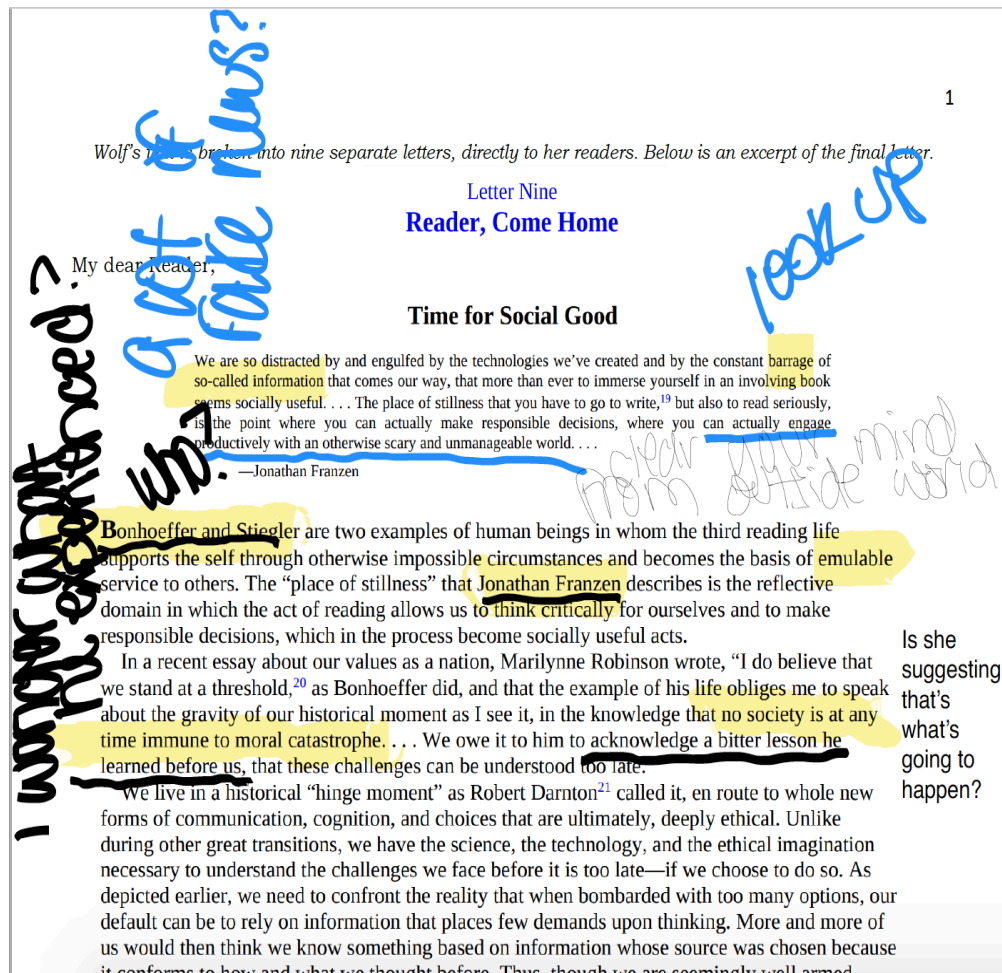
Many noted that their private annotations were mostly just summaries (which reflected what I saw in Reading Event #1) or marks that don't clearly indicate what the student found important/interesting/etc... One student went back to see their private annotations of Wolf's "Reader, Come Home" and found that they "don't really know why I highlighted some of these phrases" (Reflective Log #6).

By contrast, public annotations, because an audience is presumed, necessitated clearer articulation. There was great benefit in that articulation, apparently— for other readers as well as for the individual adding a new annotation. For many students, the added substance of SDA was in the interaction with peers: "I think social annotations are more valuable to me as a reader than normal annotating. As a reader, annotating my own thoughts doesn't do much to help my understanding. But reading others' thoughts and ideas deepens my personal understanding and can even introduce ideas I didn't think of" (Reflective Log #4). As one student articulates: While private annotations allow me to express my opinion without "worrying about others," social annotation encourages "engagement and more developed thought processes" (Reflective Log #4).

Further, SDA bolstered their ability to think about and do something with text. "Annotation in this way not only gave me that moment to pause and think critically, but it also made the test more memorable. I've noticed myself referencing or thinking about these texts more in other conversations and assignments. I think that might be because my annotation has allowed me to form a deeper connection with the works" (Reflective Log #4).

Negative Reactions to Intervention

Hypothes.is was not a home run for all students, though even those that expressed hesitation almost always noted the value of SDA in other comments. The negative reactions to SDA were far fewer in number. Only 15

separate codable remarks from only 10 separate participants spoke to the negative reactions to Hypothes.is. However, these negative reactions tell us a lot about how to better manage social, digital annotation.

Skills and Behaviors

While negative reactions to the intervention was the minority response, the ways that those reactions speak to the skills and behaviors of engaged critical reading spoke to the importance of crafting any annotation assignment well. See Figure 22 for the breakdown of the negative reactions that are specific to the skills and behaviors of engaged critical reading.

Figure 22 *Negative Reactions to Intervention (Skills and Behaviors)*

Negative Reactions to Intervention (Skills & Behaviors)
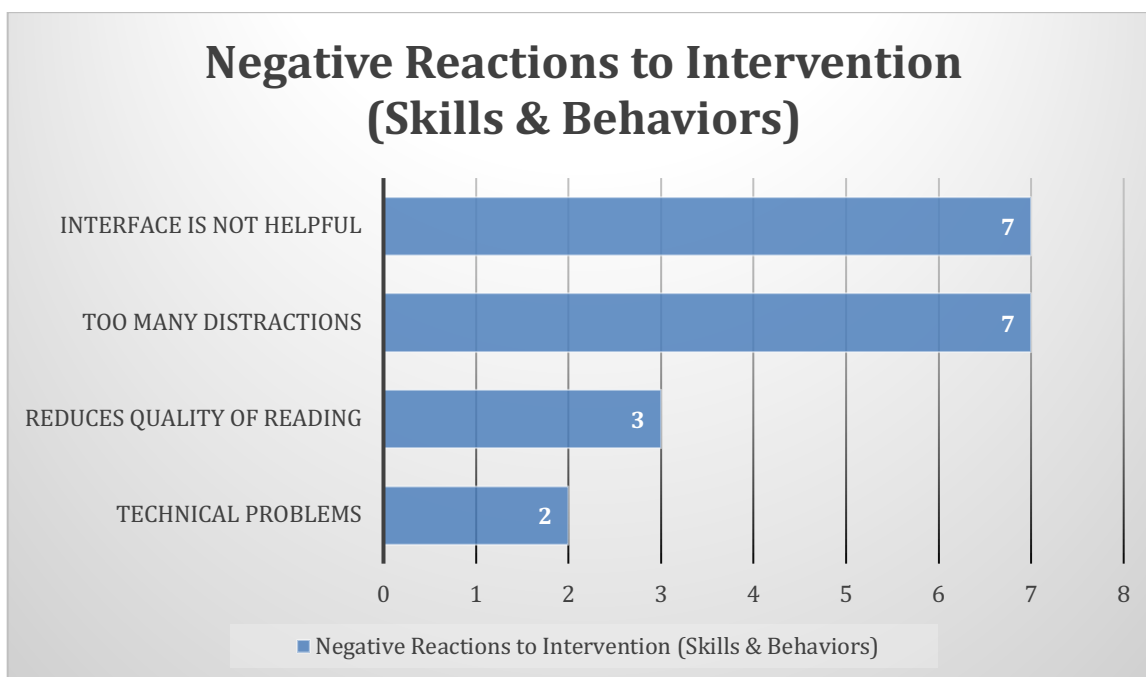
Distractions

The most common negative response to Hypothes.is is an understandable one— distractions. Some students noted that simply reading online is, in and of itself, rife with distractions; after all, computers are pinging for our attention at every swipe. However accustomed students have become to those distractions, Hypothes.is presented a new, greater obstacle to focused reading.

Kassidy was skeptical of Hypothes.is most of the semester. She claimed that the interface forced her into "constantly stopping and reading the annotations from other classmates [which was very distracting] and adding to the time it took me to get throughout the initial read of the article" (Reflective Log #3). She went on to elaborate that the digital highlights (which are all visible on the social document) made her curious about the highlights and, consequently, she spent more time checking "what someone said about it, rather than thinking for my own about quotes" (Reflective Log #3). These highlights were an issue for another student, too, in that so much of the text was highlighted that they struggled to balance finding something new to say about an unhighlighted section of text or sticking to their original annotation instinct (especially if their original idea was ground already covered by other students). Clearly, the student's individual reading path was altered by the collective and cumulative nature of collective annotations.

Interruption to Critical Reading

There was a small, but mighty, cohort who preferred private annotations because the social involvement stymied personal expression. Kassidy, for example, explains that SDA halted her own independent thought about a text. She prefers to read the text herself first, work on developing an opinion absent of others' input, then engage in the digital conversation of Hypothes.is. To read publicly was, at times for Kassidy, inhibitive to the development of her own meaning, her own opinion.

For Sharita, too, annotating on Hypothes.is meant that all those other voices were there, crowding out her own reading experience (Personal Interview). Sharita didn't think SDA was a bad thing, overall, but "I just think it didn't allow me to express my annotations the way that makes sense to me…because it felt like it was more for like everybody else to be able to see" (Personal Interview). Further, with the Wolf text (Reading Event #1, private annotation), Sharita thinks her annotations were really focused on "me understanding the content and now connecting it back to previous things that I've reader or thing that I think I'm going to learn or questions that I have about this text or how this might relate to something else"; however, on Hypothes.is, she couldn't annotate that way. The performative genre of social annotations drew her away from the more private and personal reading experience, diminishing "some of my creative and organizational touch to annotation" (Reflective Log #6). Sharita admits, though, that she is a bit

biased against the internet and the over consumption of news and the anxiety of public annotations certainly played a role in her concern with Hypothes.is.

One other student felt like the collective student annotations muddied up the message of the original article, especially distracting when they were contradictory to their own ideas: "because I disagree with some of the reader annotations and that sometimes ruin the writer works for me" (Reflective Log #4). For some students, at particular points in the reading process, Hypothes.is actually inhibited their creativity, interrupted their independent thought, and slowed them down unnecessarily.

Dispositions

In addition to the negative reactions that speak to the skills and behaviors of engaged critical reading, students' reactions spoke to the dispositions of the reading experience, as well.

Figure 23 *Negative Reactions to Intervention (Dispositions)*

Negative Reactions to Intervention (Dispositions)

Category	Value
FEAR OF PUBLIC EXPOSURE	9
PREFER HANDWRITTEN ANNOTATIONS	2
PREFER PRIVATE ANNOTATIONS	4

■ Negative Reactions to Intervention (Dispositions)
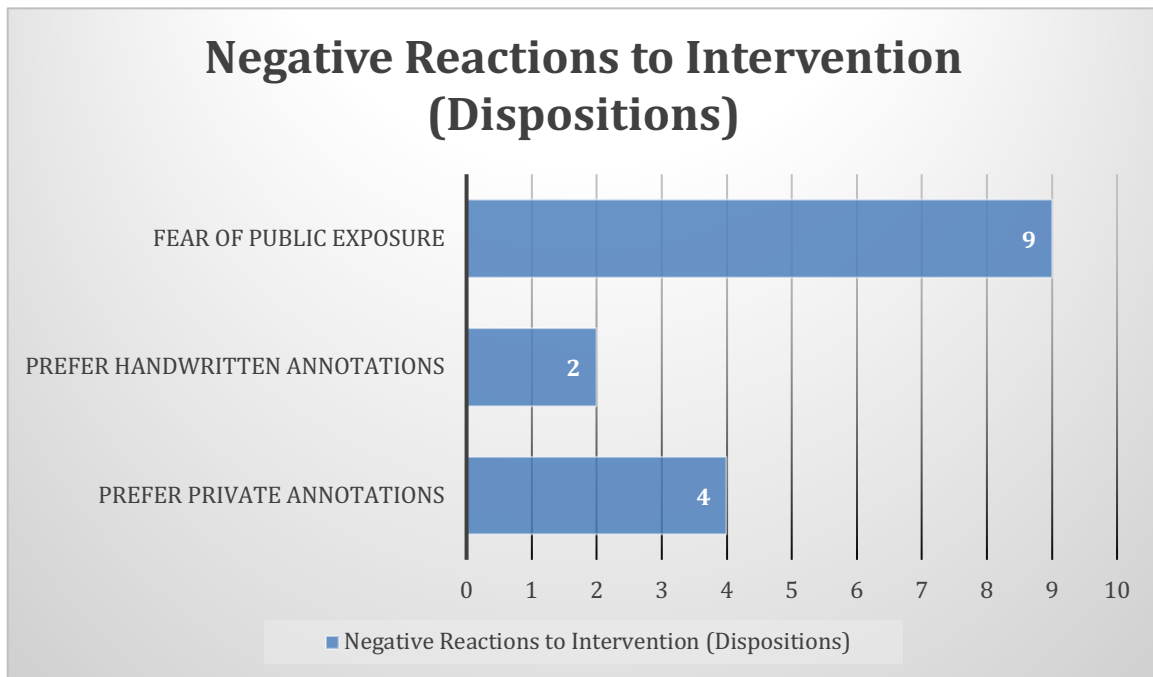
Fear of Public Exposure

Students' fear of public exposure was one of the most interesting and complicated negative reactions to SDA (9 codable instances). Going public with annotations is indeed a double-edged sword. There is an audience, a public to engage with, a pool of ideas to challenge and bolster our own internal dialogue. However, along with that public pool of ideas comes the challenge that is inherent in most digital writing/reading spaces: exposure. There is a risk in publicly engaging with others' ideas. My students' expressed this fear as one of possibly hurting others' feelings, or having nothing worthwhile to say, or maybe even offending others.

Kassidy articulates this fear well: "I think the main thing is just that when I'm annotating and I know like other people are seeing it I just my mindset kind of changes and I'm kind of thinking like how will they accept what I say or like how will they think when I say this" (Personal Interview). However, when annotating privately, "I kind of like don't think about all of that stuff that other people are thinking and I can just go in my mind" (Personal Interview). Kassidy noted that she has a hard time getting to her own opinions when her thoughts are crowded out by others' opinions. She "kept looking at what other people were saying and that really affected what I was saying so I noticed it would be better for me to like annotate it privately and then go back on my Hypothes.is and write everything I said" (Personal Interview). Kassidy felt too easily influenced by others' ideas and needed an initial chance to form an opinion before engaging in the conversational nature of social annotation. Private annotation allowed to "think more freely" and "more deeply" since she didn't feel publicly compelled to "agree with this person" to be polite. She prefers to ask questions of a text without judgment (Reflective Log #3).

One student likened Hypothes.is to "comments on a Facebook post." While it seemed a more respectful space, according to this student, "it does have that feeling of putting oneself out there for criticism" (Reflective Log #4). Students were noticeably and understandably sensitive to this sort of exposure in a public forum.

The SDA environment necessarily altered how students are willing to annotate and on what sorts of texts they were willing to take a public stance. For example, one student noted that they didn't make any "emotional public annotations" (Reflective Log #7) because doing so would seem unprofessional and/or offensive to another reader. Students were self-censoring their reactions in any individual reading event because of the public nature of Hypothes.is. There are benefits and challenges to that sort of self-censorship (explored more fully in chapter 8).

Conclusion

This chapter addressed the primary question— the question inherent to every design-based research study— related to whether the intervention worked and under what conditions it did/did not work, specifically from the students' points of view.

This study asked: Does and, if so, under what circumstances does social, digital annotation (using Hypothes.is) enable students to learn skills, behaviors, and dispositions attributed to engaged critical reading? And, at least from the students' reactions to the SDA intervention, the intervention proved overwhelmingly positive in ways that speak directly to the skills, behaviors, and dispositions of engaged critical reading. Students saw benefits to their comprehension, their engagement with the text, their confidence, their active reading strategies, and their ability to challenge and expand their own thinking. Though the negative reactions were small in number, those

reactions were provocative and warrant far greater discussion (more in chapter 8) to better understand when and under what circumstances the performative nature of SDA is generative or inhibitive to achieving improvement in ECR.

CHAPTER 7

FINDING II: STUDENTS' SHIFTING SKILLS, BEHAVIORS, AND DISPOSITIONS

OF ENGAGED CRITICAL READING

In this second chapter of findings, I take an etic approach to seeking patterns among the results of coding students' annotations. Rather than relying solely on what students *say* about their own annotation practices, this chapter explores the patterns found in the annotation habits themselves across all reading events (one baseline, five SDA-based events, and one LMS-based discussion). In this more etic approach to the data, I'm able to gauge the value of the intervention beyond students' self-reported experience. This view of the data is important to this study, especially in this context that supposes students enter the college classroom with an incomplete conceptualization of reading. Students may not yet recognize the kinds of reading habits and goals they exhibit and, even if they can acknowledge their habits and goals while reading, they may not comfortably express them. For example, students' language seems to indicate that the primary goal of reading is to comprehend what someone else has to say, not to co-construct meaning for themselves and, as such, might not know how to articulate some of the reading outcomes proposed by the ECR model. That limitation necessitates a close review of the data from an etic perspective.

In this section, I examine— from an etic point of view— the quantitative and qualitative data that speaks to the shifting skills, behaviors, and

dispositions of reading as a result of repeated exposure to the SDA intervention. Much of the data presented in this chapter is from students' annotations across all six reading events, though the qualitative data found in students' reflective logs and survey responses are included as well.

<div align="center">**The Shift: A Quantitative View**</div>

The Baseline: Private Annotations

The semester began with a reading event that asked students to annotate in any way they saw fit. They were asked to read Maryanne Wolf's "Reader, Come Home" and the text was provided digitally, as a PDF file. The prompt read:

> Annotation is one way to actively read a text. I'll bet you've done some form of annotation (or marking the text) in your academic career. We're going to keep using that as a strategy for wrestling with complex ideas. For this first effort, I'm asking you to critically read and annotation Wolf's "Reader, Come Home" text in whatever way you feel works best for you.

Some students chose to print, then write out their annotations by hand; some used a digital pen to annotate; others used digital tools (e.g., Adobe's comment function) to highlight, underline, and make comments directly on the text. To understand students' annotation habits before the SDA intervention, each instance of marking the text was carefully reviewed for potential coding. However, with private annotations, many such markings

couldn't be coded. In fact, the majority of individual marks (all "marks" count as annotations, though not necessarily components of ECR) were non-linguistic marks, like a highlighted phrase, a squiggly line, or a portion of text circled or underlined (sometimes in various colors).

In most cases, I was unable to attribute these non-linguistic marks to a codable category of skills, behaviors, or dispositions— not necessarily because they don't count in any particular category of ECR, but because I can't justify a particular code. There simply isn't enough information to work with in those non-linguistic instances of annotation. See Figure 24 for an example of a student's private annotations, noticeably marked with highlighted passages and non-alphabetic marks (e.g., a star, brackets, underlines, red/blue/black lines, etc...).

Figure 24 *Sample Student Private Annotations*
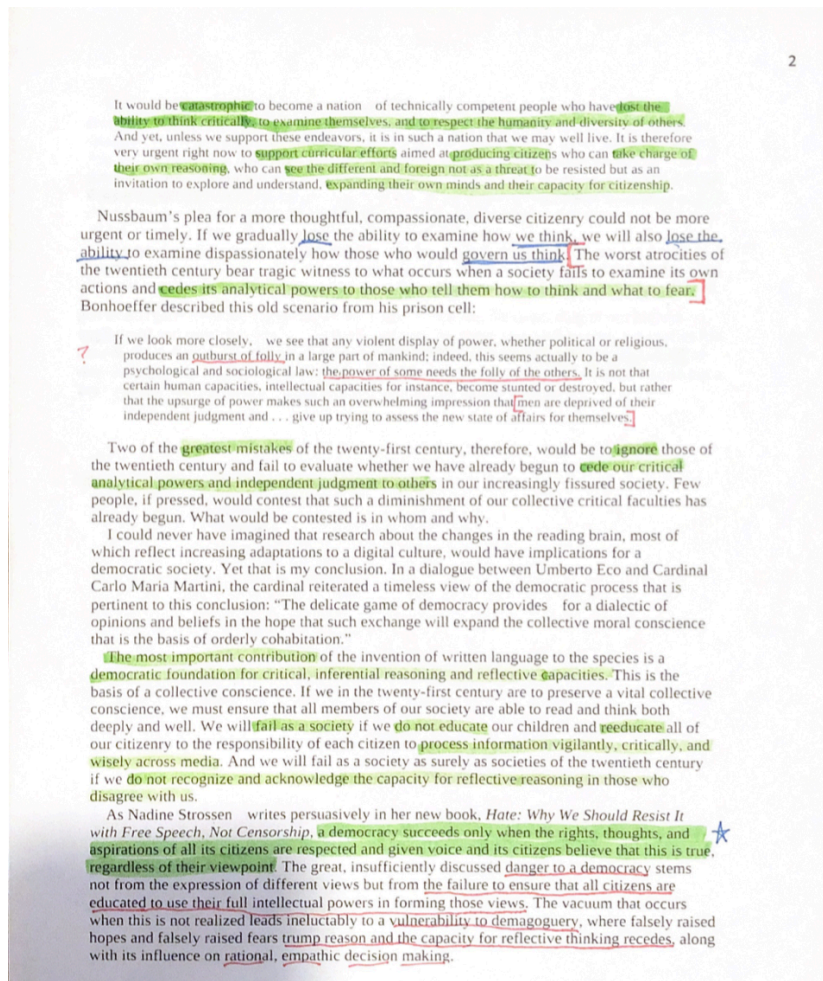
Beyond those non-linguistic marks, many (though not most)

annotations were codable. In fact, there were 234 total codable instances

among all readers in this first reading event. By comparison to later reading

events, that number is low. Every reading event thereafter yielded double the

number of codable instances (600, then 613, for the next two reading events).

There was an immediate increase in the number of codable annotations (and,

therefore, annotations that constitute engaged critical reading in discernible

ways) once students moved from their typical private annotation habits to social, digital annotation. Table 6 recounts the coding instances that were evident in that initial reading event (Reading Event #1), hosted prior to the SDA intervention.

Table 6 *Codable Instances of Each ECR Component*

Skills and Behaviors		Dispositions	
Acknowledge Confusion and Complexity	32	Demonstrate Empathy and/or Affect	0
Assess Context of Meaning	20	Demonstrate Empowerment and/or Responsibility	0
Identifying/evaluating rhetorical moves	16	Demonstrate Flexibility of Mind	0
Negotiate Competing Claims	0	Demonstrate Metacognition	2
Read with and/or Against the Grain	0	Demonstrate Motivation for Labor-Intensive Work	48
Test Validity	99	Demonstrate Purposeful Approach	0
		Demonstrate Willingness toward Praxis	17

Among the codable instances (234 total), the most common annotation move was *Testing Validity* (99 codable instances), accounting for 42% of the total codable instances of annotation. When students did annotate beyond the non-linguistic marks, they were most comfortable testing ideas presented in Wolf's text against their own experiences. When done in private,

those instances were far less clearly articulated, however. See Figure 25 for examples.

Figure 25 *Sample Student Private Annotations, Testing Validity*
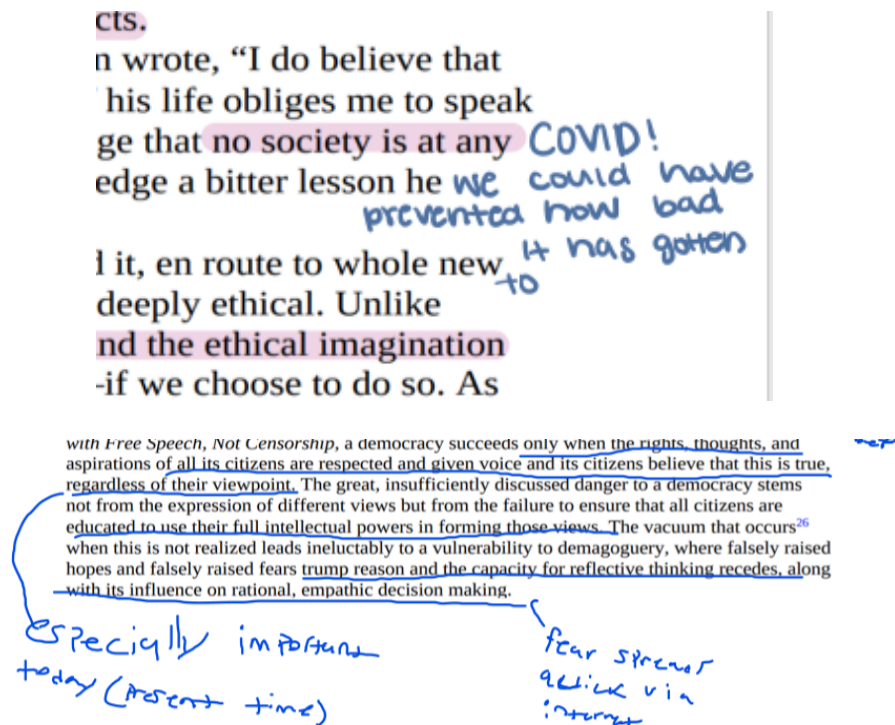
What isn't listed on the table of codable instances in Reading Event #1 is significant. Beyond the uncodable annotation marks, the next most common annotation habit was to mark vocabulary words (sometimes defined in the margins, sometimes not). See Figure 26. Vocabulary is certainly important, but I suspect that is an annotation device leftover from earlier educational expectations and a product of a more foundational,

comprehension-based approach to reading (therefore, noting vocabulary terms was *not* a component of the ECR model).

Figure 26 *Sample Student Private Annotations, Vocabulary*
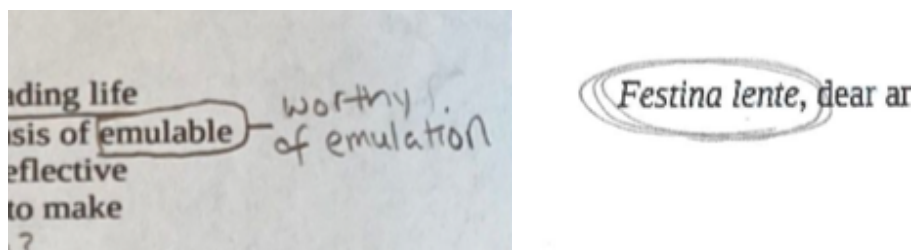
Based on extensive review of the uncodable annotations among private annotation efforts, it's safe to conclude that private annotations were far more concerned with defining unknown words, as well as drawing out key words or phrases that helped summarize/paraphrase sections of text— all for the sake of an early comprehension in the form of absorbing information from the text. See Figure 27.

Figure 27 *Sample Student Private Annotations, Comprehension*

2

It would be catastrophic to become a nation[22] of technically competent people who have lost the ability to think critically, to examine themselves, and to respect the humanity and diversity of others. And yet, unless we support these endeavors, it is in such a nation that we may well live. It is therefore very urgent right now to support curricular efforts aimed at producing citizens who can take charge of their own reasoning, who can see the different and foreign not as a threat to be resisted but as an invitation to explore and understand, expanding their own minds and their capacity for citizenship.

Elite
People w/ power

Nussbaum's plea for a more thoughtful, compassionate, diverse citizenry could not be more urgent or timely. If we gradually lose the ability to examine how we think, we will also lose the ability to examine dispassionately how those who would govern us think. The worst atrocities of the twentieth century bear tragic witness to what occurs when a society fails to examine its own actions and cedes its analytical powers to those who tell them how to think and what to fear. Bonhoeffer described this old scenario from his prison cell:

If we look more closely,[23] we see that any violent display of power, whether political or religious, produces an outburst of folly in a large part of mankind; indeed, this seems actually to be a psychological and sociological law: the power of some needs the folly of the others. It is not that certain human capacities, intellectual capacities for instance, become stunted or destroyed, but rather that the upsurge of power makes such an overwhelming impression that men are deprived of their independent judgment and . . . give up trying to assess the new state of affairs for themselves.

Two of the greatest mistakes of the twenty-first century, therefore, would be to ignore those of the twentieth century and fail to evaluate whether we have already begun to cede our critical analytical powers and independent judgment to others in our increasingly fissured society. Few people, if pressed, would contest that such a diminishment of our collective critical faculties has already begun. What would be contested is in whom and why.

Technology I could never have imagined that research about the changes in the reading brain, most of which reflect increasing adaptations to a digital culture, would have implications for a democratic society. Yet that is my conclusion. In a dialogue between Umberto Eco and Cardinal Carlo Maria Martini, the cardinal reiterated a timeless view of the democratic process that is pertinent to this conclusion: "The delicate game of democracy provides[24] for a dialectic of opinions and beliefs in the hope that such exchange will expand the collective moral conscience that is the basis of orderly cohabitation."

understanding words

The most important contribution of the invention of written language to the species is a democratic foundation for critical, inferential reasoning and reflective capacities. This is the basis of a collective conscience. If we in the twenty-first century are to preserve a vital collective conscience, we must ensure that all members of our society are able to read and think both deeply and well. We will fail as a society if we do not educate our children and reeducate all of our citizenry to the responsibility of each citizen to process information vigilantly, critically, and wisely across media. And we will fail as a society as surely as societies of the twentieth century if we do not recognize and acknowledge the capacity for reflective reasoning in those who disagree with us.

shared idea
misunderstandings
Failures

As Nadine Strossen writes persuasively in her new book, *Hate: Why We Should Resist It with Free Speech, Not Censorship*, a democracy succeeds only when the rights, thoughts, and aspirations of all its citizens are respected and given voice and its citizens believe that this is true, regardless of their viewpoint. The great, insufficiently discussed danger to a democracy stems not from the expression of different views but from the failure to ensure that all citizens are educated to use their full intellectual powers in forming those views. The vacuum that occurs[26] when this is not realized leads ineluctably to a vulnerability to demagoguery, where falsely raised hopes and falsely raised fears trump reason and the capacity for reflective thinking recedes, along with its influence on rational, empathic decision making.

Success

well armed,

n views that

that lulls us into

ens wide the

We allow others to think for us

fraying of

n of the digital

capacities if we

She's saying that times have changed and that we are smarter about ethical decisions than before.

To be clear, seeking to understand words, phrases, and sections of a text is not a bad thing, but this focus on comprehension is notably different from the annotation habits presented with SDA.

The Intervention: Social, Digital Annotations

Annotation was not new to most students. Most had been asked to annotate before. What was new, then, with this intervention was the *social* nature of the annotations assigned in this class. Once the intervention (using Hypothes.is as a digital tool of annotation) was deployed, student habits shifted instantly. The first notable change was the number of annotations that were codable (i.e., a component of the ECR model).

Table 7 *Shifting Codable Instances Across Intervention*

	Reading Event #1: Week 1 (pre-intervention)	**Reading Event #2:** Week 2	**Reading Event #3:** Week 3	**Reading Event #4:** Week 6	**Reading Event #5:** Week 8	**Reading Event #7:** Week 11
Total Annotations	*[23]	346	367	236	259	229
Total Codable Instances	234	600	613	345	389	363

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[23] This number is much harder to quantify, given so many annotations were uncodable squiggly lines, highlights, stars, dashes, etc...

Students submitted a total of 2310 codable instances of engaged critical reading within 1437 total annotations using Hypothes.is in macrocycle #1 (Fall 2020). Over five separate reading events, students exhibited the following total codable characteristics of engaged critical reading:

Table 8 *Total Codable Instances Across SDA Reading Events*

Skills and Behaviors		Dispositions	
Acknowledge Confusion and Complexity	179	Demonstrate Empathy and/or Affect	108
Assess Context of Meaning	71	Demonstrate Empowerment and/or Responsibility	0
Identifying/evaluating rhetorical moves	77	Demonstrate Flexibility of Mind	28
Read with and/or Against the Grain	419	Demonstrate Motivation for Labor-Intensive Work	40
Test Validity	828	Demonstrate Purposeful Approach	0
Engage Language Aesthetics	5	Demonstrate Willingness toward Praxis	128
Describe Metacognition	77		

Across all SDA reading events (#2-7), with every annotation coded, the majority of moves made by students in their digital annotations was, once again, *Testing Validity* (36%), accounting for a majority of the Skills and Behaviors (52.6%) exhibited. No matter the style of annotation, *Testing*

Validity was the most common go-to reading strategy deployed in annotation (828 total instances among all reading events).

Figure 28 *Total Codable Instances Across All Reading Events, Skills, and Behaviors*
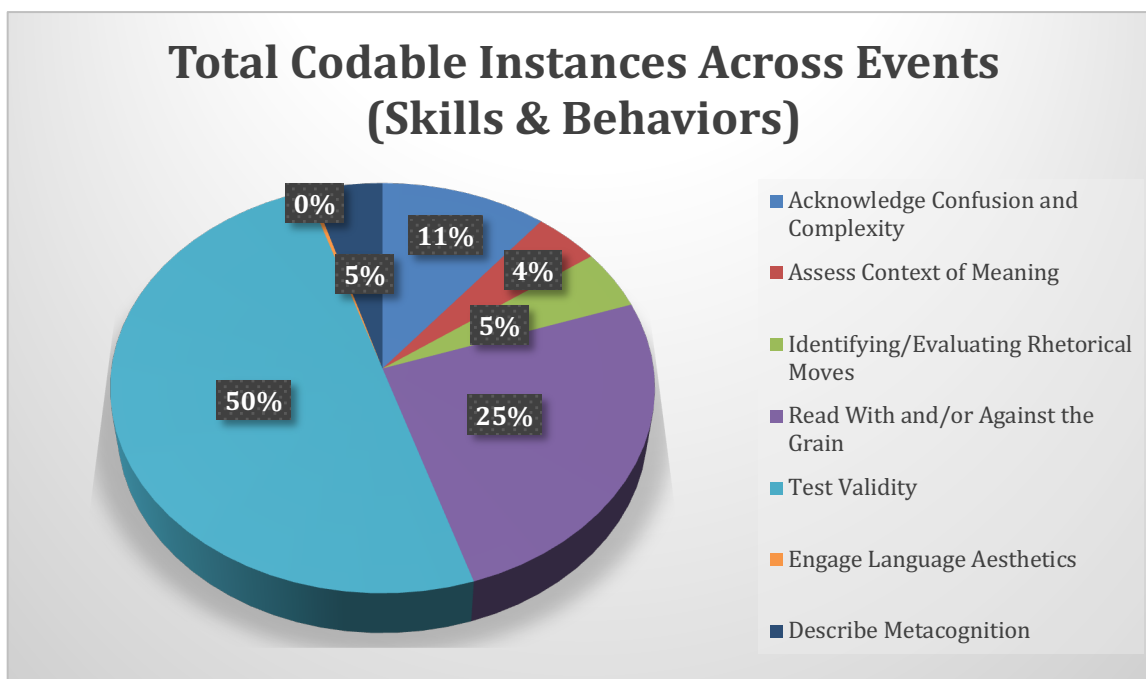
Most instances of this form of annotation involved students taking a personal experience, whether they agreed with a point presented or disagreed (with a point made in the text or with one another) and using that experience to illustrate the applicability of the claim to their lived experience. While this effort at *Testing Validity* was also dominant among the purely private annotations (Reading Event #1), the clarity and depth of articulation shifted. For example, when "The Case Against Democracy" asserted how few

Americans know the branches of the US government, students annotated by sharing their own experience:

> Yikes! But also I am not surprised. In high school, I remember touching on US politics briefly in my senior year. I can see how someone might easily forget these facts, if only learned once.
>
> I cant tell you how many times I have taken an american government class and I still cant tell you ALL the ends and outs of it.. just the basics.

Sometimes this codable instance of *Testing Validity* takes the form of applying an assertion to a particular social experience outside the text rather than a personal experience, as illustrated in these student examples:

> There have been times in history where policy incentivized discrimination against African-Americans. One example I can think of is redlining. When it's not in the businessman's favor to do business with the disadvantaged, how can he help improve their situation then, if not by voting?
>
> Uninformed voters are very dangerous. This makes me think of the upcoming election and how now more than ever it is so important to know who you're voting for.

The next most commonly coded SDA annotation was *Read With and/or Against the Grain* (419 instances, or 18%). In these instances, students often echoed the author in agreement, entertained the validity of the ideas presented in the text, *or* directly disagreed with the author/ideas expressed in

the text by interrogating the motives, interests, and perspectives behind the ideas presented. For example, students annotated in several ways that directly agreed with or countered the author's claims:

This is a harsh reality in America.

I agree that it seems impractical and somewhat elitist.

I think this mentality is dangerous and causes people to start relying on the more "educated" and stop taking actions themselves. One person believing this will turn to ten and hundreds and thousands who now do not bother to vote in the belief that it does not matter.

Notably, there were several components of ECR that were not (or were rarely) ever coded in students' annotations. This absence is notable, in that it might be explained by limitations of the researcher or lack of evidence that students engage in texts in those particular ways. For example, students did not *Demonstrate Empowerment and/or Responsibility,* they did not *Demonstrate a Purposeful Approach*, and they did not *Negotiate Competing Claims*— at least not in their annotation habits. I suspect that these dispositions, skills, and behaviors were challenging to notice, to name, or to enact in short-form annotations.

Shifting Patterns Across Events

The following series of tables represents codable instances of annotation across the five reading events that occurred during the intervention (all using Hypothes.is).

Table 9 *Total Codable Instances Across All SDA Reading Events, Skills, and*

Behaviors

	Reading Event #2, Week 2	Reading Event #3, Week 3	Reading Event #4, Week 6	Reading Event #5, Week 8	Reading Event #7, Week 11	
Acknowledge Confusion and Complexity	52	34	36	43	14	179
Assess Context of Meaning	15	10	16	16	14	71
Test Validity	229	246	120	124	109	848
Demonstrate Metacognition	4	26	3	1	4	38
Engage Language Aesthetics	3	1	0	0	1	5
Negotiate Competing Claims	0	0	0	0	0	0
Read With and/or Against the Grain	108	125	59	58	69	419
Identifying/ Evaluating Rhetorical Moves	12	16	10	17	25	77

Table 10 *Total Codable Instances Across All Events, Dispositions*

	Reading Event #2, Week 2	Reading Event #3, Week 3	Reading Event #4, Week 6	Reading Event #5, Week 8	Reading Event #7, Week 11	
Demonstrate Motivation for Labor-Intensive Work	13	8	6	11	2	40
Demonstrate Purposeful Approach	0	0	0	0	0	0
Demonstrate Empathy and/or Affect	36	26	5	23	18	108
Demonstrate Empowerment and/or Responsibility	0	0	0	0	0	0
Demonstrate Flexibility of Mind	2	3	9	7	7	28
Demonstrate Willingness Toward Praxis	28	17	26	22	35	128

Table 11 *Total Codable Instances Across All Events, Other*

	Reading Event #2, Week 2	Reading Event #3, Week 3	Reading Event #4, Week 6	Reading Event #5, Week 8	Reading Event #7, Week 11	
Direct Call to Other Readers	2	6	2	0	2	12
Responding to Others: Agreement	88	92	49	64	61	354
Responding to Others: Disagreement	8	3	4	3	2	20

A few noticeable shifting patterns of annotation throughout the intervention (in macrocycle #1) emerge in this chart. Overall, there is a noticeable decrease in both the number of annotations and the number of codable instances across the semester. However, there were some codable instances of annotation that increased over the course of the semester. For example, the number of codable instances of *Demonstrating Willingness Towards Praxis* increased, from 28 total instances to 35 by the final reading event. *Demonstrating Flexibility of Mind* also steadily increased. The rates are still low, but 7 instances were coded in the final reading event, while only 2 were coded in the first. Also, over the course of all reading events, students increased in *Identifying/Evaluating Rhetorical Moves* as the semester moved

on; in the first event, only 12 instances of rhetorical identification and evaluation, but by the end of the semester, 25 instances were coded.

Students who were far more comfortable with *Testing Validity*, or comparing personal experience to a particular claim an author makes, decreased steadily and significantly over the 5 reading events, leaving room for students to focus their annotations in other ways. While there were fewer overall annotations in the final three reading events (236, 259, and 229 respectively), the ratio of codable instances shifted. Students annotated in a greater variety of ways, in a variety of ways that count as engaged critical reading.

Further, the ratio between the number of student annotations and the number of codable instances stays relatively consistent throughout, with a much higher number of codable instances in reading events 2 and 3, and then that gap closed for the final reading events (Reading Events #4-7).

Figure 29 *Total Annotations vs. Total Codable Instances*
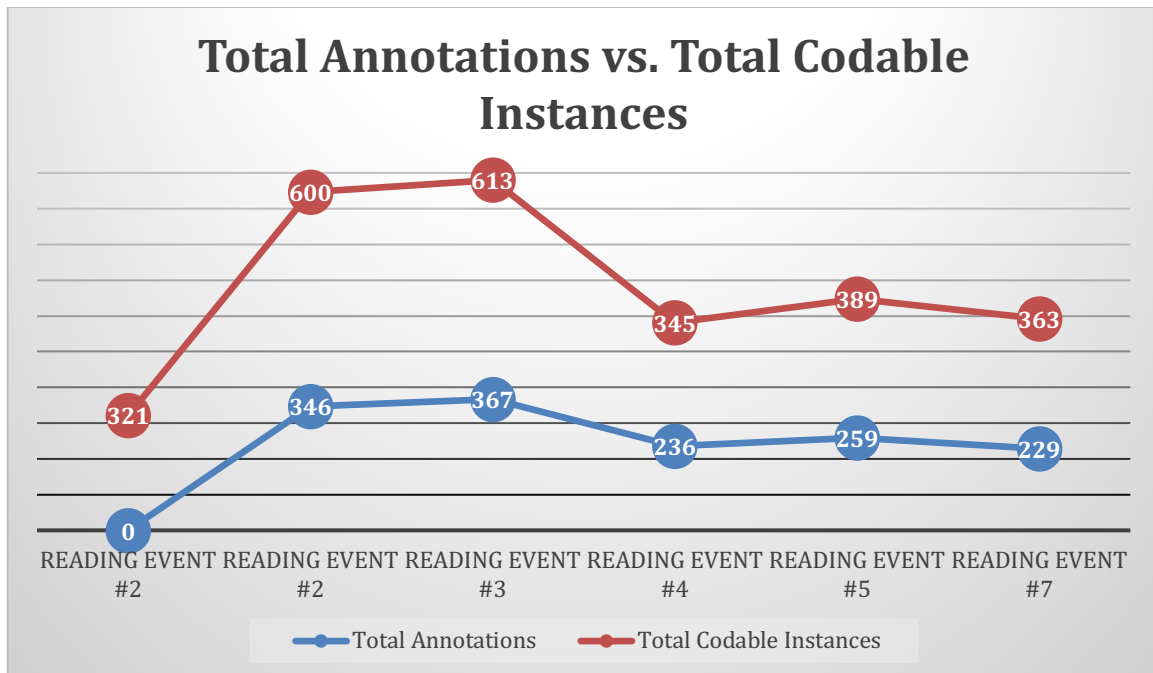
Among the reading events during the SDA intervention (Reading

Events #2-7), there was no steady increase in occurrence for each of the

codes among the Skills, Behaviors, and Dispositions. The number of codable

annotations tapers off after Reading Event #3, but I attribute much of that to

the individual texts (varying levels of interest in the text content) and attrition

(higher among COVID-era online coursework) and the more sensitive nature

of the textual content in the latter reading events. It seems that besides an

effect of early enthusiasm to meet course requirements, students engaged in

various ways with texts depending on their enthusiasm *for the text*.

The most notable example of this enthusiasm for the text and its effect

on SDA habits happened in Week 3 when students were asked to read and

annotate "The Deep Space of Digital Reading." Many students exhibited a

bolstered investment in the "Deep Space" text, based on their annotation

numbers and habits, particularly in terms of the variety of codable instances.

They exhibited a great deal of metacognition (26 instances), empathy/affect

(26 instances), openly acknowledged their confusion with the complexity of

the text (34 instances) and engaged with each other via agreement at a

higher rate (92 instances) than any other reading event. They also read with

or against the grain in greater instances (125 instances). These numbers are

higher in a greater number of categories.

Students demonstrated an expanded and more varied approach to

reading events as the semester progressed, as well. This is evident in the

greater variety of annotation moves from Reading Event #2 to Reading Event

#7. The data shows a significant decrease in two codable components of ECR

that were, at least at the beginning of the semester, the most common

annotation moves: *Testing Validity* and *Reading with/against the Grain*.

Figure 30 *Codable Instances Across Reading Events, Testing Validity*

Test Validity

229 · 246 · 120 · 124 · 109

READING EVENT #2 · READING EVENT #3 · READING EVENT #4 · READING EVENT #5 · READING EVENT #7

—— Test Validity
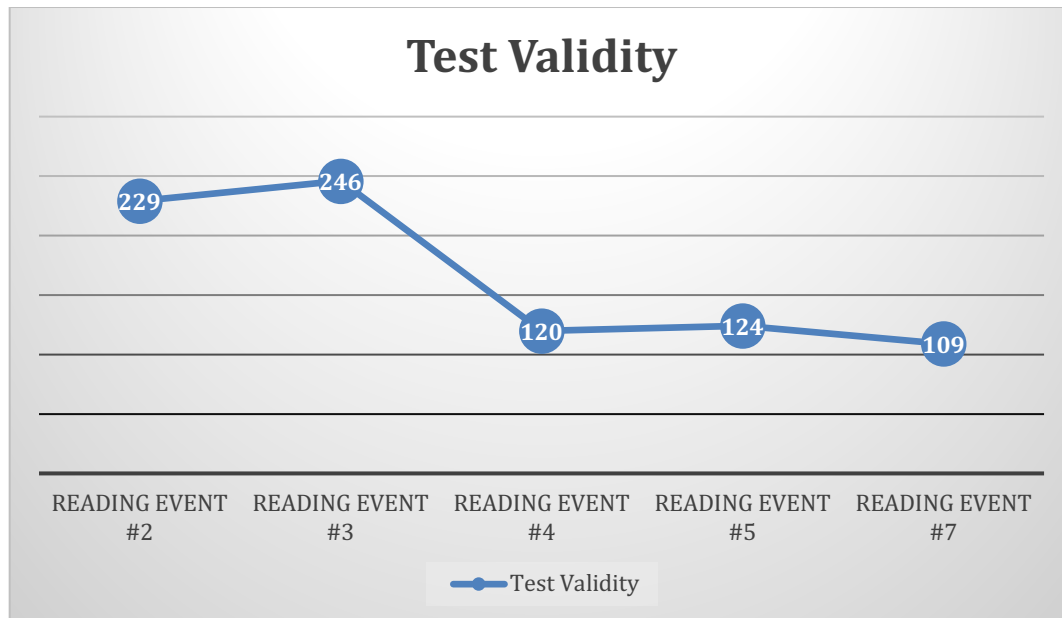
Figure 31 *Codable Instances Across Reading Events, Reading With and/or Against Grain*

Read With/Against the Grain

108 · 125 · 59 · 58 · 69

READING EVENT #2 · READING EVENT #3 · READING EVENT #4 · READING EVENT #5 · READING EVENT #7

—— Read With/Against the Grain
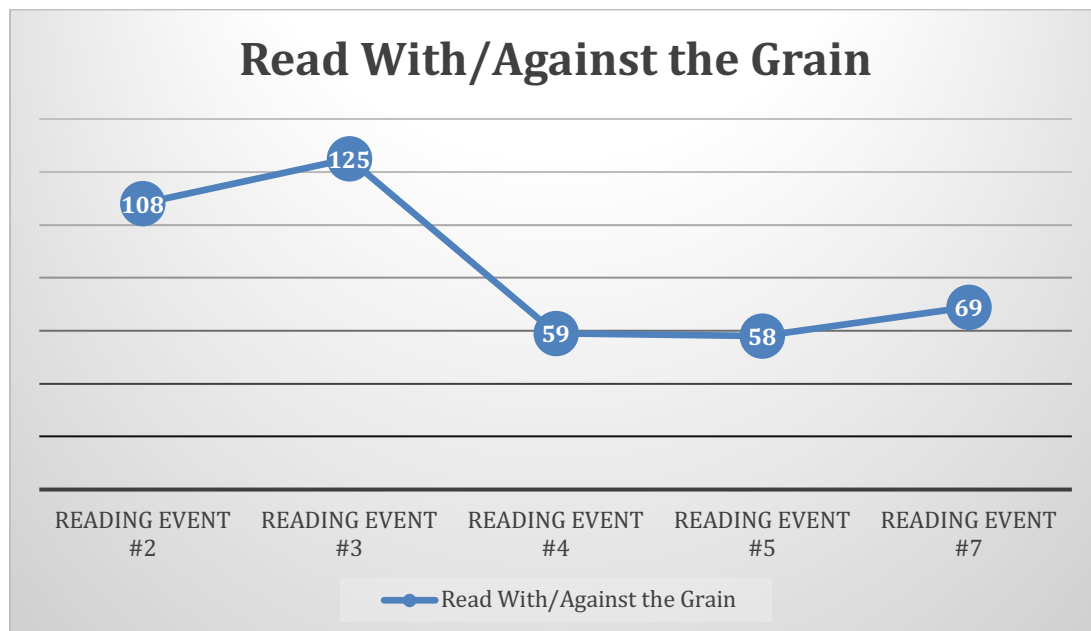
This decrease is significant in that students were still annotating but began to try various annotation moves as the semester moved forward over the course of the semester, making room for other, newer annotation moves along the way.

It's as if students were most comfortable taking their private annotation moves with them into the first couple of reading events using Hypothes.is. As they became more and more comfortable reading together, those annotation habits shifted. In fact, *Testing Validity* accounts for 38% of all annotations in the first reading event (229/600) while *Reading with/against the Grain* accounts for 108/600 (or 18%). Yet, by the final reading event, *Testing Validity* accounts for only 30% of annotations (109/363). And, by the time students were reading West's "Moral Obligations," the codable instances expanded to include more variety: *Flexibility of Mind* (increasing from two instances to seven), *Willingness to Praxis* (increasing from 28 to 35 instances), *Identifying/Evaluating Rhetorical Moves* (increasing from 12 to 25).

Codable Instances by Text. The codable instances didn't show a steady increase or decrease, but a volleying pattern, depending on the content of the text. While comparison of the data is in some respects skewed by the fact that two of these five reading events were used in macrocycle #2 and so those two sets of data include double the students, meaningful insights still emerge, on a text-by-text basis.

The number of students engaged in separate threads of conversation stayed relatively high but peaked with Reading Event #4 ("Cognitive Biases") and Reading Event #7 ("The Moral Obligations"), with 20 separate conversational threads engaging four or more students in Reading Event #4 (See Figures 32-33) and 26 separate threads engaging four or more students in Reading Event #7. It's helpful to compare that later reading event to the first reading event with Hypothes.is (Reading Event #2) where only 11 threads had four or more participants engaging in a single thread.

Figure 32 *Crowdlaaers graph of Student Threads, Reading Event #4*
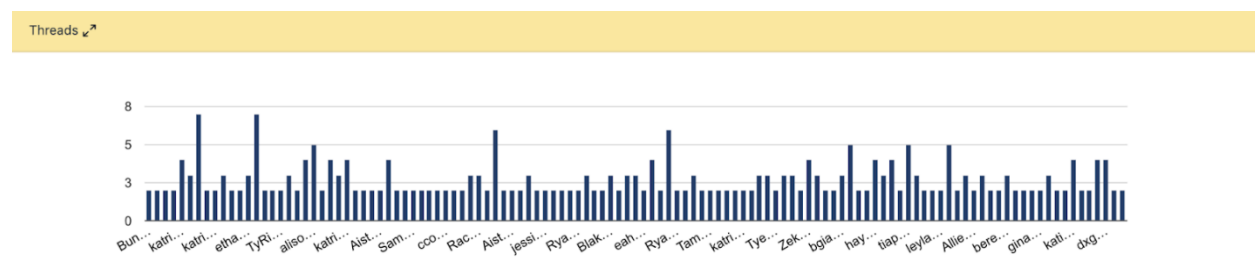
Figure 33 *Crowdlaaers graph of Student Threads, Reading Event #7*
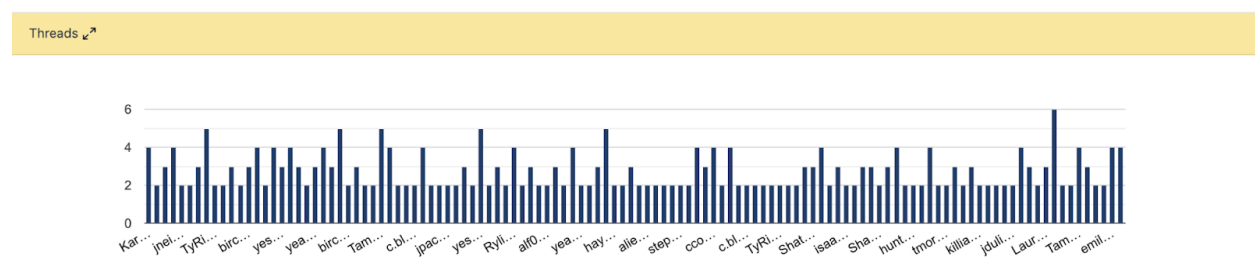
"Deep Space" proved to be a popular text among students (as evidenced by their reflective log responses and the total number of

annotations and response annotations to one another) yet yielded twenty total threads that engaged four or more readers. One possible explanation is that this text engaged readers on a more personal note. Readers enthusiastically engaged with this text but did so in a way that invited personal exploration, not social connection and discussion, unlike West's text that introduced content that students were eager to discuss with one another.

Patterns in the ways that students annotated the "Deep Space" text help justify this interpretation. "Deep Space" yielded a surprising increase in codable instances of metacognition (26 total in this text alone compared to 38 total across all reading events). Students responded to LaFarge's ideas with the following sorts of annotations:

Like I have previously said I find that I understand something so much more having it physically in my hands. But I never knew that studies have backed this up. I think this may be a problem we face in the future as digital books are becoming more and more common while many times physical books are not chosen.

Reading this paragraph made me suddenly aware of the way my brain wasn't reading smoothly. All I could think about for the rest of the text was how I was reading each line. I don't think I've ever really realized the way my brain jumps around, back and forth along each sentence, since I'm always able to understand what I'm reading just fine.

Likewise, student annotation patterns shifted in response to West's "Moral Obligations" text. The number of codable instances of *Identifying/Evaluating Rhetorical Moves* doubled in response to West's text. The nature of West's writing helps make sense of this shift. Many students responded not just to the ideas West presented, but the articulation of those ideas:

> This is an incredibly succinct summation for such a widespread issue. The wording reminded me, immediately of Jordan Peele's horror film, Get Out.

> Yea, the context of diagnoses presents the reader with instant imagery of some sort of disease or doctoral diagnoses. It instantly casts a negative light

> I like the boldness in this work.

Likewise, the number of codable instances where students *Demonstrated a Willingness Toward Praxis* also showed a noticeable increase— from the 20s to 35 total instances.

> There are still a lot of issues that we face today which mirror issues in the past. It is a truly terrifying time with a lot on the line and we must be aware of that.

> Another thing that stuck out to me was the curtal decay. We as nation must figure out how to do better.

Traditions are made and in that same respect they have to be kept.

They have to be talked about and passed down to future generations.

who can then adopt and adapt them as they see fit.

These patterns make sense in the context of West's claims. West is an excellent writer who masterfully crafts his own rhetorical moves for greater intensity. Likewise, West's assertions are calling for praxis— for action beyond the text. Perhaps it is the content of the text that most notably shapes students' efforts at engaged critical reading.

The Shift: A Qualitative View

To measure shifts in annotation and/or reading habits as the semester progressed, the quantitative data is helpful, but the quality of student annotations is far more telling. After all, the quantity of annotations didn't steadily increase overall, nor was that the goal, but the patterns of quality within those annotations did shift. This section explores and exemplifies those shifts in quality.

SDA Increased Willingness to Challenge Ideas

Students exhibited an increased willingness to challenge authors and ideas and the presentation of those ideas within the text. For example, one student challenged LaFarge's direction with his annotation: "Yeah it's fun to read absurd things, but where are you going with your argument?" (Reading Event #3). Another student found fault with the research agenda that seemingly creates an anti-technological bias in the studies of digital reading

that were cited: "anecdotally, this is not my experience. I think the researchers might have been trying to force their research to fit their hypothesis that the internet is making us stupid" (Reading Event #3). Another student challenged a specific study cited by LaFarge, "this study seems odd. The students who 'regularly did research online' probably developed that expectation only after becoming proficient with web searching. Maybe I'm misunderstanding" (Reading Event #3). In addition to challenging the author's claims, this student also acknowledged that they may be misunderstanding the point, acknowledging the confusion and complexity that is inherent in engaged critical reading. Yet another student challenged LaFarge's claim of widespread access to texts, a challenge to LaFarge's claims, "Only the wealthy could afford books though and the public library system did not exist. The majority of people could not do more than write their names" (Reading Event #3).

When West (Reading Event #7) cites T.S. Eliot's assertion that tradition takes sacrifice, one student expressed hesitation:

> I half way agree with this here is why: Tradition is how we connect ourselves to the past, with our ancestors, we keep their legacy heard which is great. The not so great part is that traditions can be changed, and sometimes people need to change them because those traditions can harm others and that's not a good tradition if it hurts someone, so we should fight for what is right. (Reading Event #7)

Many students, in fact, took up this point in West's article to discuss the role of tradition in contemporary society. Several apparently felt that this way of looking at traditions felt very new to them, and intriguing, though for a variety of reasons. Further, when West brings up the obscenely disproportionate distribution of wealth in our country, one student challenges this evidence with the following:

> These are some shocking statistics. It is worth noting that even within the upper one percent, there are astronomical differences in financial power. Take for example, the CEO of a successful chain of stores who rakes in two to three million dollars annually. This person is easily in the one percent, but his/her wealth is absolutely trivial, meager, even pathetic compared to the unbelievable amount of wealth of someone like Elon Musk or Bill Gates. Even to the one percent, there is a one percent. (Reading Event #7)

SDA Helped Demonstrate Complexity

Students also acknowledged a great deal of confusion and complexity as the semester progressed. In West's "Moral Obligation," for example, one student brings up a distinction between race and racism. When West insists that we address race "in a form that can deal with its complexity and irrationality," for example, students asked many questions of what that might mean. One student asked, "How do we do that? How can we as Americans

create that platform where we can listen to one another and accept our differences?" (Reading Event #7).

Several other students replied with potential answers (a *Willingness Toward Praxis*, in my coding schema), such as: we'd better understand the historical construct of race, or we have to better education. Several others expressed doubt that things can change, because we're so entrenched in our ways that have been handed down to us and another student thinks we already have a lot of helpful platforms and that many Americans simply aren't interested enough to make use of them. Annotations around West's text were significant, if not a bit reserved.

Another thread in response to the West text that helps illustrate how the content fostered various levels of quality among annotations was in response to a line where West says: "Their beauty is attacked: wrong hips, lips, noses, skin texture, skin pigmentation, and hair texture." Several students chimed in— either noting their own similar experience being deemed less attractive for having Black features (i.e., *Testing Validity*), or trying to understand why this standard of beauty still plagues our society (i.e., *Acknowledging Complexity*) or proclaiming the change that needs to happen (i.e., *Demonstrating Willingness to Praxis*).

SDA Increased Variety in Codable Instances

Yet another point in West's article that generated a great deal of chatter and thoughtful annotations that were coded in a variety of ways was

the presentation of statistics that illustrate the distribution of wealth in America. In this thread, students expressed anger, shock, and disgust (i.e., *Demonstrating Emotion/Affect*). They *Demonstrate a Willingness Toward Praxis* by wanting to save the middle class in some way in response to the text's assertions, "I hope we as a country see the problems with statistics like this and make meaningful change within our lifetimes." Some asked hard questions that *Acknowledge the Confusion/Complexity*, like when one student asked, "I wonder where the middle-class, people of color, and immigrants fall into?" All in all, this single line of text yielded 17 separate annotations (initial posts and replies) from 14 separate students.

SDA Enabled Meaningful Shifts in Response to Texts

Cornel West's text is a powerful case study in the way students' annotation habits shift in response to the content of the text. In the final reading event, students made powerful connections among assertions, balancing (or negotiating) big and complex claims. When West asserts that "the roots of democracy are fundamentally grounded in mutual respect, personal responsibility, and social accountability. Yet democracy is also about giving each person a dignified voice in the decision-making processes in those institutions that guide and regulate their lives," two students were inspired to draw connections between this claim and the contemporary changes. Sharita, in fact, wrote that "today, this feels untrue of the economy and societies we live in. We are corrupted sheep being herded by social

media, greedy corporations and twisted public figures. We hear what we want to hear. We believe as citizens we are being heard. This is not the realistic way of life as we know it" (Reading Event #7). In reply, another student agreed with her, noting that "The way our lives play out today is vastly different than it would have hundreds of years ago. I agree that social media, greedy corporations and twisted public figures have all been contributing factors to the erosion of our democracy as a whole" (Reading Event #7). Other students chimed in to agree that these ideals have been eroded significantly in the past 5-10 years.

Finally, because West is such a powerful author, his text evoked joy and engagement through the language itself. Near the end of the article, West writes, "The ultimate logic of a market culture is the gangsterization of culture: I want power now. I want pleasure now. I want property now. Your property. Give it to me." Many students chimed in here with comments about the power of the words, the emotions these words evoke, and the reverberating truth of West's complaint.

This final reading event was also problematic at the same time. The total number of annotations went down in this reading event, but perhaps students' own proclaimed hesitation for public exposure helps us understand this trend. West is introduced as an "outspoken critic of contemporary American society… focusing on race, class, and gender" (West, n.d.) and, what follows, perhaps was a result of being hesitant to be exposed alongside a

controversial text. The very public nature of Hypothes.is annotations and the ensuing public exposure associated with that publicity likely encouraged students to temper their comments on a topic that has become particularly challenging in social discourse.

The shift in annotation habits weren't just a product of reading West's text, though. "The Deep Space of Digital Reading" (Reading Event #3) was also highly engaging for students, but in a noticeably different way. This text proved to be inherently relatable among the students. LaFarge's claims ask readers to consider how reading in online spaces changes how they read, think, and perform. Students' annotation patterns changed noticeably with this reading. First, there were more codable instances and total number of annotations with this reading event over all others. Students produced 367 distinct annotations yielding 613 total codable instances. Though *Testing Validity* accounted for a high portion of those codable instances (246), this reading event yielded the most instances of *Demonstrating Metacognition* (26 total) as well the highest number of *Reading with and/or against the Grain* (125 instances) and the highest number of responses to other readers' annotations (with 96 total responses). This makes some sense. LaFarge's text was highly relatable to students who have been exposed to studies and articles and likely teachers who have (intentionally or not) expressed their concerns about the ways technology is changing students' attention spans, reading habits, critical thinking efforts, etc... They have a lot of experience

with digital tools, digital searching, and digital reading and their annotations reflect that experience and their interest in the subject. Notably, this was the one reading that wasn't overtly about politics (a subject many, many students said they were not initially interested in reading about).

Text selection clearly mattered a great deal. The nature of the text's content correlated with the varied ways students focused on annotation. West's text was more controversial, touching on more sensitive social ills, which led students to hesitate at times. Meanwhile, LaFarge's text invited a lot of personal introspection. This relationship between text and annotation style wasn't surprising, though what is surprising is that we don't often account for varied approaches to reading depending on the sociocultural context of the reading event or the purpose of that reading event.

SDA Engendered Talk *about* Text

This intervention revealed a new potential means for writing about and having meaningful conversations about text, but in a way that more acutely and specifically responds to details in a particular text. Hypothes.is, in that way, seems to mirror conversation about the text, but keep the text central to that conversation in a way that students weren't familiar with. As one student put it, Hypothes.is was most notable in its encouragement to "interact with the text." Their previous efforts at annotation were "not as interactive with the text…more of just giving brief comments" (Reflective Log #7).

Along with talk-about-text, the behaviors of ECR also refer to an awareness of the highly rhetorical activity of annotating publicly. Students were immediately aware that there was an audience of other readers for whom they were performing annotation. Because of that awareness, Hypothes.is annotations were also *far* more performative, given their awareness of that audience. Students noticeably *didn't* chunk the text with private notations related to what a section is all about or note the textual signposts that help them see how and when an author shifts from one idea to the next. They didn't do much labeling at all. They didn't focus on vocabulary or marking words and phrases they don't understand. They also didn't want to visibly wrestle with comprehension in Hypothes.is and for good reason. Their public-facing comments sought to move beyond comprehension, into more testing, and more applying the ideas.

Students liked the discursive cues that mimicked conversation. Many, in fact, name SDA as a form of conversation (some likened it to social media) that allows students a direct purview into others' reactions to text with a commitment to a respectful exchange of ideas. This conversation may have mimicked social media in some ways but seemed to invite more listening and less screaming into a vacuum. Kassidy felt that the social nature of the annotations supported a "positive like community of the classroom" and proved how nice everyone was. This perception of community and kindness— in the face of agreement and respectful disagreement alike— all

Kassidy to speak her voice around a text and to take a more confident stance on a text (Personal Interview).

In fact, one student specifically noted how reading others' ideas and perspectives in Hypothes.is helped her envision how she would respond to others' annotations which helped her decipher "what I tune into and tune out" (Reflective Log #5). One student felt like reading with social, digital annotation strengthened her beliefs because she was tasked with justifying her ideas to others: "I had to piece apart why I felt the way that I did and how, empirically, that related to the text and the statements the author was making" (Reflective Log #5). The intervention encouraged "monumental changes in beliefs and opinions as well as pushing me to change myself as well as others around me" because it has helped them to become "very self-aware when it comes to other people's lives and situations" (Reflective Log #5). Another student showed that this way of reading encouraged her to "look for the full context and make my own decisions about what I'm reading" rather than relying on "clips, sound bytes, or [solely] left-leaning articles" (Reflective Log #5). These instances speak to Brent's claim that rhetorical readers must learn how to discern among bids for their attention.

Hypothes.is helped students feel more certain with their reading, further inviting them to engage with tough ideas without giving up. As one student puts it, she has grown confident enough once again to keep up "with current events more" now (Reflective Log #5). This confidence seemed to

translate into action. Students posted far more often than required when using Hypothes.is. While the majority posted three initial threads and two replies, as assigned, many students posted far more than that. Examples include one student who posted 21 initial threads and replied to two in a single reading event ("Cognitive Biases"). Posting beyond the requirement was not an anomaly. Several members of the class posted far more often than assigned. In three reading events (#3-#5), the number of students who posted more than the assigned annotations remained higher than expected (see Figures 34-36).

Figure 34 *Crowdlaaers Graph is Post by Individual Readers, Reading Event #3*
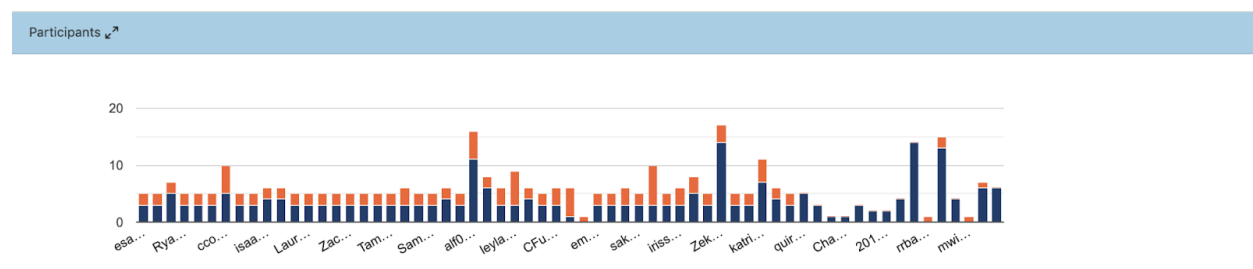
Figure 35 *Crowdlaaers Graph is Post by Individual Readers, Reading Event*

#4
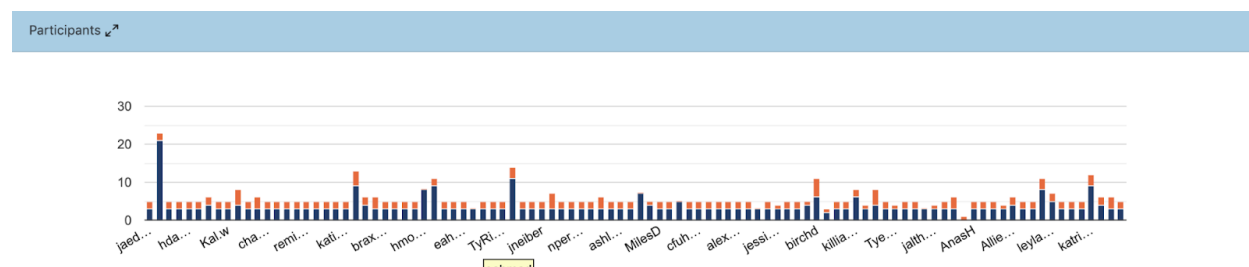
Figure 36 *Crowdlaaers Graph is Post by Individual Readers, Reading Event*

#5
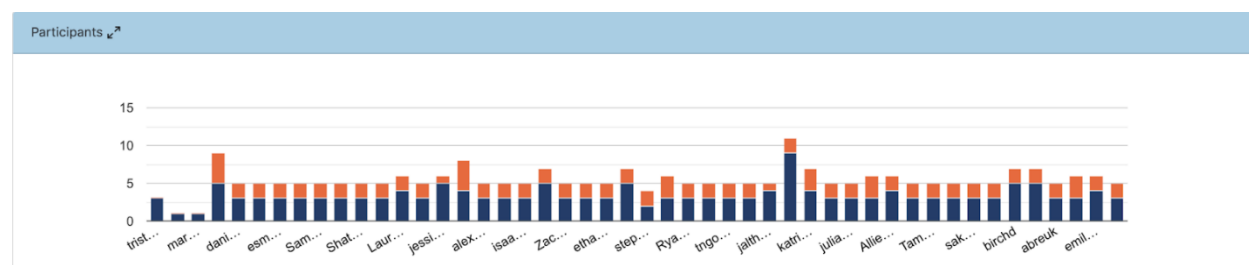
Interactive Patterns Among Readers

The notable pattern among readers' responses to one another via SDA was that students were far, far more likely to agree in their replies to one another. In one reading event: 88 codable replies qualified as *Agreement* while only eight replies qualified as *Disagreement*.

Table 12 *Other Codable Instances*

Other Codes (Interactions Among Readers)	
Direct Call to Other Readers	12
Responding to others: Agreement	354
Responding to Others: Disagreement	20

Students are still far more prone to agree with one another, and to open their reply with the stereotypical phrase "I agree" (after all, there were 354 codable instances of agreement and only 20 instances of disagreement in student responses); however, among those posts, there is a far more critical flavor to student interaction, as the following example illustrates:

> I agree that this creates equality but it also brings up a great point about the elections effecting the people who are and who can vote. This notion creates the idea of us being equal when voting because it gives us the option to voice our own beliefs, morals and opinions.
> I agree that people are born into different circumstances, but we are "in the same boat" in terms of living in this democracy and trying to make it work. As you pointed out, there's a wealth-distribution gap that is experienced by the populace, and one would imagine that this gap, if allowed to widen and widen, would cripple our democracy, taking down corporations and individuals. Our fates are tied together, or so it seems.

This annotation is posed as an agreement to her peers (and was coded as such), but ultimately challenged the point being made by adding new information or *Testing Validity* with their own additional experience or by referencing other claims made in the text, as exemplified in the following:

> I don't think the right things are being taught either. I was an honors student and all my courses barely touched on several things I think should've been explained in detail- the political systems and voting, taxes, citizenship and what it entails, etc.

> I agree and would also be interested in this research. I'd like to think I care about the interests of others and vote to reflect that. For example, even though I have private insurance, I think everyone deserves access to affordable healthcare. I tend to have an idea that people with opposing views from my own are voting more for their self-interests.

> I agree with you completely. Brennan himself admits that majority of poverty stricken black females would fail the qualification exam, yet dismisses the consequence. Personally, it is important for everyone to be represented.

Or, in some cases, students asked an extended question after agreeing with the original poster:

> That's what I am thinking too. And people are smarter than each other in different ways so what makes someone an educated guardian?

Yea, why would this higher group of people care about the others? Its not like those people can vote against them. Everyone being able to vote distributes political power more evenly.

Further, some students felt they could outright disagree or challenge their peers— a move not seen in the LMS-based discussion forum. For example, in 20 total codable instances, students replied to one another with a challenge to the original annotation with rhetorical (and semi-rhetorical) questions, such as:

However, what do you mean by not everyone has the opportunity to learn? At least in the US, students are given the opportunity to learn and they are given countless resources in and outside of schools.

There's the other side of the coin: what is rational about a voter not considering their life experience and its attachments? What is the harm in considering other views but circling back to long held stances?

Same here! I laughed when I read that. I have a different take on the Ikea effect. I believe people will pay pennies less for something in the present, even if it means spending so much more time later to assemble. It's similar to the reason people don't save for retirement. They underestimate the future effects, taking whatever seems best in the present.

Sometimes, students challenged the way another student has interpreted the text:

> I wonder though if that is the point here. What if truth isn't easily defendable? When does a human life start and a mother's ownership end for example. I take this point to mean just that; that truth isn't a suitable standard for measuring political judgment because truth isn't always black and white.

At other times, students directly countered one another's posts:

> This is an idealist point of view. Yes, ideally an educated group "taught to fear the touch of gold" could be an unadulterated direction of leadership, but it seems just as likely that those guardians (like so many others said) could fall completely out of touch of the people they're governing. But I guess that's kind of Pluto's point.

> I both agree and disagree with this statement as well. It's extreme, in my opinion, to say that all advertisers or content creators have this huge political agenda. Some of them are just very intelligent when it comes to getting people to click on their articles and they design them to be extreme for that reason. They get paid by page views.

> I disagree. I dont think the social constructs he brings up are irrelevant. Are they stupid, silly, and their very notion ridiculous? Sure, but like it or not those constructs affect the way people view others. IT has contributed to racism yes, but in order to fight it you have to realize

> that it isnt irrelevant. Its relevant because its dismantling is integral to a solution.
>
> I was also fascinated by this subject. However I do not necessarily agree, I think intuition can improve as necessary.

While these codable instances were far fewer in number, they are critical exchanges that show a willingness to engage in competing ideas, focused on the text nonetheless.

Across Two Macrocycles

While comparing all data sources across both macrocycles has proven to be beyond the scope of this study, the quantitative findings could be managed and were notable in the two reading events (#4 and #6) that were used in both macrocycles.

Students were afforded the opportunity to converse with peers across semesters in both instances and that capacity yielded even more robust conversations that extend beyond the scope of a typical semester. Students got to engage with readers beyond their classmates.

In the two reading events that occurred across both macrocycles, the number of students who interacted with one another (beyond the confines of a single semester group) was significant. In Reading Event #4 ("Cognitive Biases"), for example, a total of 570 annotations were created by 100 total active readers, yielding 119 separate threads.

Figure 37 *Crowdlaaers Graph of Total Annotations, Reading Event #4*

570	100	1	119	18	1
Annotations	Participants	Documents	Threads	Days	Tags

Annotations ↗

Date	Contributor	Annotation	Tags	Level
May 11, 2021	jaeda.shackley	This argument is especially interesting in a moder...		0
May 11, 2021	jaeda.shackley	I think the idea that all people need to be de-bia...		1
May 11, 2021	jaeda.shackley	The idea that because we have already lost so much...		0
May 11, 2021	jaeda.shackley	You make a super interesting point. I'm curious to...		1
May 11, 2021	jaeda.shackley	In a world where so little is guaranteed, saving f...		0
Mar 1, 2021	freyrea	College students tend to be broke so this makes se...		0
Mar 1, 2021	freyrea	Laziness is very prevalent in our society		0
Mar 1, 2021	freyrea	People like to think they are healers. I suppose t...		0
Mar 1, 2021	freyrea	Why? Is the goal not for them to be successful eno...		1
Mar 1, 2021	freyrea	I think this is due to sentimental value		0
Mar 1, 2021	freyrea	At some point politicians are just cruel and veil....		0

And, in Reading Event #7 ("Moral Obligations"), a total of 555 annotations posted by 99 readers yielded 118 separate threads.

Figure 38 *Crowdlaaers Graph is Post by Individual Readers, Reading Event #7*

555	99	1	118	21	0
Annotations	Participants	Documents	Threads	Days	Tags

Annotations ↗

Date	Contributor	Annotation	Tags	Level
May 11, 2021	natashasawaged	yes i think with certain things we have gotten far...		1
May 11, 2021	natashasawaged	I have to agree. we need to make a change.		1
May 11, 2021	natashasawaged	I have to agree. we are living in a scary time and...		0
May 11, 2021	natashasawaged	sometimes having individuality sparks some issues ...		0
May 11, 2021	natashasawaged	as someone who is white and living in America, I s...		0
Apr 23, 2021	Bunetak	That is an unfortunate truth, especially for the ...		1
Apr 23, 2021	Bunetak	That is so true, this situation can be easily appl...		0
Apr 23, 2021	Bunetak	That does make a lot of sense, especially because ...		1
Apr 23, 2021	Bunetak	This appears to be a circumstantial situation.		0
Apr 23, 2021	Bunetak	It is hard to keep that struggle alive without th...		0
Apr 21, 2021	StauterH	I agree, I feel like if the corporations want the ...		2

In both reading events, students in the Spring 2021 semester were reading the ideas of students from Fall 2020 and replying to their posts, not just their most immediate peers.

SDA by Comparison

One way to understand the value of SDA is to compare it to other common reading-related pedagogies— private annotation and LMS-based discussion forums.

Private vs. Social Digital Annotation

An emerging question that proved critical as the intervention progressed was this: What exactly does social, digital annotation do for students that is different from private annotations? I was immediately struck by the significant difference in student annotations between the first reading event (reading Wolf's letter and annotating privately) and the second reading event (reading Crain's essay, using SDA). The nature of nearly every annotation shifted instantly, without prompting, in response to the new public environment. I would broadly characterize those shifts as positive in that they reflect a far more critical engagement with the text. Annotations went from highlighted phrases and underlined words to fully articulated questions and reactions to ideas in the text. The annotations in Reading Event #2 (a relatively unpopular text choice) were noticeably and substantially more complex, more thoughtful, and illustrated an effort to do more than understand parts of the text. The shift from a private to a social, digital annotation environment invited a conversion *about text* that was inherently more conversational, demonstrating a number of reading skills, behaviors, and dispositions:

They *Demonstrated Affect/Empathy* instantly:

> The idea that a group can be disenfranchised and is looked as incidental is horrifying. Having a callous attitude about such serious matters shows the tone of arrogance.

They *Read Against the Grain,* challenging claims:

> This comment is interesting to me because it suggests that the democracy would choose the votes they see fit to contribute to the voting system. This option seems as though this could create more bias than already exists. This would still assume some voters are superior to others and could create a negative impact altogether.

They *Read With the Grain* and *Demonstrated their Willingness Toward Praxis*:

> I totally agree! I feel like now that I understand the way things work I can be more politically involved.

They showed appreciation for the author's language/rhetorical choices:

> Love the shade.

Perhaps, student choices regarding social, digital annotation later in the semester speak to the positive reactions most plainly. In Week 7, students were asked to choose an article related to their inquiry for the semester and read, using whatever annotation approach they deemed best. When prompted to choose their annotation style (after four separate reading events, three using Hypothes.is), the students still overwhelmingly chose to

use Hypothes.is with their own articles: 30 (out of 56) chose to use Hypothes.is, five used another digital tool (a private one, like Adobe Reader or Google Docs), and nine chose to print and annotate by hand.

Social Digital Annotation vs. Online Discussion Forum

One additional telling comparison made in this study was how the conversation-like discourse of Hypothes.is compared to the more traditional online discussion forum. It's not at all unusual in a course like this one to assign a reading and ask students to discuss what they've read by posting an initial thread (sometimes prompted with specific reading questions, sometimes not) and replying to one another. This course has included many such pedagogical instances over the years and did so again this semester, in Week 6. Students were split into four separate small groups and given the following Canvas-based prompt for Reading Event #6:

I want us to think more about this topic of critical reading and its relationship to civic participation, especially in our contemporary discursive climate. Respond to the following prompts and then respond to each other's ideas, challenging one another respectfully.

1. Practice *critical reading* with Kakutani's article, "The death of truth: how we gave up on facts and ended up with Trump." [This is an inflammatory article (on purpose), so we've got to practice respectful and professional discourse. Be willing to listen to ideas that counter

your own, practice empathy, and respectfully challenge when you need

to.]

2. Briefly summarize Kakutani's article (in 50 words or so), respond with

your opinion on the nature of the real problem here, then offer

solutions. What is it that we (the reading public, the consumers of the

misinformation Kakutani is talking about) need to do to address this

problem?

Additionally, students were asked to post one initial thread (roughly 100

words) and reply to two of their peers throughout the week in ways that go

beyond the typical "great" or "cool. I agree."

Participation in this discussion was sporadic. The four groups

participated at wildly different levels. Groups 1-4 submitted a total of 34, 18,

47, and 30 posts (respectively, Reading Event #6). No students submitted

comments beyond the requirement. This is a typical illustration of online

discussion forums, in my experience with the effort. Further, nearly every post

in this Canvas-based discussion forum ended with a summary of the text and

most replies followed the typical pattern of restating a point the original

thread's author noted, followed by repeating the claim made by the author or

the initial poster. The following is a typical exchange from Reading Event #6:

In Michiko Kakutani's 2018 article, "The death of truth: how we gave up

on facts and ended up with Trump" the author goes into how President

Donald Trump came into power. He speaks up how President Trump is

a liar and spews lies to misinform and put fear into the American peoples minds. Kakutani goes into the issue of how many people are just ignorant, and are just followers rather than informing themselves. They hear what they want to hear. I believe the issue is, many people now and days are all talk but no action. With these protest, many people are taking action to bring awareness and trying to make a change, but when it comes to actually voting or informing yourself about the issues, it's just a back and forth of whose right and whose wrong. I feel that if everyone in this country would just try to understand one another, we could get somewhere with a resolution that works for both.

> I agree that Trump has been saying to create fear. When people are scared, it causes them to believe a lot of things. I also think that people should take actions like protesting and voting, and it would be better if people try to understand the news by reading more to see what is true and false.
>
> I really like your post because I agree with you. I really feel that if people took the time to understand the thoughts and wants of others we could all come together somehow. Thank you for sharing.

There is a genre expectation of LMS-based online discussions that invites very little deviation from the above pattern. Here is another instance from a separate group:

> Kakutani's main point of the article is how falsification of truth, lies from the government, and outside government influence are destroying our democracy. She blames far right extremists and inappropriate use of social media as contributing factors to the spread of fake news and creation of polarized groups debating fact. Personally, I think the issue is deeply rooted in the entire system (in its entirety, it is flawed), and the issue of fake news is only a biproduct. Though I think a large reason for the mass increase of fake mews is due to social media and curated news feeds. Kakutani made a point that fake news in introduced slowly and social media will also slowly introduce you to people who also believe these things. From a psychological perspective, people are more likely to conform in groups instead of acting as they would as individuals. So, this is very dangerous in terms of politics on social media. This puts the government and social media in charge of our own beliefs and political ideologies (giving them an easy way to manipulate). Then with the POTUS spreading misinformation like fact, leaves voters uninformed, confused, and mislead.
>
> > Thank you for this post! I loved the point you make about "fake news" being a byproduct of a corrupt system. I think that is true

and unfortunately I think it has gotten worse over the past few

years. The confirmation bias that people receive from being

surrounded by like-minded individuals only encourages the

spread of misinformation. I agree this manipulation is dangerous

and that people should actively seek out the truth. Overall, great

post!

I liked the opinion you shared about the entire system being

flawed. I agree that it is deeply rooted and that there is no

immediate fix to it. People are not prone to change quickly and

easily and the corrupt system is a result of people who have not

yet changed. I think a solution is people need to fact check for

themselves as best as they can and try to provide their own

answers instead of believing the first thing they see or believing

the thing that they want. If we could slowly incorporate that, we

could maybe become less corrupt. (Reading Event #6)

While one reply post does *Demonstrate a Willingness Towards Praxis*,

the engagement is minimal and the replies are never taken up (i.e.,

responded to) by anyone else in the group.

What is not evident in this LMS-based discussion forum thread is a

back-and-forth engagement with an idea in the text or an effort to establish

personal connections, test validity, show empathy or affect, etc... Hypothes.is

overtly got more students talking to one another about the text. By

comparison, Hypothes.is gave students a new way to interact, *about* and *with* a particular text, in ways that yielded more favorable results related to engaged critical reading.

Conclusion

The primary goal of any DBR study is to address a common problem with a theoretically-sound intervention and then to study the success of that intervention— its context, its successes, and its failures. This study asked: In what ways do students interact with the text and with each other in their annotations throughout the semester and how do those interactions change over the course of the intervention? I think the key answer here is that students interacted with texts, using SDA, in a variety of ways that constitute engaged critical reading. In their interactions with one another, students spoke more to one another via Hypothes.is, and spoke to one another in ways that include more careful articulation of ideas, more challenging replies to ideas, with a critical appreciation for seeing others' ideas in a forum where such an exchange was respectful.

This study also asked this: In what specific ways do students' skills, behaviors, and dispositions change while practicing social, digital annotation (using Hypothes.is) with complex texts over the course of a semester? This chapter has illustrated a significant shift in students' annotation habits in that they exhibit greater complexity in and variety of responses to text, especially

when compared to their talk-about-text alternatives: private annotations and

LMS-based discussion posts.

CHAPTER 8

FINDING III: GAINS IN QUALITY READING AND ITS RELATIONSHIP TO CIVIC

PARTICIPATION

Civic participation in our deliberative democracy relies on its citizens'

ability to discern valid, useful information and to use that information in

substantive, responsible ways. In that sense, thoughtful civic participation

relies on readers and this study sought to examine the connection— in

students' own shifting perspectives of civic participation and praxis—

between reading and civic participation. To that end, this chapter addresses

findings in a way that is dissimilar from the first two findings chapters

(chapter six and seven). In this chapter, I start with noting patterns in

students' self-reported gains in the reading experience as a result of the

intervention. Then, I explore students' own reactions to their disposition

toward future action as a result of those perceived gains in reading

experience.

Their disposition toward praxis, specifically the kinds of praxis that

relate to civic participation, reveal how students feel prepared to *do*

something with what they've learned about engaged, critical reading. In that

way, this chapter is as close as this study can come to gauging how this

intervention moves students beyond the classroom— especially into their role

as active citizens. The findings here are in no way predictive, but they are

forward-facing, with a particular interest in what students are motivated to

do beyond this semester in response to the intervention. This chapter introduces findings drawn from myriad data sources— student annotations, reflective logs, and survey responses— to draw conclusions about their self-reported gains in quality reading (in response to the intervention) and dispositions toward praxis.

Students Experienced Gains in their Quality of Reading

Before addressing what students felt prepared to *do* beyond this local context, it's important to examine self-reported gains in reading experience in response to the SDA intervention. To sum up the significance of those gains, one student said it best: "it blew my mind just how much I had grown as a reader" (Reflective Log #6). This section reviews a spectrum of students' points of view on the growth they experienced in their annotation practice and, more importantly, their experience with reading, over the course of multiple Hypothes.is-based reading events.

One notable way that students expressed improvements was in the increased quality of thoughtful, complex, and analytical approaches to reading. One student noticed "a pattern of my annotations becoming more thoughtful and complex towards the end of the semester" (Reflective Log #6). Another student expressed gains in the way their annotations got "longer with more wordage as well as more in-depth with the text and more analytical" (Reflective Log #6). Length was not a requirement, so it's notable that a student felt compelled to add more quality to the conversation.

Another claimed that "Before this class, my annotations were just simple underlining or one word notes scribbled in the margins, while at the end of this class they are fully formed ideas that add substance to the text" (Reflective Log #6). For Adryan, his peers' annotations also helped him "get deeper… below the surface of what the text is trying to say…like get more into the details to really see what the text is trying to tell you" (Personal Interview) because "having my classmates' thoughts right there on the screen was an easy way to find the deeper meaning in the text" (Reflective Log #3). For Adryan, "get deeper" seemed to mean, in part, doing more than looking up a vocabulary word.

Another pattern among students' self-reported quality shifts in reading was that students felt they were becoming more critical of ideas in the text. "I also feel like since the first annotation I have found that it is okay to have a different view of what the reading is saying from others and to discuss those differences is important to fully understand the reading" (Reflective Log #6). As another student put it, "At the beginning my annotations mainly consisted of agreeing with the author or stating what surprised me. Now I find that my annotations are more meaningful. I have begun to question to the text more, the validity and purpose, who is writing the text and why are they writing the text" (Reflective Log #6). This is clearly a product of the entire intervention in context, not just Hypothes.is, but Hypothes.is played a significant role in that intervention. And the sentiment was echoed several times over, with

students feeling far more comfortable "challenging the author's viewpoints, his information, and even his stance— all great techniques I've picked up over the course of our readings" (Reflective Log #6). As another student put it, "before, I usually just explained an idea or simply highlighted it since it stood out. I now use my own beliefs to agree and disagree with an author's viewpoint. I find myself openly questioning certain ideas as well as try to tie in some of my own experience with the text. I am more open with my annotations as well since I am aware that others may be reading and responding to my thoughts" (Reflective Log #6).

With Hypothes.is, Hadeel felt that her "annotations were more meaningful" by the end of the semester, largely because of the opportunity to read others' ideas. When asked directly if her peers' annotations impacted the way she read the article, she responded without hesitation, "yes." I asked her why and she explained that her peers' annotations helped guide her reading path. So, for Hadeel, part of the clarity was in her peers' annotations. According to Hadeel, she would read the text once over for herself and then go back in to read others' annotations. She found great value in her peers' words: "I would go back in and I would read my peers' annotations I'd be like oh okay this is what this means or this is their background information so this helps me understand this." She held her peers' annotations "in the back of her mind" as read and they helped her "understand the texts in ways" that she may not have caught on to (Personal Interview).

For Hadeel, the growth in her reading skills was "mind-blowing." She took the time to look back at her earliest annotations (at the beginning of this semester) and lamented (in Reflective Log #6) that her early annotations were "just making comments agreeing with the author, but I could tell from my annotations that I wasn't completely grasping all the point... nor was I making the most of my annotations." She tried to annotate an early article over again and found her annotations drastically changed, deepened, becoming "completely different annotations than I had back in August. This time, I was challenging the author's viewpoints, his information, and even his stance— all great techniques that I've picked up over the course of our readings." For Hadeel, this class helped open "her eyes and mind to a new level of advanced reading that I never felt like I had," though I saw her as a strong reader to begin with, too. Hadeel felt, as a result, far more confident in a specific critical reading skill— seeking out misinformation. She felt more confident in her ability to sidestep misinformation and avoid sharing and repeating misinformed claims (Reflective Log #7).

Another key pattern in their own self-disclosed growth throughout the semester was the way they practiced challenging, sometimes strengthening, their own personal belief system in response to text(s). Kassidy reflected on this growth, "I believe that since the first article, I have been making more opinions and taking a stronger stance. Rather than having the majority of my annotation as summarization, it has evolved a step further to arguing from a

viewpoint and defending my stance" (Reflective Log #6). Despite Kassidy's reservations about the public nature of Hypothes.is, she also says in Reflective Log #6 that "overall, my annotations have developed from summarizing to actively taking a position and defending it."

While private annotations invited Kassidy to mark the text in ways that helped her "understand the text and make some connections" (Reflective Log #6), she feels like with SDA her annotations grew, deepened through the semester. By the end of the semester, she was "taking more of a stance," becoming "more confident in my ideas and my arguments and my interpretation of the text" and she attributes this positive growth to the confidence she felt when she read alongside other students who took up her comments. Kassidy reported that by the end of the semester, as a result of repeated practice with Hypothes.is and with a growing comfort with her classmates, she ended up "making more opinions and taking a stronger stance" rather than focusing annotations on summary and H. has helped her evolve "a step further to arguing from a viewpoint and defending my stance" (Reflective Log #6). Kassidy wasn't the only one who spoke to this pattern. Another student said that over the course of the semester, "I find myself asking more questions, looking for answers in other pieces, making an effort to understand and accept ideas that are foreign to me or go against my beliefs" (Reflective Log #7).

Yet another pattern that students expressed was increased engagement with text as the semester progressed. "This class has opened my eyes and mind to a new level of advanced reading that I never felt like I had" (Reflective Log #7). Because Hadeel was already a strong reader and an avid annotator, her testimony of growth is particularly significant. Even strong readers and motivated students seem to find new value in social annotations. She goes on to say that "before this semester, I would always walk away from a text that had so much writing and information to take away from. I felt like I didn't even know where to begin processing the information. However, I now know how to actively and accurately approach heavy readings" (Reflective Log #7). Hadeel's engagement grew from her confidence. For other, the engagement was a product of interest. By the end of the semester, after seeing the ways other readers interacted with the text with totally different opinions, "I was able to speak with the text like it was a conversation" (Reflection Log #6). This sort of interaction, according to Adryan, helped the text "be more interesting" (Reflective Log #3).

Another pattern was the way students expanded the variety in the ways they engaged with the text, or as this study articulated it, they engaged far more of the components of ECR concurrently while reading during a single event. Contrary to where they started, one student noticed how drastically they began "to interact with the text in a wider variety of ways: comparing the article with today's society, agreements with the author, using

already known knowledge to add onto the discussions that are being informed, emotional reaction to certain parts of the reading, as well as using the information to reflect with myself" (Reflective Log #6).

The final pattern that yielded notable commentary was improved comprehension. As Adryan put it, he used to "avoid having to dive in and get into the details [of a text] but um I feel like now it's a lot easier because um not only mines but the um peers that were also annotating I feel like getting their insight as well as mines really helped make more sense of the text itself" (Personal Interview). Adryan notes that his peers' contributions to the text helped him get through the complexity and served to give him more confidence with the reading task. Adryan explained that he tried to understand the text alone first, but then would look at his peers' annotations to help him. He didn't feel like he was reading alone; "there's always those people that are there that could help you if need be" (Personal Interview).

Sharita agreed with Adryan. Despite a deep concern over using Hypothes.is and digital reading generally, she also thinks it helped make the reading simpler: "what made the reading easier for me was actually reading through the comments left by other classmates. Their understanding helped me to comprehend the text little by little and helped me to formulate my own ideas about the reading" (Reflective Log #3).

Adryan claimed a noticeable growth in his reading. At first, he felt like his annotations were floundering. He didn't know what to say or how to do

more than just look up the meaning of unfamiliar words. By the end of the semester, though, "I'd say the growth now is sort of getting more comfortable with it and realizing that annotating the text is really anything you want to do with the test as long as you're engaging with it in some way" (Personal Interview). For Adryan, that realization and practice best display his growth. Adryan's comment accounts for an increased autonomy with students choosing their reading path, making personal meaning with the support and input of their peers, and finding a less heavily governed and limited way of reading a new text/new ideas.

As one student put it, "before this class, my annotations were just simple underlining or one word notes scribbled in the margins, while at the end of this class they are fully formed ideas that add substance to the text" (Reflective Log #6). The key phrase here is "add substance to the text." In this phrase, I see the beginning of shifting attitudes to the purpose of reading: to add substance, not simply absorb more accurately. The substantial gains that students report (detailed above) are important in that they speak directly to the way reading can be taught as an active meaning-making experience, one that serves praxis-based goals for thoughtful civic participation.

Students See Relationships Between Reading and Praxis

After examining student annotations, reflective log entries, and survey responses, the following data was collected because it speaks to the ways students perceive the relationship between reading and praxis of some kind.

The code *Relationships Between Reading and Praxis* culled together any response that students made overtly to the way reading does/doesn't enact, practice, embody, or realize essential components of knowledge production (Zeller-Berkman, 2014). This section addresses the patterns from a careful retrospective analysis of those responses that address the relationship between reading and praxis metacognitively.

Figure 39 *Relationships Between Reading and Praxis*
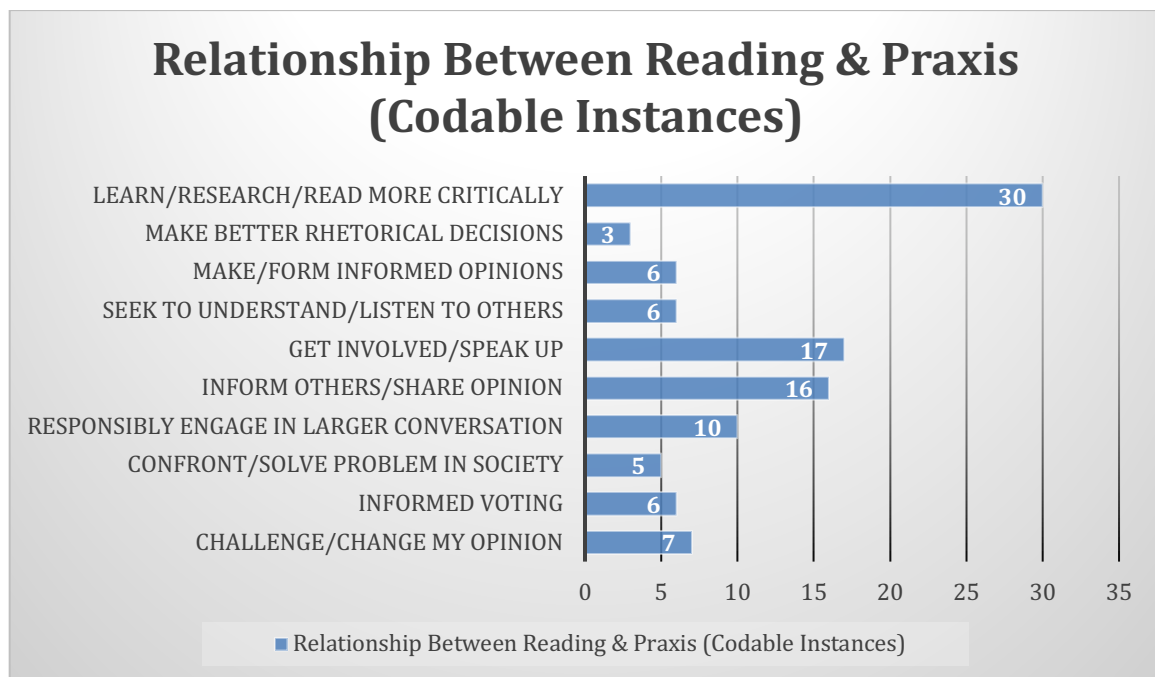
The most common collection of responses (30 codable instances) speaks to the way that students claim they intend to engage further texts (or, more specifically, students claim they intend to learn, research, read-then-think, read more critically, seek more reliable sources, analyze the texts they read more fully) as a result of a particular idea in a text. For example, Kassidy

noted that "the article makes [her] want to read more about other people's thoughts on voting and who should be allowed to vote" (Reflective Log #3). Another student felt drawn to learn more about "political systems that are closely related to a democracy and see if there are any better political systems that wouldn't alienate so many citizens of America as an epistocracy would" (Reflective Log #3). He wasn't the only one who, in response to a pretty difficult text, felt inspired to read more in order to understand a particular assertion (in this case, to understand other types of governments and their advantages and disadvantages compared to our own). Other students noted the value in looking for a much fuller context, rather than just "watching clips, sound bytes or left-leaning articles," in order to "make my own decisions about what occurred" (Reflective Log #5) or "reading something besides Facebook posts" (Reading Event #1). Many students, via SDA, found reason to contemplate more fully: "Annotation in this way not only gave me that moment to pause and think critically, but it also made the text more memorable. I've noticed myself referencing or thinking about these texts more in other conversations and assignments. I think that might be because my annotation has allowed me to form a deeper connection with the works" (Reflective Log #4). To help draw this connection between engagement with text and praxis more overtly, one student responded to a text by noting that "to think critically about something [in the text] and make our own ideas is really the whole point of Wolf's piece. That's exactly what

makes us better and what makes us better citizens and people" (Reflective Log #5).

Further, there were 17 instances of students claiming that reading helps them prepare to speak up and get involved in a specific cause. Sharita notes that the reading pushed her to "be an advocate for myself when it comes to voting and to get everyone else around me involved" (Reflective Log #3). Another student felt emboldened by the realization that she'd never before considered "that we'd be able to make differences in things like 'water rights' because they sound so big and scary to me" (Reflective Log #7). Another student expressed the way she'd already gotten involved by "actively reporting potential misinformation on the social media sites" she frequents and was proud that she helped get a post [one that was spreading misinformation] banned from Instagram as a result of her efforts (Reflective Log #7).

Among the instances of noting the relationship between reading and praxis were 16 mentions of students who felt ready, as a result of active reading, to inform others of what they'd learned and share their opinions on the matter, noting how important it felt *now* to "investigate how to motivate the coming generations of young people to educate themselves in politics" (Reflective Log #3). Reading, specifically, in preparation for their Exploration Research Project helped students see "a new angle. I wasn't just reading about the protests so I could be informed; I was reading about them so that I

knew enough to inform others" (Reflective Log #5). This desire to inform others came up several times. In fact, another ten students articulate they were ready to engage in the larger social conversation— that they now have more to talk to others about and feel confident in their ability to even have those conversations.

Other responses included the desire to vote, but specifically to make voting decisions that are informed and thoughtful. One student named how important it is to "have some background knowledge on what" they are voting on (Reflective Log #3). Another student further noted how being informed is pretty complicated: "this [text] helped me understand that we have to be more careful and informed before we begin anything we have to be committed to" (Reflective Log #3). Despite its complication, staying informed was also deemed more desirable, as one student put it: the text "encouraged me to educate myself more about politics just so I do not have to continue categorizing myself as an ignorant voter" (Reflective Log #3).

Additionally, students spoke to the way reading helps them challenge their own views/beliefs. In response to one reading event, a student admitted that "the article made me question the weight of my vote, and made me notice that part of me wants to believe that it's not as meaningless as Brennan suggests" (Reflective Log #3). Another student (Hadeel) noted that "with great help from that article, my beliefs have drastically changed. I've begun to view it as my civic duty to society to vote and be involved"

(Reflective Log #5). For some students, the process to challenge yourself was what they took away from the course: "I found during my [reading and] research this semester that....the only way to truly have an informed opinion is to actively try and disprove your own biases" (Reflective Log #7). Many students lauded the opportunity to connect to new people and new ideas, to "learn about things you might not ordinarily," try to understand the "things that are important to different people," even seeking out and spending "more time reading trustworthy news sources than I do on social media" (Reflective Log #7). One student noticed that they "held a stance to some degree on most of the issues I could think [to write about] despite never really researching them myself" and felt a strong desire by the end of the semester to "make a responsible attempt at producing change within a community" (Reflective Log #7). Students recognized beliefs and challenged them in a way they reported not challenging themselves before.

Seeking to understand others was a particularly interesting response in that it wasn't a targeted outcome of the intervention, but a welcomed one nonetheless. One student spoke to this outcome by saying "I do believe that the reading we have done...[made me] challenge myself to look outside my immediate box and engage with others who have different beliefs than I do" (Reflective Log #7). Another student claimed that this class prepared them "for listening to the opinion of others and civilly discussing these differences of opinion" (Reflective Log #7). For Kassidy, seeking to understand others was

key to forming opinions of her own: "I think one of the main connections is just that when you read you get to like see other viewpoints and perspectives and I think that's really important in like understanding what other people are saying so then you can form your own opinion and then also just being able to like stay in the know" (Personal Interview).

Another student noted how civic participation necessitates that we do the things this class encourages: "to analyze all sides of an argument [and reflect] upon listening with empathy and engaging in respectful dialogue" (Reflective Log #7). In fact, this appreciation for civic or respectful dialogue made available by Hypothes.is came up several times in the data. One student was "impressed with [her fellow students'] annotations that…was opposite of their argument. Everything they said was…done in a polite manner" (Reflective Log #6). In another student's post, "While I didn't agree with all my peers, it was nice to see what they had to say on the matter and interact in a way that is both civil and information" (Reflective Log #6). Students expressed a desire for respectful exchange of different ideas and seemed grateful to have found one potential place for such an exchange.

Students Exhibit a Willingness Toward Praxis

While similar to the above data about the relationship between reading and praxis, this section specifically addresses student perceptions of their own willingness toward praxis as a result of reading. In this section, I explore student responses— gathered from their annotations and their reflective

logs— that commit to future action. This section narrows in on instances where students articulate what they'd like to *do* (or *see done*) as a result of reading a particular idea in the text.

After careful pattern coding of all student responses gathered under the code *Willingness Toward Praxis*, the following table was designed to illustrate the more nuanced patterns that emerged. Ultimately, all 148 instances of this code were chunked into four separate categories: changes students would like to see made discursively, socially, dispositionally, as well as changes to awareness.

Table 13 *Categories of Student Willingness Toward Praxis*

Four categories of *Willingness Toward Praxis*	Codable Instances (from coding round II)
Discursive Changes	22
Seek reliable quality sources	6
Encourage others to educate themselves	2
To write about things	1
Make better/more informed decisions (inc. encourage others to make better decisions)	1
Make information more accessible	1
Educate ourselves	8
Address misinformation	10
Insist on Better Quality Press	2
Make truth #1 requirement or judgment	1

Table 13 *Continued*

Four categories of *Willingness Toward Praxis*	Codable Instances (from coding round II)
Social Changes	73
Changes to education system/curriculum	29
Vote/Vote responsibly	8
Learn from the past	3
General Call to Making Changes	33
Dispositional Changes	31
Practice empathy	7
Reflect	3
Acknowledge our own biases (be willing to look and talk to others beyond our tribes…	7
Variety of dispositional changes	13
Changes to our Awareness (variety of specifics, including: pay attention to what our representatives do)	11

Discursive Changes

One commonly reported description of students' willingness toward praxis professed a commitment to discursive changes (22 codable instances). These changes referred to seeking out, talking about, and reducing the spread of misinformation (10 codable instances). One such instance spoke to how "it's important to do your own research so that the memes [that dominate the Internet] don't influence your own political opinion" (Reading Event #5). Several other students noted that it's not enough just to challenge

misinformation, but to refuse to share it: "By sharing misinformation we are contributing to the problems of disinformation without realizing it, which is further harming the ways we perceive true and false information and who we trust" (Reading Event #5), even insisting more broadly on better quality press (two total).

A slightly smaller cohort (eight total) of instances referred to a desire to educate themselves via specific actions such as: better reading practices like re-reading, focusing/deeper comprehension, adding new texts to read, practicing lateral reading (or as one student put it, to "always have Google Scholar handy to cross check info on Facebook or Instagram" in Reading Event #5), using digital annotation, deciding what is and is not important to absorb, "look[ing] at everything we see and read with a skeptical eye" (Reading Event #5), and doing our own research on any claim before accepting it. One student commented on their shifting trust in the difference their own vote can make: "I think we just need to remind our family and ourselves that if there's something that is wrong in our world today we can make a difference in educating ourselves and voting" (Reading Event #2).

An even smaller cohort of codable instances (6 total) referred to the desire to seek reliable quality sources, such as avoiding social media, and to avoid the tendency to trust blindly. One student articulated a need to have tricks to help us discern "what is good quality and what isn't" among reading materials (Reading Event #3), though students were clearly wrestling with

the means to accomplish such a feat in their Reflective Logs. One such discursive means was to practice more attentive listening: "As far as what I'm prepared to do, I think that we can all do things as simple as listening to each other. I think this is an important step in civic participation that often gets overlooked. Listening is a small act with a big impact" (Reflective Log #7).

Social Changes

The majority of codable instances (29 total) spoke to the desire to enact social changes in response to the readings focused on changes to our educational system and/or curricula: to include "more political diversity in schools," or making political science/civics a larger part of standard K-12 curricula, teaching students from a younger age how the government works, and teaching them also "how to prioritize reading" (Reading Event #3).

However, many (33 total instances) made a variety of specific sociopolitical recommendations, such as: holding politicians accountable, demanding the White House listen to experts and admit when they're wrong or helping society dismantle the US party system. While a handful of responses call on society to just *do* something generally, others try to be more specific by asking society to use information wisely or asking social media companies to "use their knowledge of how people interact with information on social media to help users process information responsibly" (Reading Event #4).

Eight total codable instances refer specifically to voting, but most of those responses demonstrate a pointed interest in voting more responsibly: "I think a vote should always be for the policies you believe in and the capabilities of the candidate," not just a vote along party lines (Reading Event #2).

Dispositional Changes

In a collection of 13 instances, students spoke to a variety of dispositional changes including: desire to learn more, accept change, prepare for change, choose hope, be humble, don't just accept status quo, keep asking "What can be done?", keep traditions, admit when you're wrong, don't put self above majority, "see each other as intellectuals and not as being better than one another" (Reading Event #2), be skeptical, and be willing to engage in hard conversations. Another smaller cohort of codable instances address the effort toward on-going reflection (four total), acknowledging our own biases by being open to others' perspectives (seven total), and empathy (seven total). As one student put it so poignantly:

> I think there's an important difference between sacrificing our own experiences and setting them aside for a moment to understand someone else's. Nobody can sacrifice their experience— it's something we carry with us no matter what...but, we can humble ourselves enough to understand a different experience. That's the importance of empathy. (Reading Event #7)

Finally, a favorite response by several students was simply to "choose hope in difficult times" (Reading Event #7).

Another spoke to acceptance specifically: "we as people need to be more accepting and open to not only change but learn about new viewpoints and ideas to expand our minds and preconceived notions" (Reading Event #7). As one student put it, "we need to expand our political discourse beyond our political 'tribes' and social circles to engage those of opposing beliefs and background to make more informed choices for the benefit of our communities" (Reading Event #2).

In fact, West's text inspired an increased number of instances that demonstrate a willingness toward praxis, namely those that "actively combat against [racism]," including a stronger sense of inclusive communities, "improving the lives of our nation's children," and putting "yourself in the shoes of the people who are facing these racial issues and see past your own issues for the greater good" (Reading Event #7). We must "empower black voices; they are the only ones we can really learn from" in regard to West's "Moral Obligations" text.

Students reported feeling empowered to represent and make change around a number of issues that were close to their experiences. For example, one student claimed that "with my background information and with all my annotations with everything, I feel like it's my role to advocate for my condition specifically you know. People may not know about it but it's like up

to me to educate them if I were to have that conversation with them"
(Reflective Log #7).

A few responses still focused on the power of teaching dispositional
qualities, such as how to look past stereotypes and teaching children from a
young age about "respecting others and disregarding [our biases related to]
how others look, culture, or beliefs" (Reading Event #7).

Changes to Awareness

Several students noted the immense value of simply paying attention—
to what "representatives are doing in between elections" (Reading Event #2),
to actively pursuing an awareness of our own cognitive biases (a common
response after Reading Event #4, after reading a text about cognitive biases
specifically). One student noted a growing shift in awareness around social
media use after reading "The Deep Space of Digital Reading," claiming that
after this specific text, she changed her phone habits: "I try to use [my phone]
to mainly call family and friends. I try my best to stay off apps that zone me
out for hours, like TikTok… Reading [this text] has caused me to think outside
of the box and in a sense, to start to open up my eyes to the reality we exist in
now (Reflective Log #5).

Overall, students reflected a desire to take action, as expressed in this
response: "Do I feel compelled to take action after this semester's learnings?
Absolutely" (Reflective Log #7). The motivation to *do* was evident in this

collection of student responses that demonstrated a willingness toward praxis.

Students Connect Reading with Civic Participation

In this course, praxis was further narrowed to conceive of actions that count specifically as civic participation. This specific form of praxis is not a component of engaged critical reading exactly, but instead meets the exigence of the times these students are learning in. This study aimed to better understand students' perceptions of reading and its relationship specifically to civic participation. To begin, the post-intervention survey asked explicitly whether students saw the relevance of reading on their civic participation.

Figure 40 *Student response to question: Is Reading Relevant to your Civic Participation?*
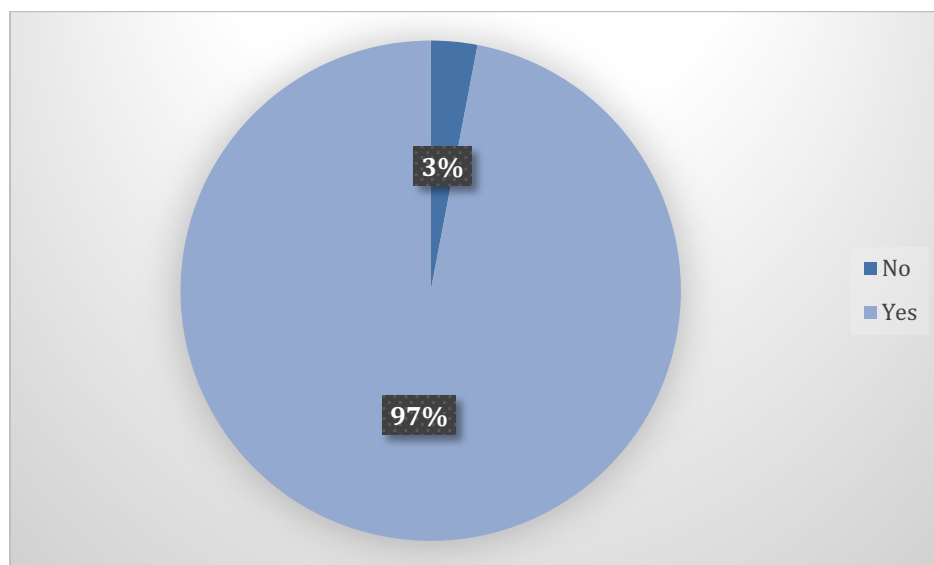
Students see the relevance, as evidenced by this simple question posed on the exit survey, but their insights and thoughtful articulation on the specific ways reading informs their civic participation surprised me. As Sharita said in Reflective Log #3: "I've taken this reading as my push to be an advocate for myself when it comes to voting and to get everyone else around me involved." In another instance, a student mentions that "one thing I took away from this class was that reading in civic participation is key" (Reflective Log #7). Those perceptions were welcomed, for sure, but I wanted to understand exactly *how* students saw the connection. Thus, the exit survey asked students to describe "how is reading relevant to your efforts at civic participation?" Seven categories emerged from their responses to that question:

Table 14 *Reading and Relevance to Civic Participation*

CATEGORIES	Examples of codable instances within categories		
Reading helps me build knowledge	"...you need lots of information to find a reason to participate."	"I need to do some reading...to build enough knowledge to advocate a civil issue."	"Reading informs our views so that we can engage in civic participation armed with facts."
Reading increases my awareness	"Reading is how I make the choice to stay informed."	"Reading is a way to give myself context for issues I may not be familiar with."	Without the ability to read well it is hard to understand what is going on in the world....much less participate civically.
Reading helps me make informed decisions	"Reading is an easy way to gain knowledge which then allows you to use knowledge to make decisions..."	""[Reading] gives me facts that I could use to decide how and if I want to participate."	"Being informed [enough to make decisions] involves lots and lots of reading.'
Reading helps me understand others' point of view	"[Reading] helps me understand other viewpoints that I do not get to encounter."	"...by reading you learn so many different viewpoints..."	"...reading with an open mind helps with seeking out a variety of different opinions."

Table 14 *Continued*

CATEGORIES	Examples of codable instances within categories		
Reading helps me form, change, solidify my thoughts/opinions	"Reading can either change or solidify your thoughts...it is okay to change your opinion."	"Reading is an easy way to gain knowledge which then allows you to ... form opinions and beliefs."	
Reading helps me improve my analytical skills	"Reading can make your analytical skills improve, thus being able to analyze other people's opinions and broadcast your own in a beneficial way."	"I think the best way to obtain information, and verify it's trustworthy, is by reading."	
Helps me engage in important conversations	"No matter what your beliefs are....[you] want some kind of context, knowledge, or evidence. It helps you engage in conversation about topics that are important to you."	"If you want your voice to be heard then participating and knowing what is going on around us is crucial."	"Reading helps me engage with others to share my opinions while also commenting on others' opinions."

Within these seven categories of data on the relationship between

reading and civic participation, three key themes emerge that are notable:

students reported increased confidence in practices of engagement, they

reported a significant shift in their attitude toward civic participation, and a newfound desire to know and act for themselves.

Reading Leads to Confidence in Taking Action

One theme that repeated itself in this study's attempts to get students to speak to the role of reading in their civic engagement aligned well with this student quote: "I felt far more confident to do something because I felt like I knew what I was talking about now" (Survey Response). Hadeel helps articulate this outcome more fully during the interview. She claims you must have strong reading skills to avoid the bad habit of "spewing meaningless jargon" and go about your business without the background information and knowledge you need to play a role. For her specifically, she feels empowered to act on behalf of erasing the stigma around mental health and ADHD primarily because of her reading in that area. "I did my research and I found information and I felt like that prepared me to advocate for it more in the future because I have a sense of um background information. Like I know what I'm talking about now" (Personal Interview).

The source of this newfound confidence for many students was increased knowledge gained from greater engagement with the text: "My biggest source of confidence was my own knowledge, with a strong understanding I was able to explain this issue to others, answer questions on the issue, and find real solutions" (Reflective Log #7). One student put it this way: "I do feel more confident in my ability to participate in general, and I feel

better prepared as an individual to participate in greater conversations about that civic duty" (Reflective Log #7). Kassidy put it this way: "I now am more confident to express my research to anyone curious and potentially change their point of view on CAFOs" (Reflective Log #7).

Confidence, for many, was expressed as a feeling less afraid of reading. As one put it, "I am not afraid to read materials that challenge me" anymore, says one student (Reflective Log #7). In another case, the student said that "I tend to let others speak more than I because I normally fear that my opinion is not in-depth enough or is not knowledgeable enough for my audience. Building more self-confidence is key for civic participation, in which I believe I can do with time and practice through more discussions and discourse with peers" (Reflective Log #7).

Shifting Attitudes Toward Civic Participation

One final thread that this project sought to examine was students' shifting attitudes toward civic participation as a result of engaging in the readings via SDA. After retrospective analysis of all available data, the simple answer is that *yes,* many students' attitudes changed significantly. To be fair, this shifting attitude cannot be solely tied to the SDA intervention itself. Annotation was a catalyst, as evidenced by the data, but so were the ideas presented in the texts themselves. This may be an impossible distinction to draw clearly, but students, many for the first time in their lives, were engaging in conversations about deliberative democracy, discourse, and civic

responsibility. Exposure to those ideas, as well as annotation-based conversations, seemed to affect shifting perceptions of civic participation.

Having said that, over the course of the intervention, attitudes toward civic participation were changed in significant ways. Hadeel, in fact, notes that her beliefs about the value of civic participation had dramatically changed, feeling inspired initially by Wolf's "Reader, Come Home" piece, then feeling empowered by her own research into ADHD (a condition she was recently diagnosed with) and her shifting notion of what it means to participate in your communities. Hadeel was handed a skeptical attitude toward civic participation from her parents. "I always felt like as an immigrant or as like a foreigner in this country your voice never really matters," like you're "encouraged to do stuff, but it makes no difference." But, "I voted for the first time in this election and, um, I started to look at things more critically," to know that "your voice matters. You just know how exactly to convey it" (Personal Interview). She convinced her parents to vote, too, for the first time in 30 years. "I was telling them 'you know your voice matters. If you have a problem with this, this is an opportunity for you to speak up. You just have to know how to reach um your audience you have to know how to structure your message.' So their perspective on their role as citizens has changed as well" (Personal Interview). By the end of the semester, Hadeel felt compelled to make "it my mission to go out and educate myself on politicians, what their campaign is about, and what they believe in. I just

refuse to eat whatever information that is presented to us in the headlines, we must go out on our own and actively conduct our research to fact check the news" (Personal Interview). For Hadeel, her viewpoints on civic participation were "drastically changed" (Reflective Log #7) over the course of the semester. I'm sure the charged political environment had much to do with that change, and her newly acquired right to vote (she's only just 18), but her active, engaged, social efforts at reading gave her the confidence to overcome her parents' skepticism and played a role in how she "no longer limit myself to the small role that I envisioned civic participation to be at the beginning of the semester" (Reflective Log #7).

Kassidy, too, said that this class "completely like changed my outlook on like how I approach different topics to other people and it actually just gives me like a little bit more confidence because I'm like thinking like I'm actually like doing something and it's helping them and like the community in general" (Personal Interview). She attributed this to her shift in attitude, from feeling like "I'm kinda young and like I'm figuring it out...like I can't really add that much" to feeling like "after this class like I really realize that like every little voice counts and like you don't have to do like huge things like even just the smallest thing of like telling someone about something...[is] civic participation" (Personal Interview).

For Sharita, her shifting attitude was tied to a shifting definition of civic participation, something every student was asked to reflect on. Sharita

started with a broad definition of *civic participation*, though: it could mean "community service, fighting for injustice, creating change in your communities or society, or just being a good person to yourself and other people" and recognized early on that she did not want to be a "performative ally or activist" (Reflective Log #1). By the end of the semester, Sharita said, "you know even when we're talking about things as simple as texts and emails, um these are your you know civic duties and something as small as like reaching out to a friend um that might be in need" in addition to standing up against corporations that aren't upholding ethical standards or assessing our own moral and ethical beliefs. "Reading really ultimately turns into communication" (Personal Interview).

Desire to Know/Act for Themselves

Most students reported that they'd never paid much attention to what was going on beyond their immediate personal relationships before; they just "went with what they were told" (Reflective Log #7). As one student put it:

> Politically speaking, the foundation of my beliefs mainly derives from those of my parents and the demographics of where I grew up…everyone I grew up around had liberal views and identified with the Democratic Party. As I have gotten older, I have put upon myself to be more deeply educated in politics since it is such a current and prominent topic of conversation.

Many students at this level are at a point where they're ready and eager to know things for themselves and seem highly aware of that fact. Many are looking to question what they've learned in their families of origin. Kassidy discussed her effort at reading as a catalyst for and resolution to a recent attempt to question her faith. She echoed the same sentiment that so many students did: a desire to push beyond the opinions they grew up with. Kassidy grew up in a Christian family and only recently started "questioning the beliefs I had been taught as a child" (Reflective Log #5). To begin that challenge, she started reading a book (outside of class) that proved pivotal.

> Before reading this book, I was still wrestling with the idea of God. This book details the accounts of visions and dreams that Nabeel claims he has received from God. Had I had only that brief summary, I would not have believed Nabeel at all. However, reading his experiences has changed me and made me a stronger Christian than I was before I even began to question Christianity. Although by the end of the novel I was still reading skeptically, the evidence and arguments that Nabeel presents was very compelling.

Kassidy is noting how essential reading the book was to her willingness to change her opinion, to shift her belief system, and in this case to strengthen her faith. She read the text critically, always skeptical of the author's claims and potential attempts to manipulate the reader. By the end

of the reading experience, Kassidy felt that she "was making my own decisions in what I believe and choose not to believe" (Reflective Log #5).

Students, though, mostly don't acknowledge that their beliefs have changed or could change after reading events, though. They most commonly say the readings reinforced their beliefs and/or just made them more knowledgeable about their beliefs. They often also said they were challenged to understand something/someone else's beliefs, though they did not change their own beliefs. One student noted this specifically in her reflective log when she says her opinions on police brutality weren't changed, but she felt bolstered by a fair reading of her opposition. That fair reading of contrary ideas is a significant, advanced reading skills indeed.

For several students, this bolstered confidence led to a motivation to vote. Several students were faced with the opportunity to vote for the first time. That's not unusual in a class where most students have or are just turning 18. In my experience, many students are not eager for that privilege. They are often overwhelmed, confused, disconnected from the process, or ambivalent to the issues. But the attitude was different in this semester. What was different this semester was the reported confidence with navigating their vote: "Not only did I vote this year, but I was confident with my vote" (Reflective Log #7). As another student reported it, "This class taught me to want to be more involved in those conversations and to better find correct material to be knowledgeable if I do decide to participate" (Reflective

Log #7). One student found a community of people who, like her, supported 3rd-party candidates.

Some of this newfound preparedness comes from the rhetorical work itself. As Hadeel put it:

> through the course of this semester, I learned that with the correct medium/product, you can make anyone your audience. I feel more prepared to take action on the topic of ADHD…because I am far more informed about this topic and I know how to structure my information in a way that would allow readers to grasp what it is I'm intending for them. I no longer limit myself to the small role that I envisioned civic participation to be at the beginning of the semester. (Personal Interview)

The experience of feeling better prepared, more confident, and willing to engage in praxis that is particular to civic participation was echoed many times over but summed up well by one student in the final reflective log (#7): "I absolutely feel more prepared to take action beyond this classroom. Taking this class gave me the motivation, time, and effort I needed to really delve into an issue I was already passionate about. I think one of the most important things about being a strong civic participator is being educated."

Conclusion

Students reported significant gains in quality reading experiences, specifically with quality gains in complex approaches to reading text, their

increased critical reading habits and comprehension, marked by more meaningful annotations that challenged authors and ideas. These gains helped students feel confident to challenge their own belief systems, or at least listen with an open-mind to contrary ideas. The gains were dispositional as well, including increased engagement and confidence. These gains were the foundation for the way students saw themselves as active and informed members of a deliberative democracy.

Some of the most powerful results of this intervention relates to students' preparedness and willingness to take action, especially among those who feel disenfranchised because of their age, race, or socioeconomic status. In fact, these courses include a lot of Dreamers (DACA) and students with families that have illegal immigrant status (though this was not a question this study would dare ask). Students in such circumstances often report feeling left out of social meaning-making or change-making and for good reason. This disenfranchised attitude often results in (and from) a lack of confidence in their role in social decisions. There is power in a more agentic approach to reading. There is power in students feeling confident in their own ability to engage in the discursive habits that are key to deliberative democracy. And that power translates to civic action, at least in what students reported in this study.

This study asked the following question in relationship to engaged critical reading and its role in praxis: After repeated practice with social,

digital annotation (via Hypothes.is), what dispositions do students demonstrate toward praxis, a characteristic commonly attributed to engaged critical reading, beyond the composition classroom? Specifically, by the end of the semester, what do students feel prepared to *do* beyond the composition classroom? The answer is that students spoke to a series of specific discursive actions they feel prepared to take on as a result of the intervention. Students not only metacognitively spoke to the relationship between reading and praxis (in that reading is the key preparation for praxis), but they also spoke to their own willingness to engage in discursive, social, and dispositional acts, in addition to committing to be more aware of what others are saying and doing.

The last two questions ask whether students acknowledge the relevance of, and the relationship between, engaged critical reading and civic participation, specifically, and whether students do (or not) shift their attitude toward being engaged in civic participation. The answer to these last two questions is most simply *yes*. Students articulated a variety of important connections between reading and civic participation around several categories.

Attitudes did change, especially for Sharita and Hadeel. For other students, these changes seem mostly related to feeling empowered through more active reading habits and a stronger grip on their own opinions— as in alignment with or discordant from their peers' opinions. Students claim to

feel more empowered to engage in ways that count, for them, as civic

participation.

CHAPTER 9

SITUATING THE LOCAL FINDINGS WITHIN THE GLOBAL CONVERSATION

In this penultimate chapter, I pull together key themes that emerge across all the major findings from the preceding chapters, particularly with connections made between SDA and the skills, behaviors, and dispositions of ECR. These findings are then situated in conversation with research findings from similar studies— often, but not always, illustrating consonance with their conclusions.

SDA Enables the Skills, Behaviors, and Dispositions of ECR

This study stops shy of claiming that there is a cause-effect relationship between SDA and student development in the components of ECR. Such a claim would necessitate a stricter isolation of SDA, without the contextual variables that this study's design makes central. However, if *development* refers to "change over time leading to an increasingly complex patterning of activity, through which both the individual and his or her products and environment can become increasingly complex structures, separately and interactionally" (Phelps, 2020), then there are implications about the potential for enabling the conditions for such development inherent in these findings. The students' "increasingly complex patterns" of reading and annotating reveal significant development as the intervention progressed. This development is evident across the categories of the ECR model— in the skills, behaviors, and dispositions— reported in the data.

Enabling Skills of ECR

The skills included in the ECR model (detailed in chapter three) include the ability to: assess the contexts of meaning; apply knowledge to real-world situations to test validity; negotiate among multiple, competing claims to develop their own unified system of knowledge; engage the confusion and complexity of text; especially immersion in chaos and complex, ill-structured problems; engage with the pleasure of the aesthetics of language; read both *against* the grain and *with* the grain; describe their own metacognition; and, identify and evaluate rhetorical moves (all detailed in chapter three). While all ECR skills were practiced to some degree, under particular circumstances throughout the intervention, only certain skills proved substantial among the findings, including students' metacognition around their own improved reading processes, their critical engagement with the text, and autonomy with meaning-making.

Metacognition

Students' ability to be aware, articulate, and reflect on their reading processes is a key component of metacognition, a common FYC objective. In students' metacognitive efforts toward their own reading (overtly prompted in the series of Reflective Logs), they repeatedly reported the value of adding SDA to their reading processes. See Figure 41 below.

Figure 41 *Positive Reactions to Intervention, Skills and Behaviors*
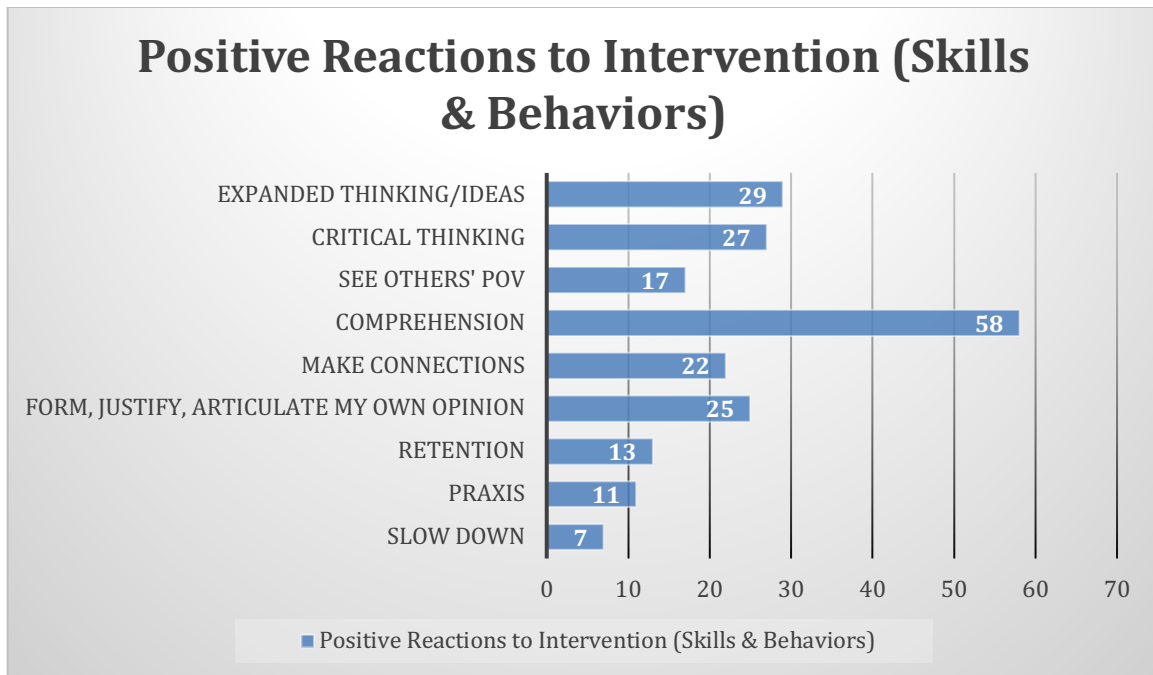
The primary reported benefit to their processes was the chance to dialogue with peers about text— either as articulating/justifying their opinions *to* peers, making connections *with* peers, or having the chance to see others' points of view. Students find the performance *for* and the collaboration *with* peers yielded powerful benefits (in their own terms) including retention, comprehension, expansion of ideas, and critical thinking.

These results are not a great surprise, given that so many other studies have reported similar results (see Johnson et al., 2010; Kirschner, Paas, and Kirschner, 2009; Laughlin, Bonner, and Miner, 2006). There are far too many such studies to describe them all, but a few are particularly relevant. The majority of O'Dell's (2020) subjects (56%), for example, agreed that SDA *did*

change their processes of reading, for the better, and across five sections, 67%

of them said that digital annotation was particularly useful. Like my own

students, they most appreciated "seeing their peers' thoughts outside of

class" (p. 16). Likewise, Morris' (2019) students found the interactivity,

collaboration, and increased engagement of SDA most powerful. In fact, this

sentiment is echoed in many such studies of digital tools, student

collaboration, and positive perceptions related to interactivity (Lebow and

Lick, 2004; LeeTiernan and Grudin, 2001, as cited in Wu-Yain et al., 2007; see

also Li et al., 2015; Nobles and Paganucci, 2015; Sheffield, 2015; Wolfe, 2002,

2008).

Another metacognitive move was the way students described SDA's

support with keeping track of the shift in their own ideas, providing a clear

record of their thinking. SDA's call to articulate opinions, reacting in a way

that can be understood by others, seems key to developing and tracking

evolving ideas more clearly. Much as Li et al. (2015) reported, SDA (specifically

the act of selecting, highlighting, and making connections across a text)

allows students to "create a concrete record of their thinking process as they

read" (as cited in O'Dell, 2020, p. 4). Students in this intervention also agreed

with O'Dell's findings that SDA helped them break the text into parts, rather

than trying to understand it in one whole chunk (p. 16), noting that "writing

things out can help me understand better" and "organize my thoughts" or

"break down sections....to piece together meaning" and "get to its bones" (Reflective Log 4).

Several students used the term *retention* to explain how SDA "helps solidify what I have just read, makes it more memorable and stick in my head" (Reflective Log #4). For others, the record was more overtly helpful, "[SDA] helps me be able to look back at key facts and information that I feel will be useful for me" (Reflective Log #4). In fact, "without annotating, I could 'read' an entire chapter of a book without retaining a single ounce of it." However, using SDA alongside reading seemed to offer students the chance to pause, think more critically, and keep the "text fresh" for later application (Reflective Log #4).

In these ways, students' articulation of specific SDA features that foster effective reading— their ability to demonstrate metacognition— is notable and aligns with several other studies featuring SDA.

Critical Engagement

Another specific way that students spoke of SDA and its impact on reading processes was in their reports of a more active and engaged approach to reading. Students often used the term *engagement* to describe a variety of experiences, such as increased curiosity, a deeper connection with the text, and more critical exploration. In fact, "without annotation, it is extremely easy to become a passive reader" (Reflective Log #4), and as one student put it, SDA helped them more actively think "about these texts more

[and use them in other conversations and assignments]" because the social annotation helped them "form a deeper connection" to the text (Reflective Log #4). Studies like Cornice-Pope and Woodlief (2003) found that, in their semester-long study of SDA in a literature course, their students began to gain significant reading strategies, taking a more active (and engaged) approach to meaning-making negotiations.

Perhaps, students' rates of voluntary posting speak more directly to this sense of enhanced engagement. My own students often posted more than required. For example, more than 20 students during Reading Event #7 posted more than the three initial, plus two reply annotations required (as shown below, in Figure 42). These results don't stand alone. In fact, Gao (2018) found that students post more than required with SDA and that their comments are more directly relevant to the text.

Figure 42 *Crowdlaaers[24] Posts by Participants, Reading Event #7*

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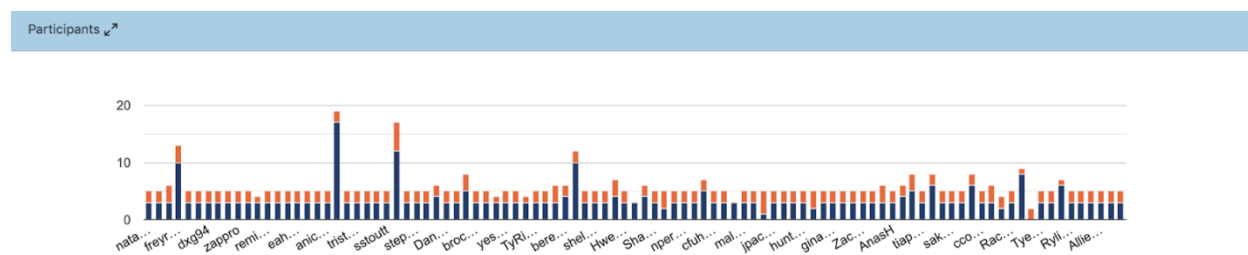
[24] Crowdlaaers graph shows how many students posted initial annotations (in blue) and reply annotations (in orange).

Students in this study felt that SDA helped them not only engage with the reading, but to engage *more critically* (reported in 27 codable instances). While other studies have had mixed results (when measuring critical analysis and SDA habits), my own students expressed gains. Hadeel makes this clear in her interview: "This class has opened my eyes and mind to a new level of advanced reading that I never felt like I had" (Reflective Log #7). She goes on to say that "before this semester, I would always walk away from a text that had so much writing and information to take away from. I felt like I didn't even know where to begin processing the information. However, I now know how to actively and accurately approach heavy readings" (Reflective Log #7). Given Hadeel's already strong background in reading and annotation, this testimony is particularly telling, but she wasn't alone. As another student put it, "When the semester began I did not question the authors and never thought more about the articles." They went on to explain that the articles and the annotations were more complex than anything they'd encountered before and that they appreciate the way SDA helped "question everything around me" (Reflective Log #7).

This sense of "depth" or "connection," collectively captured by the term *engagement*, echoes results reported by O'Dell whose subjects said that SDA helped them read in greater depth, with more curiosity (p. 16). In fact, several studies have looked directly at the context of engaged reading and concluded that engagement is more likely to happen when, alongside choice

and relevance of texts, students have opportunities to collaborate (Guthrie et al., 2012; Licastro, 2019; Yazzie-Mintz and McCormick, 2012, as cited in Ivey and Johnson, 2015), finding motivation in "reciprocal influence" (Ivey and Johnson, 2015). The findings in this study corroborate Ivey and Johnson's claim that collective, social practice is indeed a path to engagement and bears witness to the value of social interaction *while* reading or reading together using SDA to help generate that engagement. These findings, across multiple research sites, challenge the far more commonly accepted view of motivation and engagement as primarily an individual endeavor and the solitary reading experience as the best circumstance for critical reading practices.

Several studies have pointed to the ways that social, digital annotation also yields considerable improvement in reading comprehension (Johnson et al., 2010; Su et al., 2010). In fact, a recent review of 16 studies spanning seven different academic disciplines found that student reading comprehension (alongside peer review, motivation, and attitudes toward technology use) were all positively influenced by social and collaborative annotation (Novak et al., 2012). While the intent of this study was not to make such absolute claims of improved comprehension, students certainly named that growth in comprehension for themselves. As a matter of fact, "improved comprehension" was how most students described the positive benefits of SDA, accounting for 33% of the codable instances among students' *positive reactions to the intervention*. For the students in this intervention, they often

depicted *engagement* as a direct means of gaining *comprehension*: "I think [SDA] creates a deeper level of comprehension because I am more engaged in the text" (Reflective Log #3) and "honestly, sometimes without [these] annotations, there's no possible way for me to comprehend a text" (Reflective Log #4).[25]

Reader Autonomy/Responsibility

Perhaps all of this self-reported improvement to reading processes is more about readers gaining a sense of autonomy in their meaning-making while reading. Adryan illustrated this opportunity to practice confident autonomy by speaking about the noticeable growth in his reading. At first, he felt like his annotations were floundering. He didn't know what to say or how to do more than just look up the meaning of unfamiliar words. By the end of the semester, though, "I'd say the growth now is sort of getting more comfortable with it and realizing that annotating the text is really anything you want to do with the text as long as you're engaging with it in some way" (Reflective Log #7). For Adryan, like for many students, practice with SDA fostered growth in personal meaning-making with the support and input of peers and a less heavily governed and limited way of reading a new text/new ideas.

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[25] I suspect the term *comprehension* acts as a bit of catch-all term for students who don't yet have the vocabulary available to speak of reading as anything more than understanding the ideas expressed by others.

The collaboration inherent in SDA practice also resulted in students' feeling empowered to expand their thinking/ideas (29 codable instances). One student described how reading others' comments "helped me to formulate my own ideas about the reading itself" (Reflective Log #3). Among those 29 codable instances, students repeatedly attributed their expansion of thought to the interaction among peers around a specific text. This finding corroborates what Lisabeth (2014) concluded, too, that students were encouraged to view collaboration around text as a form of empowerment to make their own meaning "through non-hierarchical collaborative knowledge-making" (p. 243). SDA, specifically as a force for such autonomy among readers, has made for rich scholarly discussions. Morris (2019) claims that SDA de-centers authority, blurring the supposed lines between production and consumption and Lisabeth (2014) found promise in the way her students eagerly challenged their reverence for *Elements of Style* using SDA, claiming SDA "a transformative public act as the text being annotated takes a backseat to the collective backchannel" (Lisabeth, 2014, p. 233). Her students, much like many of my own, began to do more than agree with an author as the intervention moved forward— into far more critical and challenging annotation moves. Others who study SDA echo the same rich potential to "become users, author, and audience all at the same time" (O'Dell, 2020, p. 1) to disrupt fixed authorities of text on a broad scale (Schacht, 2015), shifting from an instructor's authority to control discourse to a de-

centering of power "through a fracturing of attention, interest, and commitment" (Kalir, 2017, p. 6). Collectively, these studies examine a long tradition of challenging authorial authority and fixed truth in text, put forth by many scholars (see Barthes, 1977; Foss and Griffin, 1969; Goldsmith, 2011; Johnson, 2007; Slack et al., 2004; Smith and Kennett, 2012) by using SDA as a tool for fostering autonomy, agency, and responsibility among readers. The affordances of Hypothes.is— as an overlay to a text that specifically collects voices, interpretations, and puts readers in conversation with one another— are unique and students' use of those collaborative affordances, while nascent, put readers in a position of authority around texts, visually privileging their strategies of reading as co-creators in conversation with one another.

An example of an autonomous path to meaning-making that my students took is evident in Reading Event #5 when one annotation thread picked up on a variety of assertions that they deemed worth their attention, though I may not have personally chosen to focus there. One student found the concept of memes to be most interesting and sparked a conversation among peers:

Original Post: Memes ability to remain unchecked or researched by intellectuals allows them to stay under the radar and makes them more powerful.

Student #2 Reply: I agree 100%, they are so powerful because they are viewed as not dangerous or deceiving. They can reach anyone and spread any perspective and yet they are unharmed and do not face consequences for doing the same thing as everything else.

Student #3 Reply: Indeed! It didn't hit its popularity until about 10 years ago which is weird to think about.

Student #4 Reply: I honestly never knew it was first used in the 70s. That actually kind of caught me by surprise. (Reading Event #5)

The replies went on in this single annotation thread, but this relatively small point made in the context of a great discursive concern over misinformation sparked a passionate collaboration that I could not have predicted and would not have chosen as a focal point for a more structured discussion.

Accounting for the Benefits to ECR Skills

These advancing skills were a product of the highly collaborative nature of student reading activity as well the notably rhetorical and performative approach to reading that students exhibited when engaging SDA. The collaborative nature of Hypothes.is helped put readers in a more agentic position, empowered by one another and their own personal choice to enact the skills of ECR. Students spoke specifically to a growing willingness to challenge texts, to trust the meaning they were making by testing it against

their peers, to examine the meaning others made of the text, by controlling the direction of the annotation threads, and even openly (but respectfully) disagreeing with one another. This willingness, even eagerness, among the students in this study to hear what their peers had to say illustrates budding efforts at honoring diverse viewpoints; the social nature of this platform caused them "to think differently," not just more (Reflective Log #4). The collaboration afforded by this digital space proved key *because* it helped readers stay open to what other people might think. In the students' own words, reading others' annotations around particular ideas in a text "deepens my personal understanding," "introduce[s] ideas I didn't think of" (Reflective Log #4), helping them draw "connections I otherwise would not have" (Reflective Log #3), "think in a different perspective" (Reflective Log #4), and "branch out beyond our personal opinions and views of the given articles" (Reflective Log #6). For many more than I have space to account for here, this reading-based collaboration "provides a new perspective that I can bounce my own thoughts on" (Reflective log #5).

Another part of that unique quality of SDA to reading processes is that students overtly *perform* the reading experience. The performative nature of Hypothes.is presents students with a unique struggle (as referenced in the Negative Reactions to the Intervention discussed in chapter six), but this struggle seems to simultaneously be the key to the significance of SDA as it pertains to the skills of ECR. The power lies in the invitation extended by SDA

to challenge student thinking well enough to articulate their ideas for consumption beyond themselves. My students were highly aware of the performance of annotation *for an audience* built into SDA. This awareness pushed them to annotate, and thus read, differently. For example, students avoided certain typical reading habits, like marking unfamiliar words, basic summarizing, or marking the text with symbols or colors that were undecodable to their peers. Rather, they formed full sentences, justified their opinions, provided evidence for those opinions, etc... in ways that illustrate they are aware that other readers will engage with their ideas around the text. This performative feature of SDA encouraged students to articulate their opinions clearly— in a way an audience could understand. Likewise, they were encouraged to justify their claims in a way they imagined an audience of colleagues and peer readers were likely to accept. For my students, this performance helped them respectfully engage difference and invited them to experience that difference with others in civil ways— all critical factors of deliberate discourse. As the instructor, this performance was doubly helpful in that it provided insight into their reading practices around collaborative meaning-making. That kind of insight into students' reading processes is rare.

Of course, this study isn't the first to report the performative nature of Hypothes.is as a key affordance of the interface. Kalir (2017) found web applications, such as Hypothes.is, to be "distinctly performative" and

transformative, in that they broaden possibilities for readers and authors to produce and engage in the discursive performance (p. 4). Perhaps, it's the combination of these two affordances— the collaborative and performative invitation that SDA extends— that bring together a digital tool that affords the opportunity to both speak and listen to a peer network of ideas in highly agentic, active, and engaged ways.

Enabling Behaviors of ECR

With Hypothes.is, students' talk-about-text behaviors of ECR (detailed in chapter three) yielded more substantial collaboration *around* and *about* the text. This is especially noticeable when compared to a traditional online discussion forum. While a direct comparison of SDA with LMS-based discussion forums was not the focal point of this intervention, the comparison underscores a significant pattern of ECR behaviors. In the Canvas-based discussion forums, students primarily spoke in generalities about the text, summarized key points for one another, rarely challenged one another and, in reply, mostly agreed, then restated a specific point typed in the original student's post (see full discussion in chapter seven).

This study's efforts to compare students' annotations with Hypothes.is to their Canvas-based posts about a specific text reveal results similar to those reported in other studies. Wolfe and Neuwirth (2001) and Wolfe (2002) found that the key to heightened critical thinking of analysis with text was found in creating annotations on "the same visual plane as the primary text"

(as cited in O'Dell, 2020, p. 4)— a noted challenge in the way traditional discussion boards or chat functions (such as Blackboard or Moodle) "visually separate the primary text and the commentary so that learners must move between two different spaces, the text and the response screen" and, for them, "this task of switching in turn disrupts the reading process and makes it more difficult for learners to focus on specific details of the text and their own interpretations" (Kaplan and Chisik, 2005; Wolfe, 2008, as cited in O'Dell, 2020, p. 4). This study finds the same to be true, as exemplified by the following exchange, among many, using Hypothes.is:

> Original Text: ...from the idea that people are 'estranged' from their future self. As a result, he explained in a 2011 paper, 'saving is like a choice between spending money today or giving it to a stranger years from now.'
>
> Student #1 Post: This is a really interesting idea to me. Where and when does this disconnect take place? Why wouldn't someone want to better themselves in the future?
>
> > Student #2 Reply
> >
> > I think it also involves a "living in the moment" mentality. Some people have the attitude that saving money is pointless if you might die before you get to enjoy it.
> >
> > > Student #3 Reply

I agree with you in that many people live with the mindset of "the future is not promised." Also, some people believe that saving money actually devalues its worth.

Student #4 Reply

I too was curious about this. I wonder how many other instances this present self bias comes into play other than with saving money.

Student #5 Reply

Other times present self bias can affect our behavior is any time we have to deal with delayed gratification. It is like the famous Stanford Marshmallow Experiment in which children had to make the decision to eat a marshmallow right when they are given it or wait and get two.

Student #6 Reply

I totally agree with you here this gave me a lot of questions too. I also have to wonder when this happens to you in other aspects of your life.

In this SDA exchange, students are closely examining the claim that some of our cognitive biases stem from a disconnect between ourselves in the present and ourselves in the future. The first annotation questioned this claim and others chimed in with questions and alternative answers that helped explain the bias. This extended annotation thread strayed from the

author's assertion long enough to question and explore its validity among readers but stayed engaged with the idea presented in the text, exhibiting an awareness of and commitment to the text as fuel for on-going conversation. They stayed focused on a conversation about particular points made in the text, as opposed to the more general summaries most often fostered in LMS-based discussion forums. In this way, Hypothes.is fostered a more firmly textually-anchored conversation out of its logistics and convenience.

These findings echo other SDA studies, like van der Pol, Admirall, and Simons (2006), that concluded "[SDA] Annotations consistently referred more frequently to the text when composed in the margins than in discussion board posts" (as cited in Licastro, 2019, p. 90), yielding a more effective on-going discussion of a single topic (also cited in Licastro, 2019, p. 90). Gao (2018), too, found that "when students 'talk' with one another about a shared text through digital annotation," the conversation is richer "as students pay closer attention to the text, establish more proximal connections between their discussion and the source material, and embrace opportunities to elaborate their ideas, clarify, and learn from the viewpoints of their peers" (as cited in Kalir and Garcia, 2021). In fact, my own findings found, much like Plevinski et al. (2017), that "students who author digital annotation as an alternative to discussion forum posts ...participate in knowledge construction practices that include interpretation, questioning, and consensus-building" (as cited in Kalir and Garcia, 2021).

Of course, the technology wasn't the single factor upon which student reading behaviors with SDA pivot. This study finds that the particular content of the text shapes the exchange of ideas and supporting particular components of ECR. For example, the total number of annotations dropped in the final reading event where students read Cornel West's "Moral Obligations." Given students' self-reported struggle with the performative and highly visible nature of Hypothes.is, it makes sense that students might post more cautiously when the text evokes highly contentious topics, like racial equity. The controversial nature of some texts may significantly impact students' willingness to annotate publicly. Likewise, the more private, reflective nature of a text like "Deep Space of Reading" (Reading Event # 3), by contrast, invited students to comment on their own personal experiences with reading habits without replying to one another as often.

In these ways, the content of the text is noticeably central to the conversations held with SDA and Hypothes.is fostered a behavior that Heath advocates as essential: habits that shift consciously in response to the specific text.

Additionally, the codable instances among student annotations and reflective log responses yielded far more attention paid to pleasurable responses to syntactical and linguistic moves of the author, a move that closely resembles Heath's behaviors of reading and expressing pleasure in reading language that is expertly crafted. Students commonly described

pleasure gained from certain language aesthetics. For example, one student responded to the text: "great way to end. kinda cheeky and cute, but I absolutely enjoyed it" (Reading Event #2) while another simply exclaimed, "friggin beautiful" in response to West's articulation (Reading Event #7).

Behaviors also often refer to rhetorical reading. In addition to Brent's approach to rhetorical reading, other scholars (Haas and Flower, 1988; Haswell et al., 1999; Bunn, 2011) explain it as an effort to gauge the rhetorical contexts of authors: to read for rhetorical intent as well as for content. These findings reveal that students, when asked to employ SDA alongside any reading event, move well beyond the more typical summary of content (e.g., this text seems to be about politics) or simple identification of typical genre parts (e.g., this is an introduction, I see an example here, etc...). In this way, my findings are noticeably different from the findings of Haas and Flower's (1988) study of student readers who paid attention to content features of the text far more often than any other rhetorical features (77%) and only the more experienced readers exhibited a more rhetorical reading practice, accounting for purpose, context and the effect the text/ideas had on them as a reader (13% of think-aloud strategies) (p. 176). My students engaged with the text in ways that mimicked the "experienced readers" studied by Haas and Flower (1988): building multi-faceted rhetorical representations of text. For example, students in this study were engaging the larger rhetorical contexts in their

Hypothes.is-based annotations. Some students made more complex notes about how the author seemed to be constructing their main point:

> This is an interesting point - seems opposite the thesis of most of this piece which is that being an informed intelligent voter results in the best democracy. But this is saying to not pay too much attention to what your electorates do between elections. Maybe the point here is that once elected, your electorate has the freedom to act how they choose, and in doing so are hoping to be acting on your behalf enough to ensure your vote and be re-elected. (Reading Event #2)

Based on what this text is about I feel like this study contradicts what the article is trying to proof because obviously people who use the internet more often or that are proficient with using the internet to research will be so much better at it than someone who uses it for very minimal stuff. So what exactly is the point of this being added in the article? (Reading Event #3) Some exhibited 'experienced' rhetorical reading by critically challenging the author's rhetorical choices or calling for explication:

> I wish the author would have given an example or two about this. (Reading Event #5)

> This statement bugs me. I get the point, but it feels insensitive. Maybe I'm reading too much into it, but to say definitively how someone in their last moments would act is arrogant. (Reading Event #5)

Some students named additional examples of similar rhetorical approaches that help give other readers a greater context for understand the claims:

> This is an incredibly succinct summation for such a widespread issue. The wording reminded me immediately of Jordan Peele's horror film, Get Out. A fetishization of a problem (and/or the black body) sounded like the thesis to that piece. (Reading Event #7)

While the "experienced" readers in Haas and Flower's (1988) study were far more experienced than the students in this study, my own students exhibited similar, advanced rhetorical reading habits.

Enabling Dispositions of ECR

Students' attitudes toward reading and texts matter as much as their skills and behaviors. Accordingly, the ECR model that undergirds this study has broken up dispositions into six key components that demonstrate: a feeling of empowerment and responsibility for making meaning of a reading; a feeling of empathy; an awareness of affect/emotion of self when encountering text; a purposeful approach to any reading event; a motivation to do the strong, aggressive, labor-intensive work of reading for problem exploring; a state of mind that approaches texts flexibly, from various stances; the desire to experiment and play with new ideas; and, a favorable attitude and willingness toward praxis (all detailed in chapter three). The data points to three key ways that the SDA intervention enabled dispositions of ECR.

Confidence

Studies on social, digital annotation indicate that confidence and motivation, in particular, rise in conjunction with SDA (Gao, 2013; Johnson et al., 2010; Licastro, 2019; Reid, 2014). Likewise, for students engaged in this study's intervention, confidence proved to be a key finding. Students often attributed their heightened confidence to the acquisition of greater stores of knowledge and the comprehension that accompanied engaging with their peers to better understand texts. As one student put it in their final reflective log (#7), "what has helped me feel confident in contributing to the larger conversation [was] the conversations we had…I know that my classmates will totally understand my opinions and try to elaborate by sharing their own… so that we can have a nice conversation about it until we get to [the] main point of the topic." Understanding, especially alongside and with the support of their peers' annotations, led (for many) to greater stores of confidence.

For many students, this enhanced sense of confidence stemmed from shifts in their reading process that helped them successfully tackle complex texts. Hadeel illustrated this point well: "This class has opened my eyes and mind to a new level of advanced reading that I never felt I had" (Reflective Log #7). This confidence in her reading processes wasn't typical for Hadeel. Before this class, and its intervention, she would "walk away from a text that had so much writing and information….I felt like I didn't know where to

begin....now I know how to actively and accurately approach heavy readings"
(Reflective Log #7).

Other students expressed this increased confidence as a result of
tackling their fears around reading. For example, for one student, breaking
down the complexity into smaller chunks was key: "Before this class, I would
skim an article and instantly become overwhelmed and decide to skip on
reading it. Now, I am able to look at a difficult text and think to myself 'this is
doable'" (Reflective Log #7).

Motivation

Alongside the increased confidence attributed to SDA, students were
more motivated to do the labor-intensive work of reading when they felt
empowered by their peers' thoughts and interpretations on display via
annotations. For others, their increased motivation was a result of renewed
joy, where they reported that they enjoyed the reading experience more with
SDA as part of that process, echoed in Kawase et al. (2009).

Willingness Toward Praxis

Perhaps it's the students' willingness toward praxis that strikes the
most resonant chord in the possibilities for SDA to help advance the
dispositions of engaged critical reading. No study to date has sought to
examine dispositions of reading to praxis, and specifically praxis related to
civic participation, so this section situates the findings in this regard to the
hoped-for discursive attributes commonly called for in a well-functioning

deliberative democracy: expressing civic and critical empathy (Mirra, 2018), engaging in acts of humility (Taylor, as cited in Beach, 2019, p. 219) with an effort to justify our ideas to others (Dryzec et al., 2019), civilly expressing dissent (Ivie, 2015), and *doing* something with our informed opinions to make change (Carillo, 2018).

First, the discursive SDA space fostered civic and critical empathy (Mirra, 2018). There were seven total instances of students who spoke specifically to empathy as a key dispositional change they felt prepared to enact, as evidenced by one particularly poignant student comment: "Nobody can sacrifice their experience— it's something we carry with us no matter what...but, we can humble ourselves enough to understand a different experience. That's the importance of empathy" (Reading Event #7). Empathy is a powerful driver of civic participation when we recognize the role of the personal in the public civic life and, perhaps, SDA helps give students an opportunity to practice a key component of critical civic empathy— a willingness to understand and engage in values very different from our own.

A number of students also spoke to the value of listening and challenging their own biases, showing a growing willingness toward the humility it takes to challenge our beliefs and listen to other ideas (Taylor, as cited in Beach, 2019, p. 219). A disposition like this is not a simple one. To challenge our own beliefs is to risk change and change is challenging for us all. Many students in this study felt empowered to challenge their own beliefs,

to listen with empathy, and to engage with other ideas: "As far as what I'm prepared to do, I think that we can all do things as simple as listening to each other. I think this is an important step in civic participation that often gets overlooked. Listening is a small act with a big impact" (Reflective Log #7).

Another important disposition of both ECR and civic participation is the willingness to justify our own ideas to others. We need more than an echo chamber of opinions; many social media venues offer that sort of sounding board. Rather, what is not so simple is justifying our opinions to others. Hypothes.is fosters a discursive space that calls for justifying ourselves in response to a particular text and its ideas. In 25 codable instances, students spoke to this quality in their assessment of SDA during this intervention: students reported feeling emboldened to articulate their ideas, and back them up more fully as a common reading strategy.

Students craved a space for collaboration, but not just any sort of collaboration; my students craved *civil* discourse, noting the desire and appreciation for such a culture in their positive responses to the intervention. To many students during this intervention, the Hypothes.is-based conversations encouraged a respectful exchange of ideas, inviting more listening, more empathy, and as Kassidy put it, a "positive like community of the classroom" (Personal Interview). This perception of community and kindness— in the face of agreement and respectful disagreement alike— allowed Kassidy to speak her voice around a text and to take a more

confident stance on a text (Personal Interview). As Kalir (2017) sees it, "a reader's decision to participate in public web annotation carries an implicit social contract; that my contributions are open to your response, that my ideas are open to your dissent, and that my assertions are open to your rebuttal" (p. 7). I think my students perceived that "social contract" and thrived in it, despite their noted constraints and hesitancies. Their performance was perhaps rightfully tempered in response to Kalir's imagined social contract (for example, the reason the total number of annotations in the final reading event on West's article decreased noticeably).

Civility doesn't beget agreement, however. In fact, "democracy exists only in the presence of dissent" (cited in Ivie, 2015, p. 49), so dissent is also key to democratic deliberation (Ivie, 2015). In this sense, dissent refers to "advancing a significant difference of opinion or expressing a substantial disagreement" (p. 50) that questions (rather than commands), interrupts (not rules), and advises (without governing) (p. 50). While outright disagreement with one another occurred substantially less often than agreement (20 instances of direct disagreement with a peer annotation, compared to 354 instances of overt agreement), student readers did disagree with the author, in the form of *Reading Against the Grain* (making up some portion of the 419 instances coded as such). If the act of such a discursive dissent is key to deliberation, then Hypothes.is holds the space for practicing and sharing such dissent by decentering authority and building collaborative authorities

in reading. Lisabeth (2014) agrees that SDA opens up the opportunity for disruption and dissent. Her study looked at the way SDA facilitated annotation as a form of "student protest" (a key feature of Shor's "empowered" classroom, p. 235) or the freedom they found in multivocal discourse of SDA to critically examine and challenge, as Shor puts it, "standard knowledge through which the status quo tries to promote and protect its position" (as cited in Lisabeth, 2014, p. 235).

Another dominant illustration of the disposition towards praxis that emerges from the data in this study is how many students planned to read, think, and research more in response to reading the texts in this class (30 codable instances, *Relationship Between Reading and Praxis*). Reading as a pragmatic art (Roskelly, 2014) is exhibited in all the ways students felt motivated to continue to engage in the ideas presented in text, by learning more, researching further, and continuing to read more critically to avoid the missteps of engaging with hasty or ill-formed assertions. Within this data set, students exhibit a willingness to practice their civic life as a result of engagement with the texts, a key to seeing citizenship as a practice, not a possession (as deemed a necessary criterion for deliberative democracy by Lawy and Biesta (2007) (as cited in Mirra, 2018).

Accounting for the Benefits to Dispositions of ECR

Student responses during this study's intervention reveal that this communal and collaborative nature of SDA is significant to the dispositions of

ECR. However, it's unnecessary at this point to put private reading habits in contention with social habits— beyond seeking to understand the differences. Perhaps, the need to balance private instances of meaning-making with social efforts at the same can be explained by Goldblatt (2012). Goldblatt's theory of individual vs. social discourse traces how literacy practices are motivated by two competing conceptions about writing: language as private and interiorized vs. language as public and communal (cited in Wible, 2016). While this study acknowledges the value of private reading, the focus was on that latter element of Goldblatt's competing conceptions: the ways we might foster the public and communal aspect of reading as conversation (as cited in Wible, 2016). The distinction, however, isn't precise. One student noted how Hypothes.is wasn't just for conversation among readers, but for enhanced conversation with self, as well: "I understand that material better when I am almost talking to myself by making annotations" (Reflective Log #7). There is great value in that conversation with self, or introspective reflection. However, if we only read in isolation, we are equally vulnerable to our own limitations. Without the external conversation, we are victim to our own tendency toward our own limitations— like ethnocentrism, inexperience, economic interests, paradigmatic limitations, etc… (Bruffee, 1984, p. 639). If indeed thinking better is a product of learning to converse better, then Hypothes.is serves as a valuable dispositional catalyst for both personal and social contemplation.

The value is evident in the shift made apparent from private annotation to SDA-based annotation. Not only did the codable instances within annotations shift significantly with the use of SDA, but students also saw varied purposes between the private and the social acts of annotation. As one student articulates: While private annotations allow me to express my opinion without "worrying about others," social annotation encourages "student engagement and more developed thought processes" (Reflective Log #4). Perhaps, they are just two ways to engage in reading that achieve two different (but related) intellectual activities.

And, this communal and collaborative annotation also speaks to a means to achieve deliberative democratic reading practices. When it comes to the "crisis" of democracy as described and explored by many scholars, there's hope in collaboration. While we are, and have fairly consistently remained, poor solitary reasoners, people *are* good "group problem-solvers" (according to Landemore, 2013, p. 145). Hypothes.is doesn't seek to alter individual reasoning directly, but to increase social opportunities that foster "individual reasoning [that] can improve under the right social conditions" (Dryzek et al., 2019, p. 1149). The crisis of democracy, as Dryzek et al. (2019) sees it, is one of communication, not one of individual reasoning. And through this communication, it is the connections we make, especially with people who see and act in the world in ways very different from us, that are necessary to fight the divisiveness and polarization of contemporary civic life (Mirra, 2018,

p. 8). In fact, Dryzec et al. (2019) assures us that countering biases— a necessary willingness to challenge our own commitments to misinformation— is best done when we reason together. Thus, Hypothes.is appears to privilege the more optimistic, collaborative, problem-solving mechanisms of deliberative democratic discourse. The affordance of reasoning together alongside peers, around particular texts— features made possible in SDA— might be the most advantageous and unique feature of the intervention.

These dispositional values of thoughtfully building and challenging our own belief systems, reconciling differences, and feeling into others' ideas are values that students reported throughout this data in response to the SDA intervention.

SDA is no Panacea

Despite the development enabled by SDA, it is no panacea for the concerns teacher-scholars have about advanced reading. For example, many scholars claim SDA annotation is one possible remedy to the challenges of teaching reading in the writing classroom, namely because we can "see reading" (in response to Scholes' famous line: "if we could see reading, we would be appalled," 2002). For example, Sprouse (2018) claims that "because text annotations are written during the reading event, they also offer a more immediate view of reading not possible with post-reading reflections" (p. 43). Morris (2019), Horning (2017), and Carillo (2018) seem to agree. However, much

as Flower's think-aloud protocols of writing didn't provide a clear window into student cognitions, SDA isn't the means to see the inner cognitive workings of reading, either. SDA doesn't demystify the complicated act of reading, especially at the advanced levels described by the ECR model of this study. The annotations students produce *do not* reveal processes of reading for scholars eager to see such a thing, but it does something else that's immensely valuable. It allows for students to reflect more directly on their reading processes, and it amplifies an addition to that reading process that has likely escaped their educational experience: the social nature of meaning-making among a community of readers and encourages the performance of articulating and justifying one's own ideas. This articulation and justification (i.e., performance) proved a critical influence on enacting the components of ECR.

Further, scholars like Collins have seen the potential for marginalia to enact "skirmishes against the author" (as cited in Lisabeth, 2014, p. 233); however, I didn't find that tendency, either, though I see the possibility (with more direct instruction in that direction). Like Lisabeth (2014), I'd hoped to see the use of Hypothes.is to instigate "critical engagement and 'difficult thinking' rather than for a re-creation of close-reading practices," but that's an almost comically insurmountable aim— one that seeks to shift deeply entrenched cultural perceptions of authority, agency and epistemological commitments. SDA alone cannot carry such a heavy burden.

Likewise, Hypothes.is as a social and digital annotation tool cannot shift outdated conceptions of reading. Like Lisabeth's (2014) subjects, much of what is evident in my own student's annotation habits is still a re-creation of the independent structures of reading/annotating simply re-enacted in digital space at this point. Student comments around the "big picture purpose of reading" speak to this persistent perspective: "I read to get into the minds of great thinkers like Plato and Socrates." Or, as another student put it, "reading for me is mostly done for informative purposes" (Post Survey, Fall 2020). The conceptions of solitary, sedentary searches for fixed meaning with a text must change first before the technologies for reading can be fully utilized. While digital affordances may help in the effort to de-center text as "static entities" (Hayles, 2012, p. 13), the lauding of text as static knowledge to be absorbed moreso than engaged cannot occur by use of digital texts and artifacts alone. No tool has that power to change such fixed conceptions without educators' conceptions of reading, first, and use of the tools to accompany the pedagogies we use to teach and engage students.

Perhaps, students' negative reactions to the SDA intervention help us see that Hypothes.is, despite its potential, is no panacea to the problems education faces: those that did react negatively to Hypothes.is aren't anomalies to other studies. Blum (2009), in fact, in *My Word! Plagiarism and College Culture* notes that in the age of social media circulation, "the performance self must constantly worry about the judgments of others, must

constantly wonder if a given set of actions is the most effective, or is even

appreciated, and what the consequences will be of her or his actions" (p. 64).

This tool affords a highly rhetorical approach to reading, which is not

altogether a bad thing, but if the "constantly groomed version" (p. 70) of self

disproportionately impedes engagement with the ideas, then SDA cannot

achieve the goals set out in this study.

Further, while Lisabeth (2014) is concerned specifically with Shor's

empowered classroom, her claim that "students are not always comfortable

with the 'risky Utopian leaps' they are asked to take" (as cited in Lisabeth, p.

243) is evident in this study as well. Blum (2009) and Lisabeth (2014) see the

ways SDA can complicate "critical engagement with issues and ideas that

might involve staking claims and challenging group norms" (Lisabeth, 2014,

p. 242). My own students' spoke directly to this concern. While Hypothes.is

felt, for most, like a respectful dialogic space, one student noted that "it does

have that feeling of putting oneself out there for criticism" (Reflective Log #4).

Kassidy spoke to the way her awareness of an audience tempered her

annotation efforts: "I think the main thing is just that when I'm annotating

and I know like other people are seeing it I just my mindset kind of changes

and I'm kind of thinking like how will they accept what I say or like how will

they think when I say this" (Personal Interview). Students are noticeably and

understandably sensitive to this sort of exposure in a public forum and it's not

likely a coincidence that this student of color is the one noting such a

limitation. Students who are traditionally marginalized are vulnerable to continued aggression in digital spaces, as well.

There is also a growing frustration over how students' ability to personally respond is crowded out by an overwhelm of ideas already taken in the digital margins. Barbara Fisher (upon review of Lisabeth's 2014 article submission draft) felt that some students must have felt that their personal reading was "overtaken by others who got there and left comments first" (as cited in Lisabeth, 2014, p. 242; Novak et al., 2012). My own students corroborate this insightful concern, often noting their frustration when everything in a text was already highlighted and, consequently, their comments had to shift to try to add something new to the mix. While this can be avoided by setting up private groups, there seems no viable work-around for a purely public social annotation experience around the same text multiple times over. This saturation of a text is oftentimes distracting, as participants in this study noted (Novak et al., 2012).

Conclusion

While SDA is not the fix to reading that composition teachers may wish it to be, it is a start to turning our attention to critical new tools for enacting the social and rhetorical goals of reading. When the findings of this study are situated within the larger conversation— the theoretical and empirical collection of scholarship— we can most clearly see the significant possibilities for SDA as a tool that enables a distinctly social and rhetorical approach to

engaged critical reading. While our pedagogies must continue to change shape, the digital tools of reading (such as Hypothes.is) also help foster multivocal and collaborative social constructions around text, authority, and readership (and the dynamics among them all). Student annotation practices in this intervention show a promise for the role of reader-as-authority to be enacted, practiced, made overt. Putting this collaborative reading technology to work may help materialize a means to address the challenge posed by Brent (1992) to develop a sense of reading as rhetorical invention. Doing this collaborative reading work allows students to locate the collaborative space of meaning-making and see how the reader, author, and text are entangled in a complex textual network together— defined by one another's existence.

Likewise, if thoughtful deliberation happens when citizen readers are able and willing to "confront shared problematic situations" (Jackson and Clark, as cited in Crick, 2016, p. 288) via democratic interaction, then the data points to the way that Hypothes.is provides a space for such activity, specifically talking about text, to occur.

CHAPTER 10

LOOKING TO THE FUTURE

This chapter applies the local findings to future global contexts. After synopsizing the key findings, describing the unintended outcomes, and acknowledging the limitations of this study, this chapter details the implications of those findings on the two foundational theories (social invention and rhetorical reading), and details several implications on local contexts (my classroom, my colleagues' classrooms, professional development efforts, and composition program design) as well as global contexts (as they are relevant to other teachers and other FYC programs across the field of RCWS). This chapter ends with suggested opportunities for future research.

Synopsis of Key Findings

The research questions, pedagogical goals, and initial research design were born of concerns— both academic and social— for the role of advanced reading in students' lives during and beyond their years in the university setting. The intervention was designed to introduce a potentially new pedagogical tool (Hypothes.is) with distinct new affordances, namely the accessible digital format and the interactive, performative social space of digital reading. The research question put into motion at the beginning of this study was this: Does and, if so, under what circumstances does social, digital annotation (using Hypothes.is) enable students to learn skills,

behaviors and dispositions attributed to engaged critical reading? Another way to ask this question is to consider whether the intervention met the pedagogical goals of this intervention: to foster the practice and advancement of engaged critical reading and to generate pragmatic pedagogical tools for teaching engaged critical reading in rhetoric and composition/writing studies classrooms (RCWS).

Ultimately, after deploying the intervention in two separate macrocycles, reflecting on the context of the intervention, and then carefully examining the multiple data sets, this study rests (for now) with the conclusion that SDA, particularly the Hypothes.is interface, enables development in a rich variety of reading skills, behaviors, and dispositions that are often more visibly critical than their private annotation (and/or LMS-based discussion forum counterparts). To be clear, other types of reading experiences matter a great deal. This study doesn't intend to imply that the private reading and annotation experience are less rich than the social reading experience afforded by SDA; rather, the assertion is that the private experience yields different results than the social reading experience, as evidenced by students' annotations throughout this intervention. The social annotation experience is far more performative and, therefore, highly rhetorical and inventive, encouraging an agentic approach to reading that is sorely missed in many FYC writing classrooms.

In all meaningful reading events (public and private), students are entering a larger conversation— an inherently social and inventive act; however, what marks Hypothes.is as particularly valuable is how students *began to see* reading as entering the conversation, "animat[ing] the interactions" (Brandt and Clinton, 2002, p. 345) beyond the immediate literate event. SDA has the capacity to arrange meaning-making interactions (Latour, as cited in Brandt and Clinton, 2002) in ways that are visible to the students themselves.

While there are well-earned reservations with SDA and it's no absolute salve to the concerns teacher-scholars have over advanced reading development, the intervention did yield substantial results— some more expected than others. First, students responded in overwhelmingly positive ways to their annotation efforts using SDA. They perceive great value in access to their peers' annotations (i.e., ideas) in the immediate context of reading, around a particular text. Their self-reported data matters a great deal in that their own perceived benefit implicitly speaks to their dispositions and their motivations for reading complex texts— a key factor, if not the *most* critical factor, in a meaningful reading experience.

Beyond students' own self-reported perceptions, SDA fostered social invention and rhetorical reading in several important ways. Particularly notable is how students' private annotations contrasted their Hypothes.is-based annotations. The immediate shift was profound. Hypothes.is-based

annotations yielded a far more complex, multifaceted set of reading skills, behaviors, and dispositions. Students concurrently performed many of the components of engaged critical reading when they were asked to read with SDA, something not apparent in their private annotations, as a result of their reading in community with peers.[26]

As I try to account for this shift, two key themes emerge. With all the data organized and carefully contemplated, it seems that the performative nature of SDA (Hypothes.is, specifically) and the social engagement afforded by this relatively new digital tool of reading were the biggest catalysts for change. It was the performative nature of Hypothes.is that called upon students to articulate their ideas clearly enough for an audience to understand, to justify their stances, making those ideas available for scrutiny. Likewise, the performative nature of Hypothes.is is what gave students the opportunity to engage with their peers' ideas around specific assertions made in the text— often helping them with comprehension of the ideas or helping them form opinions of their own. Annotation has long been deemed a valuable active reading strategy among instructors and scholars. The additional affordance of *collaborative* meaning-making via social annotations

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[26] It's interesting to note that, despite the clear value articulated in sharing ideas while reading a text, students didn't metacognitively name "interacting with peers" as a key reading strategy. It seems that students are enacting the interaction in their annotations, but not yet comfortable naming those relationships/social interactions as key to their reading experiences.

is the new element being examined in this intervention. Students in this study took advantage of that affordance and their effort proved substantial.

In addition to their more general positive reactions to SDA and beneficial changes to their habits of ECR, the intervention (i.e., reading texts that spoke to the role of discourse in civic participation and using SDA while reading) led to significant changes to students' attitudes toward their role as participants in a deliberative democracy. Three of the four interviewees spoke passionately of this shift, as did the collection of student comments culled under seven total categories of ways that students said reading spoke directly to their civic participation efforts (i.e., where students felt prepared to make informed decisions, explore alternative points of view, change or solidify their beliefs, as detailed in chapter eight). In these ways, SDA fostered a highly pragmatic response among students. They felt prepared and even encouraged to act (or to support actions taken by others) in ways I've yet to see in any other reading event prior to this intervention. Perhaps that outcome is a product of the ideas presented in the texts; perhaps, it's the active and collaborative nature of SDA. Or, more likely, perhaps the combination of both contributed to the shift.

The circumstances are significant. While the many hardships faced during the intervention undoubtedly impacted its success (discussed at greater length in the next section, Limitations on the Intervention), several elements helped foster success: text selection (selecting texts that were

responsive to current exigencies), an effort to build and sustain relationships in OWI (working to develop student-student as well as student-teacher relationships), and attention to reflection on the reading experience (asking students to reflect on their meaningful reading habits throughout the semester).

Unanticipated Outcomes of the Intervention

Not all the outcomes of this intervention fit neatly within the scope of this study. In fact, there were several unanticipated outcomes of the intervention worth noting.

First of all, I didn't expect the intensity of the workload that a focus on engaged critical reading would have on this course overall. Reading is incredibly labor-intensive; writing, too, is labor-intensive. Focusing on both became too much. In response to a need detailed in several microcycle observations, I reduced word counts on several reflective log entries, I reduced the number of reading events, and I reduced the total number of reflective log entries, as well. There was never quite enough time to fit all the reading events in alongside the writing projects. A composition course is ultimately dedicated to teaching writing and introducing repeated practice with engaged critical reading was a challenge— one I hope to reconcile in future research efforts.

Another unintended outcome relates to the more expansive way my students saw the role of literary texts in rhetorical reading. While I did draw

from Literary Theory to better understand the components of engaged critical reading, I didn't consider (or allow for) the role of fiction in the design of the intervention. It's not uncommon for FYC courses to exclude literature from the curriculum, as I did, but students nonetheless wrote about their desire to read fiction and the way fiction was a catalyst for rhetorical reading, too. One student, for example, talked about how *Twilight* taught her to trust and believe in love (when her parents' story had taught her otherwise). Several students, in fact, spoke to the power of fictional texts in their lives and the dispositional goal of finding escape from the daily pressures through engaging purely for joy and beauty alongside the power of fiction to shape belief. I hadn't thoughtfully considered the role that fictional texts might play in the distinctly rhetorical aim of choosing among bids for a reader's attention, though my students corrected that lapse.

My favorite unanticipated outcome takes the shape of hope and optimism for the future of reading instruction. After deep immersion into the scholarship detailing deficiencies in reading, I expected to see far less critical engagement with text and an underwhelming enthusiasm for learning. However, students are far more eager to learn and challenge themselves than the scholarship implies. The long-range work of this study, beyond all that the data presented in this single study, is to keep listening to students, trying to understand the agentic momentum they already have, and harnessing their enthusiasm for collaboration and respectful exchange of

ideas. Even as the nature of discourse as well as our technologies of mediation for that discourse perpetually shift, teacher-scholars must harness their energy with pedagogical tools that can help meet them at that place of motivation.

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Limitations on the Intervention

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First and foremost, any effort to codify a process as complex and multifaceted as reading will necessarily limit the scope of the task in unfavorable ways. Even with my attempt to look at engaged critical reading through a wide-lens scope, defining those components is severely limiting. This study simply couldn't capture all the components enveloped in what it means to read. I suspect no study ever could. This study evoked, in fact, a series of intersections of ambiguous, contested terms: *civic participation*, *literacy*, *reading*, *dispositions*, etc... That's a lot of protean ground to cover, but in defense of such a lofty attempt, teacher-scholars in the FYC classroom contend with these complicated concepts every day of each semester. With that primary limitation acknowledged, there were additional, more specific limitations worth mentioning.

Isolating Features of the Intervention

Since its inception, I've wrestled with the complex nature of designing an intervention-based study. Namely, the factors involved in this intervention can't be reasonably isolated from one another. I deployed repeated reading events that asked students to use social, digital annotation for the first time,

but there's far more involved in this course. Students read texts about deliberative democracy and discourse, students engaged in research related to civic participation, students were living in a time of great conflict and political polarization and a sense of terror related to the pandemic, students were navigating a very new educational learning environment, and students were immersed in a contentious discursive culture. What that means is that I must temper any claims of cause and effect. The outcomes happen as a result of the entire semester— the targeted intervention (of SDA) as well as all related semester work and the contexts within which this effort occurred.

It's also important to note how challenging it is to study reading specifically. Scholars before this study have noted the challenges of studying this recursive and complex task of measuring reading through writing. The two are connected— even moreso in digital environments (Brandt, 2009)— but the very nature of communicating ideas for analysis "requires learners to have well-developed writing processes as much as it does reading comprehension skills" (Castek and Coiro, 2010). Such a reality begs the question of how much we're counting on those writing skills in our assessments of reading.

Technical Limitations

Inevitably, there are technical limitations to consider. For example, there are browser-specific technical limitations of Hypothes.is that inhibit participation (echoing what O'Dell, 2020, found). Additionally, access is always

an area of concern when it comes to looking at digital literacies, but even as access to Internet-based technologies has improved (Pew Research Center, 2019), other gaps have emerged, such as using the technology in productive ways or understanding best practices in sorting and organizing large swaths of information, according to Grabill (2003) (as cited in O'Dell, 2020, p. 3).

Another technical limitation is a common one among online texts: articles that were once available shift and often get hidden behind paywalls, subject to a perpetually deictic digital landscape. Only publicly available texts (when using Hypothes.is in the wild), not scholarly articles or any other text protected by a paywall, are appropriate and using the same article several times crowds the margins of that text with annotations.

The platform's inevitable rhetoricity (Arola, 2010) further dictates structure, hierarchy, and other mediating factors in the discursive participation of contributors. With an open API, technically savvy educators *can* re-design Hypothes.is to fit their purpose (as cited in Kalir, 2017, p. 6); however, for most users, Hypothes.is is used as it currently stands: affording largely alphabetic exchanges, centering around a particular text (one of my own choosing), and allowing the educator's choice of public display to be central. Students have no individual choice to allow their words to be displayed publicly or not. Students' annotations are tied to a username, one they choose, but one they also choose based on course credit; some were concerned that if they didn't use their full name in Hypothes.is, I wouldn't

count their annotation for credit. That wasn't the case (I simply asked students to self-disclose the completion of the assignment), but that didn't allay their initial concerns.

Challenging Social Contexts

The attrition rate in these composition courses was high and while can't account for all the reasons, there are clues (e.g., students dropping late for medical reasons, students telling me that they have a rough time with online classes, but had to take the course this semester, etc...) that tell me COVID inhibited the intervention's effectiveness more than any other single factor. Across the program, we found that the pandemic-related attrition in Fall 2020 was 14% (in Remote, Zoom-based classes), 22% in hybrid (part Zoom, part asynchronous online), and 24% in totally asynchronous courses (like the sections used for this study). My own classes were not spared this fate, with an attrition rate hovering at just below 25%.

The context of such attrition is significant. Although the experience with online learning has been deemed generally positive— with 57% saying their attitude towards online learning has improved as a result of the pandemic (McKenzie, 2021)— students faced real (and, at times, insurmountable) challenges. According to Every Learner Everywhere's *Student Speak 2020* report (based on interviews with 100 marginalized U.S. students about their experience of learning during the pandemic), students faced overwhelming feelings of stress, lack of motivation, time, and academic

support alongside serious deficiencies in access to connectivity with devices suitable for remote work and/or suitable spaces to get that work done (Student Speak 2020 Report, 2020). Many of my own students were caring for sick family members, got sick themselves, or were carrying the weight of uncertainty with them the entire semester. Further, they also had fewer options with learning formats, so many students had not taken an online class before and, in that way, were unprepared for the new learning demands placed on them.

In addition to the pandemic, the social environment (more generally) was highly taxing on me and the students. There were a series of notably anti-Democratic events that caused us all to question our resolve, particularly the non-peaceful transition of power after the 2020 election and the divisive rhetoric that still continues, the ongoing violence, and the murder of George Floyd by a Minnesota police officer. All these events have taken a heavy toll. And my students are facing their own personal struggles, too, often sharing their stories of overwhelm and depression and skyrocketing rates of anxiety. Students have always faced a lot of turmoil in these early college years, but the stories I heard during both macrocycles (Fall 2020 and Spring 2021) were unparalleled in my 21 years of teaching. My students felt undone by the election chaos, by social isolation, by the weight of navigating ever-changing and new social norms. Even with these limitations in mind, there are

implications in the findings that speak directly to the theories of social

invention and rhetorical reading worth considering.

<div align="center">**Speaking Back to the Theory**</div>

Design-based research (DBR) distinguishes itself from many other

classroom-based methodologies by privileging an intervention that is both

informed by theory and concurrently speaking back to that theory. DBR

studies "put theory to work," placing them "in harm's way" (Cobb et al., 2003)

in order to better understand, better apply, or modify the theoretical frame in

a meaningful way. To that end, this section addresses whether, and in what

way, the findings reinforce, challenge, or modify the theories that

undergirded this intervention. The theoretical lens utilized here is a

pragmatic one— eager to find a way for RCWS to reclaim theory related to

reading and rhetorical invention in a way that fellow teacher-scholars

recognize from their own experience (Wegner-Trayner, 2013). To find that

pragmatic way to reclaim reading as a key constituent of rhetoric, I turn first

to LaFevre (1987)— who paves the way with her articulation of rhetorical

invention as inherently social.

SDA and Invention as a Social Act

LaFevre (1987) rallies against what she calls a Platonic view of rhetorical

invention (i.e., depicting a closed, one-way system of communication and the

atomistic self as inventor, absent of her society), inviting active, inventive, and

agentic rhetorical work. If invention is "the process of actively creating as well

as finding what comes to be known...occurring when individuals interact dialectically with sociocultural in a distinctive way to generate something" (p. 33), then reading— particularly reading as a social activity— is a prominent component of rhetorical invention. Not only is the reader socially influenced (socially constituted), but also invents through language or symbol systems that are socially shared and builds on a foundation of knowledge or a "social legacy of ideas, forms, and ways of thinking" (p. 34). Specifically, there are four main points that constitute a social view of invention: (1) actively creating, finding, remembering the substance of discourse, (2) involving a variety of social relationships (real and imaginary), (3) dialectical process of interacting individuals with socioculture to generate something, and (4) an act that is initiated by inventors and brought to completion by an audience (over time and through a series of transactions).

While SDA is not the only way invention occurs through the act of reading, the findings indicate an advantage to students seeing this social nature of invention in action via their collective reading experiences. They do enact reading in ways that get us closer to the vision LaFevre (1987) sets in motion. In fact, reading via SDA seems to bring to fruition several key points of invention that LaFevre outlines.

It's students' own articulation of their reading purposes and strategies that speak to the first key point: social invention as a means of creating, finding, and remembering the substance of discourse. Reading and talking to

other readers helped students create and find their own opinions because they so visibly shared their ideas (and were aware of that performance) around a particular text. As many students reported, reading others' comments and, consequently seeing others' perspectives, helped students "make connections I otherwise would not have" made (Reflective Log #3), "made me think in a different perspective" (Reflective Log #4), gain "a new perspective that I can bounce my own thoughts on" (Reflective log #5), and even "branch out beyond our personal opinions and views of the given articles" (Reflective Log #6). Further, the way Hypothes.is helped them retain and track their own ideas helped them to "absorb more information....and to have a constant interaction with a text [which] creates a unique experience that is easier for me to recall in the future" (Reflective Log #4).

The second key point LaFevre makes is that social invention involves a variety of social relationships. With SDA as a mediating factor, students spoke to the value of community and the helpful opportunity to connect with the instructor, their peers, and the author. Those relationships were particularly valuable because the Hypothes.is-based conversations encouraged a respectful exchange of ideas, inviting more listening, more empathy, and as Kassidy put it, a "positive like community of the classroom" (Personal Interview). This perception of community and kindness— in the face of agreement and respectful disagreement alike— allowed Kassidy to speak her

voice around a text and to take a more confident stance on a text (Personal Interview).

SDA speaks to a third key element of social invention as a dialectical process of interacting individuals with socioculture to generate something. The interactive nature of student annotations is the most key finding of this intervention. The quantitative data speaks to the most overt example of this interaction: conversations among multiple interlocutors around a specific topic. Less visible, though, is the way readers interact with others as they consider what to post. Students reported that their annotations were crafted with a highly-tuned awareness of what others think and the impact of their ideas on others in this particular time and social context. One student noted how reading helped them "form new ideas" (Post Survey, Q20), and several others associated reading as a critical component for generating something. Students found that their reading was deemed pivotal to action, particularly action that counts as civic participation. Students do speak to this acquisition of knowledge as a way to be "armed" for action.

Finally, SDA yielded reading habits that enact social invention as an act that is initiated by inventors and brought to completion by an audience. Essentially, this premise of invention as a social act speaks to the presumed gap between author/speaker as actor and reader/listener as consumer. LaFevre's theory closes that gap a bit, highlighting the "indissoluble connection" (Tuchman, as cited in LaFevre, 1987) between the two. In this

perspective on invention, the reader imbues the text with import. While completion may be far too final a term for a rhetoric of text as in constant circulation, there is a brief weigh-station upon each SDA encounter, each moment of meaning made, and in that sense, brought to completion.

Many scholars have come to accept ideas as fundamentally socially constructed, and our pedagogies and theories reflect as much, especially when it comes to writing. However, our pedagogies aren't yet reflecting the invention that happens in a reading event and even fewer might confidently claim reading as a form of social, rhetorical invention. Not yet. And it's not enough, as LaFevre asserts, to add "a few group activities to the composition classroom" and call the social invention work done. It's not enough to simply assemble groups of atomistic individuals temporarily and continue to teach invention (or reading) as an activity best done in isolation. On the other hand, while this theory highlights the social nature of invention, it does not exclude the power of solitary reading experience. My own students speak to the value of that solitary experience. Kassidy, for example, felt too easily influenced by others' ideas and needed an initial chance to form an opinion before engaging in the conversational nature of social annotation. Private annotation allowed to "think more freely" and "more deeply" since she didn't feel publicly compelled to "agree with this person" to be polite. She prefers to ask questions of a text without judgment (Reflective Log #3). The solitary is, according to LaFevre (1987) still, in fact, social. Even self-talk is built on a social

foundation (according to Vygotsky), and involves other people, other social collectives, and social contexts (LeFevre, 2087, p. 33-34). Consequently, educators don't need to avoid focus on individual actors within the social network of invention. The work here needs to happen on a more conceptual level. How we teach reading reflects how we view invention— as a solitary, romantic journey (i.e., LaFevre's Platonic invention) or a social, co-operative, networked, knowledge-building process.

This is a legacy that we must challenge not only in theory, but in practical application, too. Education, as Kuhn, Oakeshoot, and Rorty remind us, is not a process of assimilating truth (a Cartesian paradigm for knowing), but a process of "joining the conversation of mankind" (Bruffee, 1984, p. 647) and the collaboration at the heart of an interface like Hypothes.is provides a model of how knowledge is socially generated, and furthermore, how it "changes and grows" (p. 648). Perhaps Hypothes.is helps students move one step closer to challenging the presumed authority of text, rejecting the presumed paradigm of a truth that lives somewhere at the center of a text, if only they had the secret keys to unlock its clues. Perhaps, SDA helps put readers in a position to co-construct ideas of their own— the invention that serves as a precursor to thinking, interacting, and acting in this world critically.

SDA and Reading as Rhetorical Invention

While LaFevre's theory only speaks of writing at the center of invention, it's not an unprecedented leap to include reading as part of that center. Doug Brent's work with reading, specifically, as rhetorical invention helps us make that leap. It's convenient to label writing the *productive* side of literacy and reading the *receptive* side of literacy (Frankel et al., 2018, p. 7), but that dichotomy does little justice to the inventive work of reading, and it leaves theories around reading highly inert, sedentary. Brent (1992) challenges reading as merely reception with his theory that resituates reading as innately rhetorical, highly inventive, and a social means of sifting through bids for attention or "deciding which of these babbling voices to believe, and with what degree of conviction" (p. xii). If knowledge is generated, invented "as a consensus of many individual knowers," negotiated through discourse, then it takes more than an author/speaker to fully account for those involved in the negotiation required to call some proposition *knowledge*. For Brent, the challenge is to dispel the myth that reading is an isolated act, an effort to absorb information from a text "rather than conversing with, and being persuaded by, another human being" (p. 12).

There are many tools that help cull together the agents of such negotiation in a meaningful way and Hypothes.is is among them— one way we might leverage digitality to foster an interactive social environment for knowledge negotiation and production, making the reader and reading

central, as evidenced by the following exchange that students had over West's text:

> Clearly this guy isn't valid if he is using irrelevant social constructs because that is what has caused so much hate and diversity within our nation when he should be focusing on the class of the population to determine his ideas

> > I disagree. I dont think the social constructs he brings up are irrelevant. Are they stupid, silly, and their very notion ridiculous? Sure, but like it or not those constructs effect the way people view others. IT has contributed to racism yes, but in order to fight it you have to realize that it isnt irrelevant. Its relevant because its dismantling is integral to a solution.

> > I understand where you're coming from. The argument that race, class, and gender do not prove whether or not a person is worthy of respect, unfortunately, is not reflected in our reality. We have to be willing to talk about the divisions in our society to help bridge them. Metaphorically tucking our country's problems under the rug has only allowed those in privilege to distance themselves from those suffering.

In this exchange, a series of readers negotiate, via discourse around a specific text, whether to accept West's claims or not. They disagree with one another, but wrestle in plain view with a challenging topic that many

otherwise shy away from (i.e., racism). Students in this study exhibited a budding attempt to "participate in the creation of new knowledge" for themselves rather than "simply absorb another person's meanings" and their work at this "symbolic negotiation" (Brent, 1992, p. xii) is displayed, justified, and shared via Hypothes.is. Students, further, recognized this opportunity to decipher "what I tune into and tune out" (Reflective Log #5) and "piece apart why I felt the way that I did and how, empirically, that related to the text and the statements the author was making" (Reflective Log #5) which encouraged "monumental changes in beliefs and opinions as well as pushing me to change myself as well as others around me" (Reflective Log #5). Students are seeing the benefits of balancing claims made in text against others' ideas and broader contexts. For Kassidy, that happened as she read more about those who have doubted their faith the way she's currently doubting faith (Personal Interview) or for Hadeel who began to realize that all she believed about the value of immigrants voting in this country was limiting her active role as a citizen.

As educators, then, one task ahead of us is to help students conceive of their efforts at reading— when they choose it to be and under the right conditions— as innately rhetorical, a highly active and social means of "deciding which of these babbling voices to believe, and with what degree of conviction" (p. xii). Students must, according to Brent, "be able to understand what it means to engage in the social construction rather than the

individualistic de-archiving of meaning" and a tool like Hypothes.is helps them practice this rich symbolic negotiation. SDA, specifically Hypothes.is, brings rich new affordances to the reading act that are significant in that they help readers realize the 'social' nature of meaning-making and may help enact the vision Brent (1992) posed decades ago for rhetorical reading.

Implications for Practice

Above all else, DBR studies aim to inform practice on many levels. Given the similarity between the course used to enact this SDA intervention and most FYC courses, there is a viable application of my findings at this local site to contexts at most other universities. Further, there is a reverberation for this intervention in the ways university programs conceive of and assess critical reading. On an even larger scale, there is life in the way an SDA intervention speaks to issues among scholars in the field. The following section explores the impact this research may have on practice on all these levels.

Implications for the FYC Classroom

The implications of this study's findings on the ways we might teach reading in the FYC classroom and, specifically, the online FYC, are paramount, given that improving instruction around this central pedagogical problem is at the center of this intervention.

Teaching Reading in the Writing Classroom

Even instructors who see the value of reading instruction (90% of RCWS instructors, according to Carillo, 2015) likely do not understand how to teach it

(Sprouse, 2018, p. 39). In fact, 51% of instructors reported a profound insecurity with reading pedagogies, and name/define several disparate theories in inconsistent ways (e.g., critical reading, close reading, rhetorical reading)" (Carillo, 2015, p. 31-32). There's work to do to help teacher-scholars in this field see specific and practical ways to enact well-substantiated and responsible pedagogies of reading. This intervention is far from perfect, and not an exact fit for all classrooms, but it's one model to inspire other such models.

The integration of a thoughtful reading pedagogy is particularly important to the work we do in the RCWS classroom. Calls for action to teach reading directly in FYC classrooms include Carillo's (2017) call for mindful reading; the Stanford History Education Group's (2017) call for 'lateral reading'; FitzGerald's (2021) call upon us to develop critical empathy of reading; Salvatori and Donahue's (2017) unruly reading; Horning's (2011) meta-reading; Sullivan et al.'s (2003) deep reading protocol; or, even Brent's (1992) rhetorical reading. All are innovative methods to achieve a more agentic, more active, more substantial set of reading strategies to address the discursive challenges of our contemporary era, yet none of them welcome a clear social pedagogy of reading. SDA isn't the only answer to help fill that gap, but it is one potential answer— one that centralizes the social act of meaning-making or "reasoning together" (Dryzek et al., 2016) as an antidote to the discursive issues we currently face.

Whatever pedagogical approach we take, unmasking the hidden pedagogies of reading is a step in the right direction. When reading gets "assigned but not taught" (Keller, 2014, p. 25, emphasis original), students see the act as mysterious, perhaps even out of their reach. This intervention, however, presents readers with one potential way to envision a demystified approach to ideas generated while reading (in that they see each other's reactions in the margins).

Beyond the teacher's perspective, however, another key takeaway from the intervention is an awareness of student's desire for a reading-centric curriculum— not more reading, but more meaningful reading experiences and more active reading strategies. While the intervention is specifically centered on social, digital annotation, the inclusion of a reading-centric pedagogy in the writing classroom had a big impact on students. One student articulated this desire well: "I love this class just for the critical reading that we do" (Reflective Log #7). This sort of response was not because a reading-centric focus in the writing classroom is somehow simpler, less mentally taxing. In fact, this study finds reading instruction to be the opposite: highly challenging, often dreaded among students, deeply misunderstood, but valuable.

As Keller (2014) calls it out, reading "may be one of the least theorized parts of classroom practice" (p. 18). This study has sought to remedy that gap

for the sake of writing teachers, like me, who see the importance of teaching reading, but don't yet see how to do that work alongside the work of writing.

Implications for the OWI Classroom

Fostering relationships through reading may be one way to help build connections in the challenging OWI space. Research has found that students who both log in frequently (Patron and Lopez, 2011) and feel a sense of community (McCracken, 2012) in their online courses are more likely to persist and succeed. My own students note that Hypothes.is feels like a digital space where they can better connect to others, instructor and fellow students alike. (a desire noted by Meloncon and Harris, 2015). Hadeel noted the way that the "structure of Hypothes.is" made the class feel more personal, "like we were really interacting with each other and interacting with you." Although she'd experienced discussions in Canvas in other online classes, she felt like the addition of Hypothes.is made the class feel far more personal (Reflective Log #6). As another student put it: "The act of responding to others' comments on an article, and seeing other's responses to mine, ends up feeling much more like a fluid conversation" (Reflective Log #6). Online instructors know that "the degree and quality of communication among classmates and with instructors while participating in online activities [such as email]" (Boyd, 2008, p. 8) is pivotal to the online learning experience. According to the students in this intervention, the quality of "cooperative dialogues" (Boyd, 2008, p. 8) that

drew students out of their isolated reading experiences was a key feature of SDA.

Further, given the strong frame of learning as a social act, the social interactions of the classroom should be, according to Doug Brent, highlighted over the individualistic interactions. Instead, online courses can make more and more space for dialogue and support. Partly, this goal can be accomplished by encouraging a student-to-student exchange. My students certainly expressed that desire throughout this intervention and Hypothes.is offered an extended opportunity for that cooperative dialogue and community-building, according to this study's findings. For those educators who are actively seeking a way around the LMS-based discussion forum (a common topic of inquiry), SDA may help foster a space where students *want* to come back to discussion (i.e., motivation) around text. Online discussions have grown stagnant and, like many others, efforts to enliven LMS-based discussions have proved futile. For many reasons (see chapter nine for more details), LMS-based discussions about text, in particular, require readers to shift between text and LMS have made the reader response challenging while creating annotations on "the same visual plane as the primary text" (as cited in O'Dell, 2020, p. 4) has proven to yield far more positive results.

While Hypothes.is as a tool was not the primary object of study, Hypothes.is proved to be a significant means of both student-student interaction and text-based interactions. Students engaged one another in

conversation around a particular text. Across both macrocycles, for example, a total of 570 annotations were created by 100 total active readers, yielding 119 separate threads in a single reading event (Reading Event #4) and a total of 555 annotations posted by 99 readers yielded 118 separate threads in another (Reading Event #7).

Implications for Programmatic Application

The implications of this study extend beyond the FYC classroom. In fact, I see a series of possibilities for programmatic decisions, as well.

Professional Development

My classroom is certainly a space for rich exploration, but this project doesn't end with that space. Professional development around meaningful pedagogies of reading haven't yet caught up with most composition programs. In fact, as a result of this work, I've begun to re-shape the TA Practicum (a class taken concurrently with a new TAs first semester teaching Core Composition I) to include questions and texts that explore reading specifically. While I'm nowhere near the first to do so, my anecdotal review of other TA programs shows very little attention paid to reading.

My own TA workshop on coding illustrated this gap well. This workshop was a further attempt to engage new faculty in professional development around the role of reading in the composition classroom. These three TA's were asked explicitly about their own experiences with teaching reading and student annotation and all reported that reading is a serious issue in their

classes, but that they don't have a language to speak about it with students. TAs were, consequently, eager to practice the language they might use with students to describe acts of reading at this advanced level. They wanted to be able to name and exemplify the components of ECR with their students to help model strong, active, advanced reading. As one TA said, "[This workshop] helps me know how to tell them what I do when I read, giving me the language to describe the thinking and the action of reading." Or, as another put it, "I can give them more options, more concrete things to do and their purpose" (Coding Workshop Attendee). Another TA who attended the workshop breathed a sigh of relief, and told me that the ECR model helped her talk to her own students about "Why do we look up references? Why do we ask questions? This helps give me a language to explain why that counts as active, advanced reading" (Coding Workshop Attendee).

In addition to requesting the ECR model description of each component, the TAs reminded me that motivation is essential. They each expressed concern over how to motivate students to read. They also expressed concern with sidestepping elitist attitudes around reading: that you must read (and read with ease) to be smart. They see among their own students a sense that those who have to labor over reading are "stupid." Their concerns remind me of the work ahead for teacher-scholars of reading within RCWS to demystify reading processes and help shift perceptions of reading that are outdated, insidious, and counter-productive.

Programmatic Assessment of Critical Reading

In addition to professional development, most programs are tasked with assessment, or gauging how well we've met our intended outcomes. The outcomes at my home institution mimic those of many programs across the nation who have based their outcomes on WPA recommendations. That means that many programs, like ours, list Critical Reading as a key outcome for composition courses with a similar description:

Students read to inquire, learn, think, and communicate. Student writing demonstrates understanding of assigned readings, and when requested, incorporates outside readings.

While reading may always be a challenge to assess, no matter how well we define the task, a robust definition is at least a good place to start. This definition of *critical reading* implies that the only criteria by which to gauge effective advanced reading is to assess whether students "understand" a text and can integrate that text into their own paper. This study, particularly the ECR model, may serve to challenge the way we describe and assess the Critical Reading outcome. Because we can't always see what's going on with a student as they read a text, much of how we (in RCWS) assess reading comes from their self-reflective letter. However, the reflection is problematic because students struggle to talk about their reading coherently. They often aren't used to the metacognitive language of reading and reading processes. This intervention shows that the Reflective Logs were a valuable

metacognitive strategy that may have yielded results above and beyond the SDA itself.

Implications for the Field

As Brandt and Clinton (2002) remind us: Latour teaches us that objects have the power to help us understand the transcontextualizing force of an interface like Hypothes.is, in the way it organizes local literacy events (like the ones my students engaged in), but also organizes across a variety of local events— into global domains. In that way, these local findings are inherently global, meant to offer insight to the field. None of the concerns named in this dissertation are specific to my own classroom or even my home institution. No matter how we all describe the issue, the "don't, won't, can't" problem (Horning and Carillo, 2021, p. 2) is all-too-common among RCWS faculty. I do believe this intervention fosters more hope than dismay in our ability to address the complicated reading problem that so many teacher-scholars note. That hope takes on a number of implications for the future of reading within the field.

Reading in a Deliberative Democracy

This study engages the discursive habits of citizenship, aptly termed *Rhetorical Citizenship* (Kock and Villadsen, 2017)*,* by focusing on students' budding civic identity (Youniss, McLellan, and Yates, 1997, as cited in Mirra, 2018) and the way they "enact their citizenship rhetorically when they interact as citizens in language and/or other symbolic systems" (Kock and Villadsen,

2017, p. 574). This discourse of deliberation helps students productively consider their relation to a civic community, their agency to act within that community, and specifically to name the "things that are in our power and can be done" (drawn from Aristotle, N.E.) that lead to a decision. The deliberative nature of rhetoric is like a balancing scale, wherein rhetors are called to weigh reasons on both sides (proairesis) in order to navigate a sea of post-truth claims or pure bullshit (Frankfurter, 2005). Readers of these claims must practice determining what they are willing to accept, developing "warrantable beliefs" (Booth, 1974, p. xiii) as a product of minds meeting over text— all of which is at the center of rhetorical reading.

Students' profound responses to their own shifting willingness toward discursive praxis (in response to reading) speaks to the goals of teaching for the sake of improving discursive habits of citizenship. These findings don't stand alone. In fact, Bautista et al. (2013) found that "when students recognize their own positionality in connection to social inequities, they achieve a deeper understanding and a more critical stance to inquiry and envision themselves taking on new roles as a result of their participation" (as cited in Caraballo and Lyiscott, 2018, p. 11). My own students not only named those "new roles," but also expressed a newly empowered perspective on participating at all in civic matters (see chapters eight and nine for more details).

If indeed societal well-being is dependent on how its citizens "find, review, and use information" (Breneman, as cited in Sande and Battista, 2021, p. 176), then educators who are well-trained in rhetorical invention, like those of us working within the RCWS tradition, are particularly well suited to the task and using SDA reading pedagogies may be one means to fostering rhetorical reading. rhetoric is communicative practice that is particularly concerned with its ends— the value of this practice to society, or its ability to use "human inquiry and activity" in order to accomplish something (Bazerman, 2013, p. 15). This intervention found that one such highly valued "ends" is the discursive praxis associated with a deliberative democracy. Hypothes.is doesn't create responsible civic participation among students, but it supports the action that accompanies that view in alignment with our field's values.

Using the ECR Model

The definition of *engaged critical reading* built for this study is one step in the right direction toward helping other teacher-scholars articulate the specific moves of meaningful rhetorical reading. This articulation matters, because a "process we can't describe may be hard to teach" (Haas and Flower, 1988, p. 167). While this model of engaged critical reading is inevitably flawed, the specific components of ECR offers a *more* concrete approach to help instigate composition-specific discussions of what we want students to *do* with reading. This model helps RCWS teacher-scholars envision, and make

pragmatic, the goals of rhetorical reading. This is a significant step toward crafting a full picture of reading that helps demystify the advanced skills, behaviors, and dispositions that yield knowledge construction— a picture that embeds reading squarely in the rhetorical situation and pragmatically teaches students to move beyond the knowledge-telling (as writers) and knowledge-gaining (as reader) paradigms that Haas and Flower lament against (back in 1988), we leave meaning construction a mystery to students.

Utilizing Digital Tools and Pedagogies

While this study wasn't focused on evaluating digital tools for educational spaces specifically, the role of Hypothes.is as a digital tool is unavoidably central to the conversation. As a field, we've quickly moved from a state of exploring the ways technologies added to classroom pedagogies to one where we agree that students must leave school with the ability to use digital technologies productively as a now fundamental communicative practice (O'Dell, 2020, p. 2). This has become an essential conversation, in part, in response to the scholarship of McLuhan, Kittler, Manovich, Hayles, and many others who speak to the essential connection between the way we think and the media that shapes those thoughts. The deictic nature of ever-shifting digital tools bring with it new assumptions, new practices that teacher-scholars have a hand at shaping, alongside a need to stay aware of how we are shaped by it.

The discussion this study wishes to perpetuate is not one that views digital tools through a dichotomous lens, characterizing particular technologies as either a cure for or the disease of discourse, but instead aims to look for the complex relationship between literacy and technology and shape that understanding in productive ways (Selfe, 1999). For example, one such productive approach is to examine how SDA helps illuminate the qualities of digital text, illustrating how "texts have always been liquid and living...changing technology just brings to our attention things we should have been thinking about" (McDougall, 2015, p. 5). In this study, the qualities of text, as situated in particular contexts that affect meaning-making efforts, is notably visible in Hypothes.is— because the tool is an overlay to any publicly-available text without disrupting its original context. In that way, SDA (specifically, Hypothes.is) affords a unique opportunity to read in context. The affordances of such a technology may help take conceptualizations of reading further.

Of course, digital tools are no autonomous correction to misrepresentations of reading. In fact, Stommel (2013) sees a danger in presuming that digital pedagogies aren't merely re-creating the same "vestigial structures of industrial era education," but still sees hope through the potential pitfalls. While this sort of analysis of power structures is beyond the scope of this study, it's potential to simply re-create the same outdated conceptions of reading are prominent. SDA won't change those conceptions;

it only affords the opportunity for scholars, readers, and teachers to make explicit the changes to those conceptions.

Challenging Conceptions of Readership

At the outset, this study aimed for both practical and theoretical gains in the conception and practice of readership. The need is clear. Post-secondary teachers still hold on to views of reading as "discovering authorial intent rather than as a developmental, active process of constructing meaning" (Bosley, 2008, as cited in Keller, 2014, p. 25) and often fall back into old patterns of characterizing reading as passive (Adler-Kassner and Estrem, 2007). Even if they know that reading is something other than passive, a lack of confidence in reading theories and pedagogies leaves them falling into old habits— handed to them from their own early educational experience, no doubt.

If language is an active force in the way we conceive of and act in reality, then the way instructors speak to reading and assign reading events matters to enacting the kind of thoughtful meaning-making that we ultimately want to see. To that end, how we talk about reading and reading habits constitutes the role our students adopt as they read, the way they do or do not take autonomy or responsibility for their beliefs and their reading.

In a world where the distinctions among reader and author have blurred (or collapsed), what follows could be substantial. A more active reader, empowered by the tools of digital annotation to collaboratively *make*

meaning out of text, might also take more responsibility for the dissemination of ideas and the consequences of circulating misinformation.

Suggestions for Future Research

This study yielded several suggestions for productively moving forward. Some of those suggestions are best directed at the designers of Hypothes.is. For example, this study found that the biggest obstructions to the continued use of Hypothes.is in educational settings is the crowded margins of digital annotations that serve as an overwhelming distraction to many readers. After one or two semesters using a specific article, the digital margins are far too crowded by annotations to warrant further use. Additionally, while I know Hypothes.is is working on the ability to annotate multimodal texts (podcasts, images, etc...), that significantly limits its use among practitioners in a field that value a focus on modal variety.

Other suggestions relate to future research efforts. Throughout the interviews, the powerful role of purpose personal choice in reading material stands out as a theme. Scholars have studied purposes of reading within RCWS, specifically the accumulation or "vertical 'piling up' of multiple forms of reading" (Keller, 2014), but according to Salvatori and Donahue (2017), the most sophisticated reader makes deliberative shifts, depending on the purpose/task of a reading event. A closer examination of student purposes as they shift in varied reading events, and how that purpose shapes student social annotation habits, is warranted. As one student put it, purpose is closely

linked with motivation: "I think giving students choice on how and what they read gets them to put more in and in turn get more out. When students are given no choice or opportunity, they become unmotivated, skim, or don't read" (Reading Event #7). A study that sought the connections between students' motivation, purpose, and habits in a particular reading event would likely yield important insight.

Along the lines of motivation is the power of private engagement with text. This study doesn't aim to dismiss "the importance of having some kind of special, private connection to a text"; rather, I hope to add to that a balanced perspective that honors "the vitality that comes from scrutinizing and interrogating a text's central ideas as they are played out in various public forums" (Jolliffe, 2003, p. 137). This study calls future researchers to more closely examine the private interaction with text, especially as it is balanced with the social interaction of reading.

Reading is a life-long pursuit, a "continuously developing skill" throughout our entire lives (Frankel et al., 2018). It doesn't end at high school graduation or after we've earned a college degree. Rather, the latter stages of learning— where content-specific domains of knowledge construction are evidenced— happen in the years following college (Baxter-Magolda, 2004) because that learning evolves as we live and experience new things, new and old texts, new and old ideas, and find new desires to read (to know, to feel joy, to feel empathy, to escape, etc...). More studies that extend beyond the

academy are necessary to gain insight into writing and reading habits across a lifetime.

The timing of social, digital annotation is another interesting thread worth pursuing. While SDA has generally been deemed a positive addition to the reading process in this study, at what point in the process and for what purpose within that process? O'Dell (2020) used digital annotation as an entry point into a text assigned for the course, but mused over the timing of the tool and asked whether SDA made for a better "halfway step" (p. 16). She suggests that students who annotate upon first reading vs subsequent readings may find reason to read on a micro-level (examining specific lines) vs a macro-level (recognizing more holistic patterns across the text). This study found reason to question the timing of SDA, as well. The intervention design in this study used SDA as an entry point, but perhaps SDA isn't the best *first* exposure to a challenging text. In fact, for some students (though admittedly a small minority), especially early in the reading process, Hypothes.is halted their creativity, interrupted their independent thought, and slowed them down unnecessarily. The key feature of SDA is the *social* nature of this new form of annotation. What would it mean to maximize the affordances of this social interaction at a particular stage of the reading process/context/purpose? For example, is SDA ideal for readers who are wrestling with brand new ideas? Or, for students trying to negotiate their own opinions? Or, is SDA most advantageous after they've done their initial

reading for comprehension? More research can examine the point at which SDA is most generative to the reading process. This is a concern beyond the scope of the current study, but one that justifies further research.

Does this study impact how we define *engaged critical reading* or whether this gestalt approach is sustainable? The definition of *engaged critical reading* (discussed in chapter three) is multifaceted, expansive, yet still falls desperately short of capturing all the dynamic processes involved in advanced-level reading. There's much work left to be done to understand reading at advanced levels, especially reading beyond the university. Jolliffe (2017) calls RCWS scholars to "think more deeply about our definitions of readers and reading" (p. 19). I've attempted to do so, but it's a field-wide pursuit. Likewise, Sprouse (2018) fears the hesitance among writing instructors to teach reading most overtly stems from the confusion over competing definitions/theories of reading. I'd add that its life, largely outside RCWS, has only exacerbated the confusion among teachers in the field. This perception, and the way the ECR model may or may not clear up confusion, might be tested anew in future research.

Morris (2019) studies SDA's effect on developing the reading-writing connection. While transfer from one reading event to another (or to a writing event) is beyond the scope of this study, future work might more closely examine the written artifacts drawn from ECR. Morris refers to SDA as a "bridge to writing" (p. 117). This study assumes that reading served as a

"bridge to writing" in the very nature of the course but did not study that bridge.

Conclusion

Any future application of the findings in this study necessitates careful review of the context. This intervention was put into motion amidst a worldwide pandemic, deep and unending national (and global) social unrest, as well as a crushing uncertainty with new (or new to many faculty and students) learning environments. The stakes were high and the expectations set forth with this intervention were high in response— the desire to empower active student readers as agentic meaning-making and knowledge-producing entities within a polarized deliberative democracy.

With that context at the center, Hypothes.is— a thoughtful form of social, digital annotation— proved helpful to students as they applied a multifaceted approach to reading complex texts, one that fueled their approach to civic participation and discursive democratic deliberation. With the right discursive conditions, marked by civil engagement and a willingness to enter into collaborative engagement of text, "deliberation can overcome polarization," the group can become less extreme, "opinions can change" (p. 1145) and we can "build bridges across perspectives" (p. 1146). The key, according to Dryzek et al., (2019) is to enhance moments "and sites of listening and reflection" through the "surfeit of expression" (p. 1146). SDA

proves in many ways to afford such civil engagement through its

performative and social affordances.

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APPENDIX A

MAJOR PROJECT ASSIGNMENT PROMPTS AND ASSIGNMENT SHEETS

UNIT 1: Exploratory Research Project
The semester began with an Exploratory Research Project. This project aims to "open a question up and to keep it open for as long as possible," (Miller, 2016, as cited in Carillo, 2018, p. 84), granting students the opportunity to expand their literate repertoires when they become deeply engaged in acquiring new knowledge about things that matter (p. 2). I'd add "matter *to them*." The idea here is they learn to generate complex and exigent research-able questions. This project is meant to foster intellectual curiosity and a slow-build to knowledge. Students then use academic research to try to get closer to an answer to that question and along the way practice the instrumental features of academic research writing. In this first unit, reading functions in the following ways: reading with a motivated interest (to answer their own question), synthesizing varied sources in order to come closer to an answer to their question, making text-to-text connections, explicitly connecting personal experience/prior knowledge to text, flexibly approaching an issue with an open mind.
UNIT 2: Critical Analysis Project
In the second unit of this course, students were asked to choose one specific text-based argument related to their inquiry-based research (from Unit 1). They worked through a few tasks to analyze the form and validity of the chosen text-based argument: (1) map the logic of an argument (mapping the interplay between evidence and claims); (2) track the origin of the evidence presented (looking for corroborating evidence and/or original sources), fighting misinformation and innumeracy (like playing the telephone game and noticing how crazy the message gets warped when it reaches us); and (3) examine statistical claims, in order to (4) seek out motivated bias for themselves. Reading functions in this project in the following ways: critical reading, deep reading, interrogating validity and motives of a text, reading rhetorically, explicitly detailing the relationships among assertions in a single text, and practicing academic conventions of textual analysis. In addition to the content-based reading of Unit 1, students were also asked to do "structure-based reading" in this 2nd unit in order to make "conscious choices about

how, when, or whether to use" those ideas (Adler-Kassner and Estrem, 2007, p. 40).

UNIT 3: Rhetorical Advocacy Project

Bazerman reminds scholars in the field of rhetoric that the field's fundamental questions have to do with "how to accomplish things," not just examine what things are (Bazerman, 2013, p. 15). In this way, rhetoric of this kind is fundamentally deliberative. This final course project honors that action, calling upon students to enter the conversation with their well-informed opinion.

Now that students have practiced deep inquiry, entering larger conversations they are eager to participate in, reading critically and for the express purpose of forming their own opinions, students create a responsible advocacy artifact. Students navigate the rhetorical components of their chosen situation, ultimately crafting their message using any medium (e.g., videos, posters, t-shirts, etc...) that most appropriately addresses their chosen audience.

The most important component of this assignment is the rhetorical defense where they prove that they made conscientious rhetorical decisions to appeal to *that* audience. This unit is the most expressly dedicated to "high-road transfer" (Yancey et al., 2014a) in that it asks students to enact and reflect on the "capacity to compose rhetorically, for a purpose in a given genre and for a specific audience" (p. 16). This unit is also focused on crafting rhetorical reading for transfer, relying on metacognition and generalizable reading knowledge— about practices of reading, especially (2015).

Reading functions in this unit in the following ways: reading to form a personal opinion/update their belief system, practice reading with intellectual compassion/empathy, and rhetorical reading.

Exploratory Research Project Assignment Sheet
John Dewey (philosopher, pragmatist, education reformer) claims that to think is to embrace uncertainty, to welcome the unknown and remain steady in a "forked-road situation" (an ambiguous situation which presents a dilemma with many alternatives). With this reflective essay, I want you to do just that.

This project is about learning to use academic research to satisfy curiosity and seeing research as a personal endeavor. You're already a researcher (you use

google all the time), but the trick here is to deepen the quality of your inquiries by entering into academic conversations.

This project should serve to set you up for your work throughout the rest of this class. What you turn in for this first project is a reflection of the earliest stages of research.

The key is to *explore*. Don't choose a topic you know a lot about. Be curious. Research rarely starts with the *right* question; what usually happens is that you ask a question, and that question leads you to other, more complex questions. Follow your curiosity and see where each new source might take you. In the process, you'll see how writing is often heuristic—how it mirrors the thinking process, and you'll also learn how to research in a number of different media.

Okay, fine, but what exactly are we turning in?

You will begin with a researchable, divergent question that you have a personal interest in seeking answers to. Then, you'll conduct the research. You **will submit two parts** for the final grade: (1) a **complete research log** with 12 sources (from a variety of mediums, including at least two peer-reviewed, scholarly journal sources) and (2) a **reflection essay** that (at least 5 full pages) that details your research question, your personal investment in that question, and then integrates the most key 5 sources, **explaining what you learned from those sources and how that information helps you come closer to an answer to your question** (assimilation).

With this reflective essay, you must: tell me what your research question is and explain why it matters to you. Then, you must *integrate* (through summary, paraphrase or quoting) the pertinent (at least 5 key sources) information that you learned from your research exploration and *assimilate* that information—tell me how it helps answer your research question. *Cite* your sources both in-text and post-text perfectly using MLA format.

Critical Analysis Project Assignment Sheet

To analyze something is to ask what something *means*. It is to ask *how* something does what it does or w*hy* it is as it is. Analysis is the kind of thinking you'll most often be asked to do in your professional and academic life. The first step toward being a better analytical thinker and writer is to become more aware of your thinking processes, building on skills that you already possess, and eliminating habits that get in the way. Most generally, here are five moves that help you analyze: Suspend Judgment, Define Significant Parts and how They're Related, Make the Implicit Explicit, Look for Patterns, and Keep Reformulating Questions and Explanations. We'll be putting these skills into action throughout this unit.

To begin, you need to identify a short argumentative text on your topic of interest (use the topic you've already researched, if you'd like, or make a switch). Look for an article in a reputable popular periodical (*The Atlantic*, *The New York Times*, *Wall Street Journal*, *Time*, etc...). Ideally, you will stick to the topic you already chose to work with (in the Exploratory Research Project), but you are free to switch topics, if you choose. **Warning**: do NOT choose a how-to article or a peer-reviewed journal article. Choose a *short* text with a clear argumentative purpose.

With that text in hand, you will be conducting a logical analysis by submitting two parts: a logical map and an essay that evaluates the author's use of evidence.

Final Rhetorical Advocacy Project
This final advocacy project takes your early exploration and turns it into a concise argument with popular appeal.
Your final project will focus on assessing your ability to negotiate the rhetorical situation— specifically through argumentative claim, target audience and genre.

Rhetoric concerns itself primarily with messages that effectively present an argument. In this class, by having you advocate, you're pushed outside the ho-hum research paper (which often only rehearses what others have already said) and into the terrain of engaging analysis of evidence to support a *responsible* claim, through multiple modes of media.

Beware: Propaganda often uses nefarious rhetorical means (think advertisements and Hitler), such as false connections and vague appeals "to the people." In crafting your own product for advocacy, I'd like you to use arguments that aren't so flimsy – hence the term *responsible*. Your product and your claim ought to be responsible—an argument you deem a public service (a service to someone outside your own selfish goals)—not an advertisement for a product or a vote.

I am assessing your ability to negotiate three critical components of inventing rhetoric: (1) choosing an exigent **claim** (engaging in an issue that is relevant to you and the communities to which you belong and creating a specific, responsible argumentative claim), (2) choosing an **audience** (a specific group that needs to hear your claim), and (3) choosing an **appropriate creative genre/medium** through which to communicate *that claim* to *that audience*.

What are you grading on, specifically?
- Your product must clearly depict your argumentative claim. It should be clear, convincing, and smart.

- Your product must combine visual images/icons and text in logical support of your claim.
- You put effort into creating/choosing evidence.
- Your claim is well substantiated with a literature review. A literature review synthesizes and summarizes the authoritative research that substantiates your claim (use 6-8 valid sources; include a perfectly formatted according to MLA or APA protocol; use at least 1 scholarly journal article).
- You can defend your rhetorical choices thoughtfully.

What might be my medium of delivery?
First, consider your intended audience and the message you're sending; then, you can choose the medium that might most effectively deliver that message. The medium might be: an NPR story, a web site (Google Sites), a virtual poster/infographic, a pamphlet, a video (if you create a video, you must load that video onto YouTube or Vimeo and submit the link). Rhetorically, I'm assessing how well your medium serves to send your message to your intended audience and how professional and convincing that product is.

Collection of Reflective Log Entries (7 total)
John Dewey was right: "We do not learn from experience ... we learn from reflecting on experience." Reflection is a critical part of the educational experience. Not only is it helpful to collect your own thoughts on insights, challenges, triumphs, but it's helpful as the person charged with assessment (a dubious and complicated task at bests) to see the motives behind your reading and writing processes. Here's why: what we intend to happen with our composition is rarely what happens. I need to see what sorts of risks you took and which yielded successful results and which didn't. In a class where you are charged with growing from wherever you begin this journey, I need to hear you describe your growth, your risks, your learning.

With this reflection, I'm inviting you to engage in the most significant part of the learning process, including: comparing your intended outcomes with actual outcomes, cataloguing your shifting experience with reading and writing, evaluating your metacognitive strategies, analyzing and drawing causal relationships, synthesizing meanings and applying your learning to new and novel situations, producing your own personal insight and ultimately learning from *all* your experiences.

I will give you specific prompts for each log entry and will read and grade these logs as we move along. Collectively, this series of log entries (7 total) will comprise your complete reflection in the course. This reflection (and the prompts) will focus on your experience with reading, with composing and with civic participation—the themes of the course.

APPENDIX B

TEXTS CHOSEN FOR INTERVENTION

Text	Summary	Justification
Reading Event #1 (pre-intervention) M. Wolf's "Letter Nine: Reader, Come Home" (from *Reader, Come Home: The Reading Brain in the Digital World,* 2018)	Wolf's text is broken into nine separate letters, addressed to readers. This is the final letter. Wolf makes a case for reading as critical to a deliberative democracy. One main assertion Wolf makes is that "good readers of a society….detect danger" and act as "guardians of our common humanity."	This text helps set students up for reading— and its civic merit— as an object of study, specifically, setting a tone for the focus of this course. In week 1, students annotated this text however they saw fit, providing a baseline for annotation habits prior to the intervention.
Reading Event #2 C. Crain's "The Case Against Democracy" (*The New Yorker*, 2016)	Crain posits the question of who is in a position to make thoughtful decision about public welfare, blatantly challenging many of the tenets of democracy and exposing the challenge of uninformed voting practices.	Crain opens the semester with big questions about whether our democratic principles are working, a question I'd hoped students would engage throughout the semester. This text was the first (of five total) reading events using Hypothes.is as a form of SDA, assigned in week 2.
Reading Event #3 P. LaFarge's "The Deep Space of Digital	Lafarge poses a question that has been asked many times over: do we read differently	Because experience tells me that students have read multiple accounts of the ills of

Reading" (*Nautilus,* 2016)	online than we do in print? The question isn't new, but LaFarge's answer offers a reprieve from the apocalyptic characterizations of digital reading in that the medium impacts our reading, but that "digital reading will expand the already vast interior space of our humanity" if we put it to good use.	digital technology on thinking and reading, I intentionally chose a text that had a less pejorative view of the situation, but invited personal reflection, nonetheless. This text meant to get students to think more explicitly about their own reading processes. This text was the second (of five total) reading event using Hypothes.is as a form of SDA, assigned in week 3.
Reading Event #4 B. Yagoda's "The Cognitive Biases Tricking Your Brain" (*The Atlantic*, 2018)	Yagoda condenses the cognitive science research of Kahneman and Nisbett to outline the biases that often occur in our own thinking processes.	The 2nd unit of this course asks students to critically analyze the biases shaping the assertions in their chosen topic of inquiry, by examining one particular text closely. In order to examine biases closely, students needed a starting point. Concurrently, the goal was to give students a language with which to test and reflect on their own cognitive biases. This text was the third (of five total) reading event using Hypothes.is as a form of SDA, assigned in week 6.

Reading Event #5 C. Wardle's "Misinformation has Created a New World Disorder" (*Scientific American*, 2019)	Wardle discusses the impact that misinformation has on society, along with the way new technologies manufacture the amplification of such misinformation.	In an effort to support students' critical analysis of text, Wardle powerfully argues the purpose of such a sustained effort at examining a text for misinformation: the cost of allowing poorly-substantiated claims to circulate is high and threatens to undermine the power of valid information necessary for a democracy to thrive. This text was the third (of five total) reading event using Hypothes.is as a form of SDA, assigned in week 8.
Reading Event #6 M. Kakutani's "The Death of Truth: How We Gave up on Facts and Ended up with Trump" (*The Guardian*, 2018)	Kakutani puts Trump's monstrous regime" on full display, but blames the slow, but incipient decay of truth and a growing distrust of expertise and rampant mis- and disinformation for the current state of affairs. She calls on us, citizens, to resist the rhetoric of cynicism and resignation common among politicians, and resist the alternative facts often espoused by power-hungry individuals. Her final line draws together her concerns, "without	This text is intentionally controversial and politically motivated. While the assertions are not unjustified, they were likely to evoke passionate response from students already immersed in politically-charged calls for blame. This text is not unlike many of the articles they are likely to encounter in their own social media feeds. As a brief check, I asked students to choose their annotation path at this point (Week 6) in

	truth, democracy is hobbled."	order to gauge whether they continued with SDA or returned to another familiar approach to annotation. *Student annotations in this reading event were not factored into the data, only their choice in how to annotate plays a role.*
Reading Event #7 C. West's "The Moral Obligations of Living in a Democratic Society" (from *The Good Citizen,* 2001)	West is concerned about declining democratic principles and blames economic declines, cultural decay, and political indifference as the source of the decline. West evokes issues of class and race, too, in this essay that calls for hope (though not optimism) and personal responsibility to return to the principles of democracy.	West is possibly the only author students would have encountered before the intervention. If not, he is a force that warrants engagement— not only because his ideas are highly praxis-based, in response to a struggling democracy, but also because his language use is intentionally rich and complex. This final text was the fifth (of five total) reading event using SDA, assigned in week 11.

APPENDIX C

REFLECTIVE LOG PROMPTS

#1: Literacy and Civic Narrative (Week 2)	#2: Metaphor for Reading (Week 3)	#3: Wrestling with Difficulty (Week 4)
In this first log entry, share your experience with reading and writing prior to taking this course. Has your experience been good with reading and writing— in and/or out of school? How confident are you with both reading and writing? Describe your confidence level for me. Part II: I also want to hear a bit about your role with *civic participation*. What do you think it means to participate in civic matters? Do you see yourself doing this kind of participating? If so, in what ways do you participate? If you do not participate, why not?	Metaphors can be really powerful ways to communicate big ideas. In 350-500 words, describe what kind of metaphor you'd apply to *reading* (or, to yourself as a *reader*) in any context (this doesn't have to be about just reading for classes). Explain your metaphor to me.	Choose one of those texts that you've read in the last two weeks; choose the one that was the most challenging for you to read. Focus on that text as you respond to this prompt: what, *specifically*, did you focus on as you read that text? How did you make sense of the text when it got particularly tough (please give one specific example)? What did you do to make sense of those tough sections (again, please give one specific example)? What, specifically, did you find interesting or confusing about these sections? What might you want to know more about as a result of reading this text, if anything?
#4: Experience with Annotation (Week 6)	#5: Forming/Updating Your Own Belief Systems (Week 9)	#6: Understanding Changes to Your Annotation Habits

In at least 350 words total, please respond thoughtfully to the following prompts regarding your experience with annotation as a reading strategy. *Have you annotated a text before? If *yes*, have you done so without being prompted (by a teacher, for example)? In what ways did you annotate (examples: maybe used a highlighter to remember a particular sentence or maybe you circled words you need to look up later or maybe you wrote something in the margin). If *no*, why not? *What kinds of texts do you/would you annotate without being asked to? *What do you think annotation does for you as a reader? (e.g., does it help you read? Does it help you understand? Does it help in another way?) *Read through your own annotations this week on Wolf's "Deep Reading Brain" and place them into 3-4 categories (e.g., annotations that talk back to the author, annotations that are emotional reactions to	Recall and describe one short narrative/specific example of how you have challenged your belief system through reading in this class (whether a reading I assigned or a reading you chose on your own).	(Week 13) After skimming back over your own and your peers' annotations so far this semester (we've annotated together five total times, all listed below), list 5-6 major categories for the most effective ways we all annotated (e.g., I most often asked questions about the messages in the text, or I noticed that most student annotation seem to focus on agreeing with the author in their annotation, etc...). Imagine you're guiding future students in the art of annotation here and, to that end, please list *at least* 5-6 categories/types of annotations that make the habit of annotation most helpful or meaningful.

the text, annotations that challenge the ideas in the text, etc...). These categories should reflect how you *most often* engage with the text and the ways you most often engage with your fellow readers in those annotations?		
#7: Changes to Your Reading/Reading Habits and Plan for Civic Participation (Week 16) Describe what stands out about your own learning related to your reading and/or your reading habits. Use specific examples from your own experience this semester to illustrate your learning. Describe *if* and *in what ways* you feel prepared to take action beyond the classroom (if any) related to the topic(s) you've investigated this semester? What are you prepared, if anything, to DO as a result of all this inquiry/research/reading?		

Directions: Often, because reflection is such a critical activity for learning, teachers ask you to write a reflection at the end of the semester. I'm doing

things a little differently in this class. Instead of reflecting at the end, I'm asking you to reflect throughout the semester in a series of reflective logs that make up your ENGL 2030 ePortfolio.

Throughout the semester, you will keep a portfolio of reflective logs that help you deeply consider your habits of reading, writing, and researching around the theme of civic participation. Each log entry (there are 10 total) should be roughly 350-500 words (depending on the entry. See individual directions for more information), original, and honest reflections of your own experiences and/or processes (no need to flatter me here; I'm only interested in your opinions, behaviors and honesty).

Literacy and Civic Narrative
This prompt has two parts--one dedicated to reflecting on your reading and writing experience prior to this course and one reflecting on your role in civic participation. These are themes you'll be working with throughout this semester.

I: In this first log entry, share your experience with reading and writing prior to taking this course. Has your experience been good with reading and writing--in and/or out of school? How confident are you with both reading and writing?

II: I also want to hear a bit about your role with civic participation. Do you see yourself engaging in issues that matter in your own communities? If so, in what ways do you participate? If you do not participate, why not?

Aim for at least 500 words total in this first reflective log.

Remember: Aim for 500 total words of original and honest reflections of your own experiences in response to both above prompts. I'm only interested in your personal opinion about the prompted question, your application of the material, and your honesty.

Metaphor for Reading
Metaphors can be really powerful ways to communicate big and complicated ideas. Describe what kind of metaphor you'd apply to *reading* (or, to yourself as a *reader*). Explain your metaphor to me.

Example: Reading, for me, is like turning over the soil in a field. When you turn soil, you dig up new, long-buried nutrients, and that refreshes the surface in unexpected ways, or...

Example: Reading is like pulling out your eyelashes, one painful lash at a time because it takes so long and it always seems impossible to get all the details.

Aim for roughly 350-500 words in this log.

Remember: Aim for 350-500 words of original and honest explanation of your metaphor. There is no need to flatter me here; I'm only interested in your personal opinion about the prompt, and an honest explanation of the metaphor you chose.

Wrestling with Difficulty
We are reading a lot of complex texts in this class, for sure. They are complex for me, too. Last week, we read "The Case Against Democracy."

In this log, write a 450-500 word description of your experience with reading this complex text: what, *specifically*, did you focus on as you read "The Case Against Democracy"? Be specific about which sections of the text you focused on and what your mind was doing as you read these sections. How did you make sense of the text when it got particularly tough (please give one specific example)? What did you do to make sense of those tough sections (again, please give one specific example)?

What, specifically, did you find interesting or confusing about these sections?

What might you want to know more about as a result of reading this text, if anything?

Remember: Aim for 450-500 words of original and honest reflections of your own experiences and processes. There is no need to flatter or prove major transformation here; I'm only interested in your personal approach to reading, your way of making sense of the material, and your honesty.

Experience with Annotation
In at least 350 words, please respond thoughtfully to the following prompts regarding your experience with annotation as a reading strategy:

*Have you annotated a text before? If *yes*, have you done so without being prompted (by a teacher, for example)? In what ways did you annotate (examples: maybe used a highlighter to remember a particular sentence or maybe you circled words you need to look up later or maybe you wrote something in the margin). If *no*, why not?

*What kinds of texts do you/would you annotate without being asked to?

*What do you think annotation does for you as a reader? (e.g., does it help you read? Does it help you understand? Does it help in another way?)

*Read through your own annotations this week on Wolf's "Deep Reading Brain" and place them into 3-4 categories (e.g., annotations that talk back to the author, annotations that are emotional reactions to the text, annotations that challenge the ideas in the text, etc...). These categories should reflect how you *most often* engage with the text and the ways you most often engage with your fellow readers in those annotations?

Remember: Aim for 350 words of original and honest reflections of your own experiences and processes. There is no need to flatter or prove major transformation here; I'm only interested in your personal opinion about the prompted question, your reflection on your own annotation habits, and your honesty.

Forming/Updating your own Belief System
If reading is all about actively building your own belief system by choosing which voices to tune in to and to believe, and "with what degree of conviction" (Brent), describe (in at least 500 words) how you have sorted through those bids for your attention with a specific topic/text/inquiry. Just give me one short narrative/specific example of how you have challenged your belief system through reading in this class.

Maybe your belief didn't change, but instead was bolstered by what you read; that's fine. Maybe you did change your mind; that's fine, too. Either way, describe one specific example of how reading affected your belief about a specific topic.

Remember: Aim for at least 500 words of original and honest reflections of your own experiences and processes. There is no need to flatter or prove major transformation here; I'm only interested in your personal opinion about the prompted question, your application of the material, and your honesty.

Understanding *Changes to your Annotation Habits (& Helping Future Students Do It Well)*

Together, we're going to build a guide for future students to the best practice of annotation.

I: After looking back at your own and your peers' annotations so far this semester, we'll help develop categories for the types of things we all annotated (you started doing this categorization in your last Reflective Digital

Log entry, but now you're looking at all annotations, not just your own). Aim for 5-6 categories.

II: What do you see in your and your peers' annotations that are common? Compared to your own annotations, what is different or new about your peer's annotations? How many different ways do students annotate the text, in your opinion (list those different ways...as many as you see)? What kinds of annotations did you choose to reply to and do you see a pattern in your choices? Aim for at least 250 words here.

Remember: Aim for a list of at least 5-6 categories (for the first prompt) and at least 250 words (in response to the second prompt) of original and honest reflections of your own and your peers' experiences and processes. There is no need to flatter or prove major transformation here; I'm only interested in your personal opinion about the prompted question and your honesty.

Have your annotation habits changed since your first try (back in Week 1, when we read Wolf's "Reader, Come Home")? If so, how have they changed? Do you interact with the text or with each other any differently? Why do you think that is (or is not)? Please use specific examples (pulled straight from your annotations through the semester).

If nothing has changed, why do you think that is?

Remember: Aim for 350-500 words of original and honest reflections of your own experiences and processes. There is no need to flatter or prove major transformation here; I'm only interested in your personal opinion about the prompted question, your application of the material, and your honesty.

Changes to Your Reading/Reading Habits & a Civic Participation Plan

We've worked hard to get to a point where you can confidently add to the larger conversation. Your Final Rhetorical Advocacy Project is a great start to participating in the important conversations happening around in your own communities around a specific topic that matters to you.

Describe *if* and *in what ways* you feel prepared to take action beyond the classroom (if any) related to the topic you chose? What are you prepared, if anything, to DO as a result of all this inquiry/research/reading?

**What exactly has helped you feel confident in contributing to the larger conversation? Likewise, what are the barriers to contributing to the larger conversation? What makes you feel like you aren't prepared to participate in civic action?

Remember: Aim for at least 500 words of original and honest reflection of your own experiences and processes. There is no need to flatter or prove major transformation here; I'm only interested in your personal opinion about the prompted question, your application of the material, and your honesty.

APPENDIX D

BASELINE AND FINAL SURVEYS

Baseline survey questions

[Include brief description of the study here. I have a video script, but need to see if Qualtrics allows video uploads.]

1. Demographics: How do you identify along the following criteria:
   1. Male_____ Female _____ Other _____
   2. Age range: 17-20 _____ 21-25 _____ 26-30 _____ 31-35 _____ 36 + _____

2. What is the primary reason you're taking this course *online*? _____

3. This course is about both reading and writing. We'll talk a lot about your writing this semester, but I'd like to ask you specifically about your reading at this point: How strong of a reader do you feel you are (when it comes to longer, complex texts) at this point?

   I feel very confident when I read complex texts _____

   I feel mostly confident when I read complex texts _____

   I do not feel very confident when I read complex texts _____

   I do not feel confident at all when I read complex texts _____

4. Please describe in your own words how you feel about your reading skills.

5. When you encounter a complex text, one that you *need to understand*, what reading strategies do you use to help understand the ideas in the text?

6. Describe what sorts of things you read *outside of school*.

7. Describe why you choose to read those things. For example, what do you get out of reading those things? In what ways (if at all) does reading inform your beliefs? Experiences? Decisions?

8. When you read, do you ever write (or highlight or make marks of any kind) in the text (throughout the text or in the margins)? Why or why not?

9. If yes, under what circumstances do you feel it necessary to write on or in the margins of texts while reading?

10. Have you ever used Hypothes.is (a digital annotation interface)? Have you ever heard of it?

11. CONSENT: This final question asks for your consent. Do you willingly agree to participate in this study and allow some or all of the data you supply to be used in the study. This study aims to look closely at reading habits and perceptions about reading in a college-level composition class, but will not use any personal identifying features. **Any information you supply will never be published with your name or identification number.** Your confidentiality will be protected.

> Do you grant consent for the researcher to use your contribution to your course annotations, course projects, survey responses, reflective digital log submissions, and course discussions (with all identifiable features of your identity deleted/revised)?

> Yes _____   No _____

*If you answered *yes*, please enter your name here_____.

Final survey questions

1. How strong of a reader do you feel you are (when it comes to longer, complex texts) at this point?

    I feel very confident when I read complex texts _____

    I feel mostly confident when I read complex texts _____

    I do not feel very confident when I read complex texts _____

    I do not feel confident at all when I read complex texts _____

2. Please describe in your own words how you feel about your reading skills.

3. Please describe in your own words how you feel about your reading skills *now* after this course.

4. When you encountered a complex text in this ENGL 2030 class, one that *you needed to understand*, what reading strategies did you use to help understand the ideas in the text?

5. When you encountered a complex text in other classes you're taking, one that *you needed to understand*, what reading strategies did you use to help understand the ideas in the text?

6. When you encounter a complex text outside a school setting, one that *you need to understand*, what reading strategies will you use to help understand the ideas in the text?

7. Are these strategies new to you, as a result of this or other classes you've taken this semester? Please briefly describe.

8. Describe the purpose of reading *for you*? For example, what do you get out of reading? In what ways (if at all) does reading inform your beliefs? Experiences? Decisions?

9. For you, is annotation an important reading strategy?

a.   If no: what circumstances might warrant you using annotation practices while you read?
b.   If yes: under what circumstances do you feel it necessary to annotate while reading? What sort of purpose in reading would make you want to annotate a text again?

10. Now that you've used Hypothes.is, are you likely to keep using it?

> I will not use H. again _____
>
> Sure, I might use H. under the right circumstances _____   (If yes: what are those "right" circumstances?)
>
> I definitely plan to use H. again _____

11. Do you think reading is relevant to your efforts at civic participation?

If yes: how is reading relevant to your efforts at civic participation? Please explain.

If no: why is reading not relevant to your efforts at civic participation? Please explain.

APPENDIX E

TA CODING WORKSHOP AGENDA

This workshop is designed to challenge the coding for this project: challenge the definitions of the separate codes and the application of those codes on the data.

1. **Goals Today:**
   1. To help challenge my articulation/definition of each code. Each code needs to be self-explanatory.
   2. To apply and check my application of those codes.
2. **The study** (elevator pitch style…synthesis of INTRO).
   1. **Overview:** I am studying reading as an inherently rhetoric pursuit. And a rhetorical pursuit that is key to a deliberative democratic discourse. To that end, I have deployed a pedagogical intervention that may (or may not) help students practice advanced levels of engaged critical reading as an active, social pursuit: social, digital annotation (via Hypothes.is).
   2. **Explain ECR and its components.**
      From a complex network of theories, I have identified three key components— skills, behaviors and dispositions attributed to engaged critical reading (knowing full well that there is much, much more to account for).
         1. *Skills* refers to the intellectual competencies that readers use in a reading event. These competencies are most often detailed in behaviorist and cognitive theories of literacy, as studied in multiple fields: education, cognitive science, rhetoric & composition/writing studies, literacy studies, literary studies, etc.…
         2. *Behaviors* is specified here as "literate behaviors," Shirley Brice Heath's term for the interactive talk about text and self-conscious focusing on language that is essential for readers as they work to access "stores of the mind" (1984).
         3. The concept of *dispositions* refers to those individual, internal qualities that determine how the intellectual skills and behaviors will be used (Driscoll and Wells, 2012, p. 5) in service of learning (as opposed to dispositions that dis-incline learning). Many educators know of these favorable dispositions as the eight habits of mind posed by a coalition of three major professional bodies who strongly influence RCWS scholars and educators: persistence,

metacognition, curiosity, openness, engagement, creativity, responsibility, and flexibility (Frameworks).

   c. **Present grid of codes** and definitions/examples of each code (PRINT copies for everyone).

4. **Sample annotations workshop:** Have TAs apply the codes to sample annotations individually (2 Ref. Log samples, 1 Wolf, 2 pages of H. Annotations).
    1. Do Wolf (two students samples)....repeat process with H. (two samples) and Ref. Logs (two samples).
    2. Compare the codes with one another. Aim to find consensus.
   3. Discuss their decisions.

5. **Discussion:**
    A. *What do you think you learn from this about your own students' reading practices?*

    B. *How to approach reading in the writing classroom?*

    C. *What about the purpose of annotating as a reading practice, specifically?*

Follow-Up Question: Ask them to name the things they most need from Practicum

APPENDIX F

TA CODING WORKSHOP ARTIFACTS

Figure 43 *Hypothes.is Report Coding TA #1*

Figure 44 *Hypothes.is Report Coding TA #2*

irisss_V11 9/2/2020 10:47 PM in Public

Human beings have been reading for thousands of years, but in antiquity, the normal thing was to read aloud.

Totally normal for me! Reading in silence and to myself is like I am wasting my time. In my mind I am just thinking about random stuff and not fully focused. For me at least I have to hear my voice to comprehend what I am reading.

meta-cognition , validity

irisss_V11 9/2/2020 10:44 PM in Public

Naumann gave a group of high-school students the job of tracking down certain pieces of information on websites; he found that the students who regularly did research online—in other words, the ones who expected Web pages to yield up useful facts—were better at this task (and at ignoring irrelevant information) than students who used the Internet mostly to send email, chat, and blog

Based on what this text is about I feel like this study contradicts what the article is trying to proof because obviously people who use the internet more often or that are proficient with using the internet to research will be so much better at it than someone who uses it for very minimal stuff. So what exactly is the point of this being added in the article?

negotiation , complexity , rhetorical

irisss_V11 9/2/2020 10:36 PM in Public

t's true that studies have found that readers given text on a screen do worse on recall and comprehension tests than readers given the same text on paper.

This part of the text really stood out to me because I live it. When I have a reading in front of me on paper I read it so much better than how I read this article just now (because it was online) I feel a bit lost when I am reading online and as if I didn't really get anything out of the text and so for some people it might be the same since the studies being done say so!

Validity , meta-cognition

miakallevik 9/7/2020 5:40 AM in Public

I too feel like I have a harder time reading on a screen than a paper text. I think it is important to note that readers have been studied and shown to read better on paper as this might not be obvious to others that where the writing is affects how we can recall it.

validity , context (?) , meta-cognition

birchd 9/2/2020 10:30 PM in Public

It uses the affordances of your phone or tablet to do what literature is always trying to do: give you new things to think about, to expand the world behind your eyes

This reminds me so much of David Foster Wallace's use of subtext and physical things you can include in a written text to be inventive and keep the reader from reading left to right, top to bottom.

aesthetics , context

birchd 9/2/2020 10:15 PM in Public

Students asked to read a text on-screen thought they could do it faster than students asked to read the same text in print, and did a worse job of pacing themselves in a timed study period. Not surprisingly, the on-screen readers then scored worse on a reading comprehension test.

Makes me glad I decided to buy the print version of some of my textbooks this year!

file:///Users/mirandaegger/Downloads/hypothesis (2).html

affect , Flexibility of mind (?)

24/59

Figure 45 *Hypothes.is Report Coding TA #3*

Figure 46 *Private Annotation Coding TA #1*

1

Wolf's [...] into nine separate letters, directly to her readers. Below is an excerpt of the final letter.

Letter Nine

Reader, Come Home

My dear Reader,

Time for Social Good

We are so distracted by and engulfed by the technologies we've created and by the constant barrage of so-called information that comes our way, that more than ever to immerse yourself in an involving book seems socially useful. . . . The place of stillness that you have to go to write,[19] but also to read seriously, is the point where you can actually make responsible decisions, where you can actually engage productively with an otherwise scary and unmanageable world. . . .

—Jonathan Franzen

Bonhoeffer and Stiegler are two examples of human beings in whom the third reading life supports the self through otherwise impossible circumstances and becomes the basis of emulable service to others. The "place of stillness" that Jonathan Franzen describes is the reflective domain in which the act of reading allows us to think critically for ourselves and to make responsible decisions, which in the process become socially useful acts.

In a recent essay about our values as a nation, Marilynne Robinson wrote, "I do believe that we stand at a threshold,[20] as Bonhoeffer did, and that the example of his life obliges me to speak about the gravity of our historical moment as I see it, in the knowledge that no society is at any time immune to moral catastrophe. . . . We owe it to him to acknowledge a bitter lesson he learned before us, that these challenges can be understood too late.

We live in a historical "hinge moment" as Robert Darnton[21] called it, en route to whole new forms of communication, cognition, and choices that are ultimately, deeply ethical. Unlike during other great transitions, we have the science, the technology, and the ethical imagination necessary to understand the challenges we face before it is too late—if we choose to do so. As depicted earlier, we need to confront the reality that when bombarded with too many options, our default can be to rely on information that places few demands upon thinking. More and more of us would then think we know something based on information whose source was chosen because it conforms to how and what we thought before. Thus, though we are seemingly well armed, there begins to be less and less motivation to think more deeply, much less try on views that differ from one's own. We think we know enough, that misleading mental state that lulls us into a form of passive cognitive complacency that precludes further reflection and opens wide the door for others to think for us.

This is a long-known recipe for intellectual, social, and moral neglect and the fraying of societal order. At stake here is the ultimate message of this book: that any version of the digital chain hypothesis, strong or weak, poses threats to the use of our most reflective capacities if we remain unaware of this potential, with profound implications for the future of a democratic society. The atrophy and gradual disuse of our analytical and reflective capacities as individuals are the worst enemies of a truly democratic society, for whatever reason, in whatever medium, in whatever age.

Twenty years ago Martha Nussbaum wrote about the susceptibility and the decision making of citizens who have ceded their thinking to others:

[Handwritten annotations: "what a fact news?", "Motivation", "who influenced?", "acknowledgment of confusion/complexity", "I wonder what...", "look up", "Demonstrate Motivation to do labor intensive work", "Is she suggesting that's what's going to happen?", "Engage language aesthetics", "predicting conclusion of paper", "talking abt authors?"]

Figure 47 *Private Annotation Coding TA #2*

Wolf's [...] broken into nine separate letters, directly to her readers. Below is an excerpt of the final letter.

Letter Nine
Reader, Come Home

My dear Reader,

Time for Social Good

We are so distracted by and engulfed by the technologies we've created and by the constant barrage of so-called information that comes our way, that more than ever to immerse yourself in an involving book seems socially useful. . . . The place of stillness that you have to go to write,[19] but also to read seriously, is the point where you can actually make responsible decisions, where you can actually engage productively with an otherwise scary and unmanageable world. . . .

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This is a long-known recipe for intellectual, social, and moral neglect and the fraying of societal order. At stake here is the ultimate message of this book: that any version of the digital chain hypothesis, strong or weak, poses threats to the use of our most reflective capacities if we remain unaware of this potential, with profound implications for the future of a democratic society. The atrophy and gradual disuse of our analytical and reflective capacities as individuals are the worst enemies of a truly democratic society, for whatever reason, in whatever medium, in whatever age.

Twenty years ago Martha Nussbaum wrote about the susceptibility and the decision making of citizens who have ceded their thinking to others:

Figure 48 *Private Annotation Coding TA #3*

Wolf's ... back ... into nine separate letters, directly to her readers. Below is an excerpt of the final letter.

1

Letter Nine
Reader, Come Home

Time for Social Good

My dear reader,

We are so distracted by and engulfed by the technologies we've created and by the constant barrage of so-called information that comes our way, that more than ever to immerse yourself in an involving book is socially useful. . . . The place of stillness that you have to go to write, but also to read seriously, is the point where you can actually make responsible decisions, where you can actually engage productively with an otherwise scary and unmanageable world. . . .

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Bonhoeffer and Stiegler are two examples of human beings in whom the third reading life supports the self through otherwise impossible circumstances and becomes the basis of emulable service to others. The "place of stillness" that Jonathan Franzen describes is the reflective domain in which the act of reading allows us to think critically for ourselves and to make responsible decisions, which in the process become socially useful acts.

In a recent essay about our values as a nation, Marilynne Robinson wrote, "I do believe that we stand at a threshold,[20] as Bonhoeffer did, and that the example of his life obliges me to speak about the gravity of our historical moment as I see it, in the knowledge that no society is at any time immune to moral catastrophe. . . . We owe it to him to acknowledge a bitter lesson he learned before us, that these challenges can be understood too late."

We live in a historical "hinge moment" as Robert Darnton[21] called it, en route to whole new forms of communication, cognition, and choices that are ultimately, deeply ethical. Unlike during other great transitions, we have the science, the technology, and the ethical imagination necessary to understand the challenges we face before it is too late—if we choose to do so. As depicted earlier, we need to confront the reality that when bombarded with too many options, our default can be to rely on information that places few demands upon thinking. More and more of us would then think we know something based on information whose source was chosen because it conforms to how and what we thought before. Thus, though we are seemingly well armed, there begins to be less and less motivation to think more deeply, much less try on views that differ from one's own. We think we know enough, that misleading mental state that lulls us into a form of passive cognitive complacency that precludes further reflection and opens wide the door for others to think for us.

This is a long-known recipe for intellectual, social, and moral neglect and the fraying of societal order. At stake here is the ultimate message of this book: that any version of the digital chain hypothesis, strong or weak, poses threats to the use of our most reflective capacities if we remain unaware of this potential, with profound implications for the future of a democratic society. The atrophy and gradual disuse of our analytical and reflective capacities as individuals are the worst enemies of a truly democratic society, for whatever reason, in whatever medium, in whatever age.

Twenty years ago Martha Nussbaum wrote about the susceptibility and the decision making of citizens who have ceded their thinking to others:

APPENDIX G

CODING AND ANALYSIS ARTIFACTS

Figure 49 *Round II Coding Sample*

Figure 50 *Round II Coding Sample*

majority of students (even the 10 neg. ones)

113:3 ¶ 11 in abreukatelyn_335280_11771697_Reflective Log Prompt 3 Wrestling with Difficulty.docx

Content:
I definitely enjoyed the discussion that was generated by social annotation and seeing the thoughts others had on the reading that didn't occur to me.

enjoy
expanded thinking / my ideas
comprehend

115:1 ¶ 5 in detlefsmalcolm_305736_11826054_Reflective Log Prompt #3_ Wrestling with Difficulty.docx

Content:
I found myself looking at the other students' comments to better understand what everyone was thinking and incorporated my prior knowledge.

115:2 ¶ 5 in detlefsmalcolm_305736_11826054_Reflective Log Prompt #3_ Wrestling with Difficulty.docx

comprehension

Content:
When the text got tough, the way I would make sense of it was reading it over and checking other students comments about it.

118:1 ¶ 1 in hassananas_307965_11828123_Case Against Democracy Reflection.docx

comprehension
enjoy

Content:
What I found the most helpful when going through this difficult text were my peers' annotations. Getting to see how my classmates interpreted the text was something I found particularly helpful. Their ideas on the text combined with my questions really made the text itself not only easier to understand, but even that more interesting.

120:1 ¶ 5 in herrerashatira_249142_11827989_Reflective Log Prompt #3_ Wrestling with Difficulty.docx

comprehension

Content:
What made the reading easier for me was actually reading through the comments left by other classmates. Their understanding helped me to comprehend the text little by little and helped me to formulate my own ideas about the reading itself.

expand my ideas

Figure 51 *Retrospective Analysis Sample*

	64 Threads / 346 Total thn	83 Threads / 367 Total	119 Threads / 570 Total (2 cycles)	56 Threads / 259 Total	118 Threads / 555 Total (2 cycles)	
A	B	C	D	E	F	G
• Demonstrate Willingness toward Praxis **Gr=148**	28	17	26	22	35	128
○ Direct call to other readers **Gr=12**	2	6	2	0	2	12
• Engage Language Aesthetics **Gr=15**	3	1	0	0	1	5
○ Examples of Praxis **Gr=3**	0	0	0	0	0	0
○ Identifying/evaluating rhetorical moves **Gr=77**	12	16	10	17	25	77
• Negotiate Competing Claims **Gr=0**	0	0	0	0	0	0
• Read With and/or Against the Grain **Gr=471**	108	125	59	58	69	419
○ Responding to others: Agreement **Gr=354**	88	92	49	64	61	354
○ Responding to others: Disagreement **Gr=20**	8	3	4	3	2	20
• Test Validity **Gr=927**	229	246	120	124	109	828
Totals	600	613	345	389	363	2310

Handwritten annotations: "236 (Fall 20) / 334 (Sp '21)"; "229 (Fall 2020) / 321 (Sp 2021)"; "Eager?"; "more than any other — more personal connections. — most convo."; "Fatigue? Why lower part? subject? End of Semester?"; "229 + 321"

VITA

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Conference Presentation (2020) Computers & Writing: Practicing Digital Activisms on "Reading as Resistance in the Form of Digital Hacktivism"

Conference Presentation (2020) Association for Expanded Perspectives of Learning on "Reading as a Political Imperative: Learning Arendt's Lessons"

Conference Presentation (2019) COLTT, Colorado Learning and Teaching with Technology on "Visual Conceptual Mapping Challenging Perspectives of Reading as Passive Consumption of Text"