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Leveraging Digital Communities of Practice: How Asynchronous Digital Collaboration Afforded a Complex Reading/Writing Dialogue for Secondary School Students

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LEVERAGING DIGITAL COMMUNITIES OF PRACTICE:

HOW ASYNCHRONOUS DIGITAL COLLABORATION AFFORDED A COMPLEX READING/WRITING DIALOGUE

FOR SECONDARY SCHOOL STUDENTS

by

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ABSTRACT

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Old Dominion University, 2016
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This dissertation examines a case study of a research unit taught to secondary school students with the inclusion of an asynchronous digital collaboration with college students. Over consecutive school years, two classes of high school seniors and two classes of college students, despite being geographically separated by more than 90 miles, worked together in multiple reading and writing exchanges within an online community as they read a primary text and as the secondary school students wrote research papers. This study seeks to understand the effects of this unit on the secondary school students' thinking, reading, and writing skills, focusing specifically on the inclusion of an authentic, responsive audience and the affordances of pedagogically-driven technology integration in the classroom.

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CHAPTER 1

INTRODUCTION

This dissertation reports on a study of a research paper unit during which seniors at an independent high school engaged in an asynchronous digital dialogue with an audience of college students. Throughout this digital collaboration, the students worked with each other and the college students in multiple reading and writing exchanges within an online community, as the secondary school and college students read and analyzed the primary literary text of *Othello* and as the secondary school students wrote research papers. This study seeks to understand the effects of this unit on the secondary school students' thinking, reading, and writing skills, focusing specifically on the inclusion of an authentic, responsive audience and the affordances of pedagogically-driven technology integration in the classroom.

This study developed in several stages. First, I was the teacher of the original research paper unit for eight years, from 2001 to 2008. In 2009, I redesigned the unit to include an authentic audience through the affordances of a digital collaboration tool, as I sought to help the secondary school students understand that, while they had strong reading and writing skills, they still had and would always have more to learn about writing (Adler-Kassner & Wardle, 2015). After perceiving significant growth in the students who participated in this redesigned unit, I began an action research study. As a teacher-researcher, I observed these perceived changes in the students over the next four years that I refined and taught the redesigned unit. Finally I formalized this study in 2014 into a two-part case study in order to document and analyze the effects of the redesigned unit on the secondary school students as thinkers, readers, and writers. This dissertation reports on the findings from this two-part case study.

SETTING AND BACKGROUND

This study is set at Franklin Academy[1], an independent school whose mission is to provide "a rigorous, college-preparatory education in a nurturing environment that challenges each student to achieve academic excellence, to think critically and independently, to communicate effectively, and to act honorably" (Institutional Website, 2015). As a subset of the school's mission, the Franklin Academy English department's mission (2011) defines the thinking and communication skills the department

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[1] All names of institutions and people are pseudonyms to protect the identity of the participants in adherence to the IRB protocols described in Chapter Two.

believes students should achieve for college-readiness. As described in this department mission, Franklin Academy English teachers seek to help their students become people who:

> are critical thinkers who collaborate productively with others, read for multiple purposes and are able to tackle whatever reading they need for their purposes, [and] effectively communicate with the written word to a variety of audiences and for a variety of purposes (2011, p. 1).

Inherent in this mission is the department's aspiration that Franklin Academy students become lifelong learners who can transition from Franklin Academy to the unfamiliar environments of college and life by understanding themselves as learners.

The Franklin Academy English department, under my leadership, developed a curriculum to achieve its mission based on the principles of the writing process (Fletcher, 1993; Kirby & Liner, 1988). Franklin Academy students from sixth to twelfth grade consistently and continually draft, revise, and publish their writing, including end-of-the-year portfolios in all grades (Yancey, 1992). The focus of this dissertation study, the redesigned research paper unit taught to Franklin Academy seniors in AP English Literature and Composition, was the culminating unit in the department's mission-oriented, writing process curriculum. The unit focused on helping seniors solidify their effective communication skills, as the students brought together their reading of and thinking about both primary and secondary sources with their processes of writing, resulting in a formal written product. While the students worked with William Shakespeare's *Othello* in this unit, the actual text did not matter; this unit can be taught with any equally rich primary text. The integration of reading multiple texts, primary and secondary, with their own writing was what helped students bring together all of their thinking, reading, and writing skills in preparation for the increased composition challenges of college. However, despite the department's confidence in this culminating unit, when I, as the AP English Literature and Composition teacher, taught the class of 2009, I started to question if the department was meeting its and Franklin Academy's missions as best it could for the students.

THE INITIAL PROBLEM

Franklin Academy's class of 2009 consisted predominately of academically strong students, as evidenced by their average SAT scores and GPAs, which were higher than the averages of any prior Franklin Academy senior class. These students had also been together for many years, as academically strong students in most schools tend to take the same courses throughout middle and high school. This familiarity was positive because they were at ease speaking in class but also negative because they would fall into the same discussion patterns. Other than the teacher's, no new voices challenged them.

As their teacher, I could see that the students approached their discussion work only as a conversation among this homogeneous group of peers and perceived the only audience for their written work as the teacher. This narrow perspective of learning was troublesome because it gave students a confidence in their skills that I could see was untested and therefore possibly unfounded. Yes, they were academically talented students. However, research has identified that one of the major problems for many writers is not understanding that all writers have more to learn (Adler-Kassner & Wardle, 2015). This is an important issue because "[s]tudents who make the greatest gains as writers throughout college initially accept their status as novices" (Sommers & Saltz, 2004, p. 124). The students in the Franklin Academy class of 2009 saw themselves as experts, having achieved notable academic success, but these achievements had been developed and tested only within a singular community.

As I considered this problem, the students' familiarity with their classmates was the clear issue. They had been together in school for so many years, and the resulting confidence within their homogeneous group of like-abled students had developed into a sense of mastery that was unchallenged because of the homogeneity. I knew as a writing process teacher the value of an authentic audience to making writing more like real-world communicating. The presence of an authentic audience other than the teacher encourages writers to take more care in how they communicate for this audience's specific needs. I wondered if I could extend this concept of authentic audience into making discussions more like real-world communication too by changing the circumstances of the discussions. If I could add a new audience to the students' discussions as they read and analyzed the text, I could possibly address the sense of expertise they had developed. I decided to create an asynchronous digital collaboration around the research paper process, digitally bringing this new audience into the classroom with the goal of overtly developing the students' thinking, reading, and writing skills so they could see they always had more to learn.

TEACHING COMPOSITION IN THE SECONDARY AND COLLEGE CLASSROOM

The population of this study is a representative slice of the college-bound student population in secondary school English classrooms across America. A college degree has become a barometer of future success in American society (DeSilver, 2014), yet whether students are prepared for college-level reading and writing has concerned the field of English Studies for many years (Council of Writing Program Administrators, 2014; Council of Writing Program Administrators, National Council of Teachers of English, & National Writing Project, 2011). The majority of the research on this problem has focused on college students who have already made the transition and how to support them in gaining missing

skills (Downs & Wardle, 2012; Thaiss & Zawacki, 2006; Haas, 1994). More recently, researchers have started to look at secondary school students and their transitions to college (Sullivan, 2014; Uccelli, Dobbs, & Scott, 2013; Jolliffe & Harl, 2008, 2006), focusing on theories such as habits of mind and transfer to determine what skills a secondary school student can develop to be best prepared to meet the higher expectations of college. As a growing field of research, how to prepare secondary school students for this transition is a problem crossing many sub-fields, from composition theory to digital pedagogy and from response theory to reflection.

This study adds to the literature focused on secondary education's role in students' transition to college. This study specifically examines writing instruction, an area in which secondary school teachers struggle to integrate theory and practice. Research has shown a lack of two important aspects of composition theory in secondary school English classrooms, authentic audiences and pedagogically-driven integration of technology (Applebee & Langer, 2011), as well as a lack of research on the enacted and received curricula versus the planned curriculum (Burroughs & Smagorinsky, 2009). This study addresses these areas of need, exploring how they overlap in theory and pedagogical practice.

The positive impact of an authentic audience on writing has been widely accepted by secondary school educators since the earliest writing process research (Applebee & Langer, 2011; Gee, 1989; Flower, 1979). However, Moffett and Wagner (1992) articulated the challenge teachers faced as they sought to incorporate these audiences: "practicing discourse constantly requires more audiences and feedback than can be arranged with outsiders" (p. 28). The advent of digital tools was seen as a solution for this problem. Digital audiences are considered readily and often freely available as authentic audiences for student writers (Townsend, Cheveallier, & Browning, 2013; Richardson, 2006), and digital collaboration tools can make the relationship with an audience less publication-focused and more collaboration-focused (Lea, 2001). But again, a "however:" simply using a digital collaboration tool does not mean the tool is effective in achieving collaboration. Pedagogical understanding of the affordances of digital tools has to drive their use (DePew & Lettner-Rust, 2009; Cook, 2005).

Research has found that this lack of effective technology integration in secondary classrooms is a two-fold problem. First, teachers are often not trained in using digital technologies in the classroom in pedagogically-driven ways (O'Byrne & Pytash, 2015; Luckin et al., 2009). Second, despite the sense that today's students are "digital natives" (Prensky, 2001), research has raised concerns "about the small number of learners involved in 'groundbreaking' or 'pioneering' activities even in their own tech use" (Luckin et al., 2009, p. 88). Most students are not natural users of technology for their education; as a result, they need to be taught the thinking (Luckin et al., 2009), communication (O'Byrne & Pytash,

2015), and collaboration (Broadahl, Hadjerrouit, & Hansen, 2011) skills required for effectively using these digital collaboration tools in their education. In the most recent look into secondary school classrooms, Applebee and Langer (2011) found little being done with these practices in the enacted curriculum of actual writing instruction. "The large majority of the writing students do is still to the teacher-as-examiner" (p. 17), and few teachers beyond math teachers were making use of digital tools (p. 22-23). When technology was being integrated into the classroom, "it was usually used by the teacher. . . . For the most part technology seems to be reinforcing traditional patterns of teacher-centered instruction rather than opening up new possibilities" (p. 23).

Added to this struggle of incorporating theory into classroom practice is the widespread perception that secondary school students are not learning to think, read, and write well and thus come to college unprepared (Council of Writing Program Administrators, National Council of Teachers of English, & the National Writing Project, 2011; Sullivan & Tinburg, 2006). The pressure on secondary school English teachers is clear. This study, by investigating the enacted and received curricula of one secondary school English unit, offers possible solutions for deepening and strengthening students' thinking, reading, and writing skills by integrating old (writing process) and new (digital) pedagogy.

It is significant that much of the accepted pedagogy in secondary writing instruction today was adopted from research and practice at the college level. One of the most widespread examples is the National Writing Project, a program in which thousands of elementary and secondary school educators in all 50 states have been trained how to understand the writing process as a teaching tool through the National Writing Project's partnership between university professors and the teacher-leaders who have been trained by the project (National Writing Project, 2014). The foundational beliefs of the National Writing Project drew on literature going back to work by secondary school teachers in the late 1960s and into the 1970s that became the process movement—Moffett being considered one of the fathers of the National Writing Project (Blau, 2012, pp. 96-100). The writing process is still the dominant theory being used in the enacted curriculum of secondary writing instruction (Applebee & Langer, 2011, p. 24). The relationship between college and secondary writing instruction is too intertwined to separate. The revisions and modifications in composition theory and practice as examined in this study will therefore also have implications for teaching composition in college. The theories and pedagogy of the writing process, including authentic audience, have trickled down into secondary schools from college composition research and classrooms and now constitute the ideal in conventional ways of teaching writing. This study reexamines these ideals in a new light—a digital light, an integrated light—thus raising new areas of research for college composition.

THE STUDY

To address the problem of how to help Franklin Academy students in the class of 2009 understand they had more to learn, I redesigned the research paper unit that was the English department's culminating unit. As I explained above, the students' familiarity with their "audience"— their classmates—was the issue. I put "audience" in quotes because, in fact, the students had been together in school for so many years that they did not really consider their peers as an audience. If I could find an actual audience for these students, an audience different than their teacher and peers, then I could try to challenge their confidence bred through homogeneity. Using the affordances of digital collaboration tools to address the difficulties of bringing this actual audience into the actual classroom, I created an asynchronous digital collaboration around the research paper process, digitally connecting students to an audience of college students. I sought to find out if an authentic audience, one genuinely interested in the play and what people had to say about it, brought into the classroom through this pedagogical integration of a digital collaboration tool could help academically strong students understand the power of always being a learner.

Having taught the research paper unit to Franklin Academy AP English Literature and Composition students for eight years without an asynchronous digital collaboration, in my first year teaching the redesigned unit, I sensed major changes happening in students' learning, specifically in their thinking, reading, and writing. I could see the students engaging more deeply with the primary text through the layered reading and writing of the written digital discussions with their audience, and this resulted in what I perceived as an increased ability to articulate more effectively their ideas in their research papers. By seeing how the students presented the secondary sources in their papers, I also sensed they were approaching integrating research into their writing as a conversation between the research and their ideas, rather than reporting on others' research, as is more typical for high school research (Llosa, Beck, & Zhao, 2011; Geisler, 1994; Haas, 1994). Both of these effects resulted in final papers I felt were written with more confidence. I was sensing that digital spaces had opened new possibilities for reading and composition pedagogy through my initial goal of including an authentic audience. The digital collaboration the students participated in through the redesigned unit seemed to show that secondary school students could be challenged to engage in higher-level thinking about their reading and writing through collaboration with peers and college students by working in a digital zone of proximal development (Vygotsky, 1930; Holmes & Moulton, 1997).

After the class of 2009 graduated, I continued to experiment with the redesigned unit for four more years, observing the results from a teacher-researcher viewpoint. These observations showed me

this redesigned unit was more than a digital inclusion of an authentic audience. It was a complex reading/writing integration that produced far richer and deeper changes in the students' learning than my original goals. I therefore decided in 2014 to formally document and analyze the effects of the redesigned unit in an empirical study.

RESEARCH QUESTIONS AND ORGANIZATION

This empirical study is a two-part case study examining the redesigned unit that incorporated the asynchronous digital collaboration between Franklin Academy seniors and college students over two school years. The goal of this study is to identify and analyze changes the secondary school students experienced in their learning due to their participation in the redesigned unit, both the changes I sensed as a teacher-researcher and other changes that might be occurring. My observations from the five years (2009-2013) I taught this unit prior to the start of this empirical study led me to certain ideas of how this unit affected students, but I wanted to know more about what the students were experiencing and learning. Therefore, in the study's research questions, I treat my observations as hypotheses as well as articulate the goal of exploring for these other changes. With all changes discovered, I will then examine how the multi-layered reading/writing integration afforded by the redesigned unit, specifically the inclusion of an authentic audience and an asynchronous digital collaboration, affected the thinking, reading, and writing processes of the students[2]. The study's research questions are:

- What changes occurred in the students' learning as a result of their participation in the redesigned unit featuring an asynchronous digital collaboration with an authentic audience? First, what evidence exists to prove or disprove the following hypotheses, which I observed in my five years of teaching this unit leading to this study? Second, what other changes occurred in the students' learning as a result of their participation in the redesigned unit?
    - Participation in the redesigned unit resulted in students engaging more deeply in reading the primary text.
    - Participation in the redesigned unit resulted in students articulating their ideas more effectively in their research papers.

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[2] This collaboration is also a lens into using digital collaboration tools for training new teachers. I plan to revisit my data to look at this collaboration through the perspective of the college students. For the scope of my dissertation though, I only look at the college students' roles as they affect the high school students' reading and writing processes.

- o Participation in the redesigned unit resulted in students seeing research as engaging in a conversation.
- o Participation in the redesigned unit resulted in students having more confidence in themselves as writers.

- How and in what specific ways did the process and features of the redesigned unit bring about such changes in the students as thinkers, readers, and writers?

I provide a complete treatment of the study's methodology in Chapter Two, but as an overview, I designed a two-part case study in order to explore the collaborations between two different student groups and their college audiences. In the 2013-2014 phase, the secondary school students worked with Davis University Master of Education students; in the 2014-2015 phase, the secondary school students worked with undergraduate students at Reynolds University. By shifting the type of college student involved and working with different groups of seniors, I sought to expand the study's data pool to ensure the findings would be linked less to a specific situation and therefore more generalizable to different applications.

The data collected in this study is nearly as layered as the reading/writing process I am seeking to understand. The data includes pre- and post-interviews with students who were 18 years old and volunteered to be interviewed, pre- and post-interviews with college students who volunteered to be interviewed, and end-of-unit written reflections completed by all secondary school and college students, all of which are linked directly to the next layer of data: the entire written collaboration in the digital space. The secondary school students' first and final drafts of their research papers are linked to the college students' feedback on these papers, as well as to their junior year research papers. The overlapping nature of the data is a result of the integration inherent in the redesigned unit, so it cannot be considered in separate pieces without losing the context of the whole that was so integral to the secondary school students' experiences. To maintain this complexity, I present the findings in Chapters Three, Four, and Five as the unpeeling of data layers that was the process of the coding and analysis. As I moved and cycled through the data sets multiple times, my evolving methodology was defined by the findings: how they intertwined and what new avenues of study they defined. With each layer of findings, the context of the unit as a whole as defined in Chapter Two is the foundation on which I place the analysis. In this way, I have attempted to construct a multi-layered understanding of the effects of the redesigned unit built from the foundation up.

In Chapter Three, I explore the first research question to test the specific hypotheses and look for changes I had not perceived and therefore had not hypothesized. I start by focusing on the students'

perceptions of themselves as thinkers, readers, and writers, and their attitudes towards these processes, as shown in the pre- and post-interviews conducted with the student volunteers and the end-of-unit student reflections. Research has shown perceptions affect learning (Woo, Chu, Ho, & Li, 2011; Cameron, Nairn, & Higgins, 2009; Dymoke & Hughes, 2009; Ellis, Taylor, & Drury, 2007), and this study's findings indicate that students' perceptions of themselves as writers and their attitudes towards their writing changed from negative to positive during the course of the redesigned unit. I examine what is behind these changes, incorporating the next layer of data, the college student post-interviews and my own insight as the designer and teacher of the unit. I conclude this chapter by establishing the framework for exploring the second research question: the five key features of the unit that were defined in the layered coding process as the critical aspects leading to the students' development: audience, collaboration, layers of reading, extended time and space, and reading/writing integration.

In Chapters Four and Five, I examine these five features. I focus on three specific students and their corresponding college students to hone in on how these features affected the students' development, both to confirm findings from Chapter Three and to discern other ways the redesigned unit affected students as thinkers, readers, and writers. In Chapter Four, I return to the pre- and post-interviews of the three students and their college partners to explore the key features of audience, collaboration, and layers of reading and how their integration changes each of them. In Chapter Five, I compare the written transcript of each of the three students' digital collaborations to the research paper to explore extended time and space and reading/writing integration. These two features are specifically linked to the use of the digital collaboration tool, and ultimately, I seek to define a revised framework for a composition pedagogy using the affordances of digital collaboration.

In Chapter Six, I explore how the study's findings can inform future composition pedagogy and research in both secondary school and college, specifically a pedagogy that uses digital tools to enable digital composition. I propose a nascent pedagogy of digital composition, blending Moffett's (1968) original pedagogy of dialogue with the affordances of digital collaboration (Lin, 2015; O'Byrne & Pytash, 2015; Lea, 2001). I believe asynchronous digital collaboration can be used effectively to deepen student learning in many different classrooms at many different levels of education, and further research studies can test and refine the proposed pedagogy so that, ultimately, we can fully understand how students can grow into themselves as thinkers, readers, and writers—that is, as lifelong learners—in a digital zone of proximal development (Vygotsky, 1930; Holmes & Moulton, 1997).

CHAPTER 2

METHODOLOGY

In this chapter, I start by situating this empirical study of the redesigned research paper unit in the experiments I conducted as a teacher that motivated the case study. I then explain how this study builds on prior case study methods in composition, particularly how it defines case study methods both using and studying digital collaboration tools. Finally, I present the steps of the empirical study, including participant selection, interview protocols, and data analysis.

INITIAL METHODOLOGY: ACTION RESEARCH

This empirical study began as a problem I saw in my classroom that I wanted to address: was I meeting Franklin Academy's and the English department's missions as best I could with the students from the class of 2009? These academically strong students, like many students at other high schools, were confident in their skills, yet they had only tested them with a homogeneous group of peers and the audience of the teacher. I decided to experiment by redesigning the research paper unit, a unit I would teach as well as study as action research. I sought to include an authentic audience for the students to provide a wider perspective on their skills and their learning. Action research has a long history in the field of education, arising from attempts by social researchers to remedy social conditions in the 1940s by researching within the social settings themselves (Efron & Ravid, 2013; Creswell, 2012). Action research has developed into a systematic process that researchers in composition classrooms have used to contribute important pedagogical developments, researchers such as Anne Haas Dyson (1983) in her early work. Scholars have called for more action research by teachers as reflective practice to ensure the highest quality pedagogy and instruction (van Manen, 2008; Stock, 2007; Loughran & Russell, 2002; Phelps, 1998).

In my first year teaching the redesigned unit in 2009, I completed the initial methodological steps of action research (all steps are from Creswell, 2012). I determined action research was the best design (step one) because I was the teacher in the classroom and had the time and ability to collect and analyze data, as well as to experiment with different approaches to solving the problem through subsequent revisions of the unit. As detailed in Chapter One, I identified the problem (step two) of whether I was meeting Franklin Academy's and the department's missions in the best way I could for the students, and, as I explain below in the description of the redesigned unit, I explored resources available for addressing the problem (step three) through my knowledge of authentic audience in writing process

pedagogy and the philosophy and resources of Franklin Academy's laptop program. This initial redesign of the unit became the foundation of the formal case study starting in 2014.

SETTING OF STUDY

Site Specifications

Franklin Academy is located in the central Virginia city of the same name and has approximately 350 students in prekindergarten through twelfth grade. Franklin Academy seeks to admit students of average to above average academic motivation and ability by considering teacher recommendations, transcripts, and standardized test scores (Institutional Website, 2015). The student body, coming from the city and all of its surrounding counties, is slightly more diverse than the average Virginia independent school. 20% of the Franklin Academy student body is made up of students of color, nearly matching the Virginia independent school average of 20.7%, while 35% of Franklin Academy students receive financial aid, exceeding the Virginia independent school average of 27.3% (Institutional Website, 2015; National Association of Independent Schools, 2015). Franklin Academy's Upper School tuition of $21,270 for the 2015-2016 school year was higher than the average tuition of $15,385 for independent day high schools in Virginia (Institutional Website, 2015; Private School Review, 2015).

The Course: AP English Literature and Composition

The object of study, the redesigned unit featuring a digital collaboration with an authentic audience, is a core unit of the AP English Literature and Composition course at Franklin Academy. AP English Literature and Composition at Franklin Academy is a year-long course taken by interested seniors with many course objectives in addition to college preparation. The class meets for 55-minute periods on five days of a seven-day rotating cycle. The unit that is the focus of this empirical study falls in the second semester, from late January to late March, ending about a month before the AP exam, an exam all Franklin Academy AP English Literature and Composition students are required to take. While this unit was the class's main focus for approximately eight weeks, the students also spent on average one class every two weeks doing AP exam review, such as multiple choice and timed essay practice, as well as finishing the third choice reading project of the year. Overall, for the time period of this unit, the students were predominately engaged in reading *Othello* and writing a research paper. This was nearly half of the students' final semester of high school English.

Franklin Academy's Research Curriculum

The students in this study had significant instruction and practice in research prior to this unit. An aspect of college-readiness in the Franklin Academy English department's sixth-through-twelfth-

grade curriculum is familiarity with the requirements of research. The department wants students to know how to correctly find, use, and cite information, both in-text and in a Works Cited page, since research is a critical skill in college and beyond. The department spirals this research focus through these seven grades with the juniors integrating all of the earlier lessons into writing a full research paper with teacher-led review of each step of the research process. The final department expectation is that seniors apply, without instruction, the research process and formatting. Therefore AP English Literature and Composition students are not taught, for example, citation; they are expected to use their prior knowledge as they cite the primary text and their research in their papers.

OBJECT OF STUDY: THE REDESIGNED UNIT

The Process of Redesigning the Unit

When I set out to experiment in 2009 with this unit in my action research, thinking digital was a natural direction for me as a Franklin Academy teacher, as Franklin Academy is a one-to-one laptop school. The Franklin Academy faculty is trained to, when faced with a teaching problem, consider a digital solution. Franklin Academy knows technology is not a panacea for all educational ills and that simply putting technology into a lesson can produce worse results than the non-digital lesson (DePew & Lettner-Rust, 2009; Cook, 2005). Instead, Franklin Academy asks its faculty to thoughtfully consider if technology can improve learning and instruction. The laptop program also provides the hardware and technical support faculty need to experiment with new digital tools. The AP English Literature and Composition students in this study had been part of the laptop program for three years, integrating technology into many of their courses, so they had the skills needed for using a digital tool in this course.

Connecting with an authentic audience through collaboration in an online community as an extension of the classroom seemed a pedagogically sound answer to challenging these students to see themselves as learners, even as they had developed strong skills in their prior work. I could bring an audience to the students at no cost through one of the many free collaboration tools on the web. Asynchronous digital collaboration tools, by their nature, also shift dialogue from oral to written, so in addition to talking with their peers in class, the students would be "talking" to a new audience by writing in digital discussion forums. I saw this as another step in the writing process for the students, with these discussions serving as early attempts to communicate their ideas to their audience.

Since I wanted the students to develop the novice mindset that research has proven helps students transition to college (Costa & Kallick, 2008; Sommers & Saltz, 2004), I decided to bring a version of college to them by finding an audience of college students. I felt college students training to be

English teachers would be an effective audience for two reasons. First, these college students would be under the direction of a professor guiding them in learning how best to interact with students, so the secondary school students would be under this care too. Even more importantly, I could see a win-win: as the secondary school students benefited from a new audience, the college students would benefit from interacting with real students and with seeing how technology could be used in the classroom. I hoped this meant the students' new audience members would be consistent, responsive participants because finding a responsive audience was a major deciding factor for me. Despite the fact that, in 2009, people were talking about Web 2.0 tools' collaboration and audience possibilities as an educational utopia (Richardson, 2006[3]), experience had taught me differently. I had tried, for example, having students write blogs with the idea that someone would comment, and month after month, no one did (except spam bots). The web was (and is even more so now) inundated with people sharing, and the *involved* audience shrinks accordingly. I wanted the students to have an actual audience, not a possible one. I used a different technology tool, Twitter, and tweeted a request for an education professor willing to add a digital component to her classroom. Thus in 2009, a long relationship began between Franklin Academy students, Davis University Masters of Education professors and students, and me, focused by my attempt to create an environment enabled by asynchronous digital collaboration in which students worked with a responsive audience.

The Original Unit: The Redesigned Unit's Pedagogical Foundation

The purpose of my redesign was to integrate the original unit's thinking, reading, and writing in a more complex way through the involvement of an authentic audience provided by an asynchronous digital collaboration. I am going to briefly explain the original unit to highlight the redesign that was the focus of my action research study starting in 2009 and that became the object of study for this formal case study in 2014.

The original unit was based on William Shakespeare's *Othello*, a classic text meeting the needs of this literature-based AP class. However, I wish to emphasize again that the specific text can change; what is critical is a text that can keep students excited for an intensive study. For example, I tried

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[3] As further background, Will Richardson did much of his filming of digital tools in action for the DVD companion to his second edition of *Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms* at Franklin Academy, and I was one of the teachers filmed. So, as a school, Franklin Academy was on the leading edge of using Web 2.0 tools, which was exciting, but it also made my negative experiences with the actual benefits of these tools in the classroom troubling, as I was running counter to the excitement.

Hamlet, a much more canonical text in AP English Literature and Composition classes nationwide, but I sensed the most excitement in students the year we read *Othello*. For other subjects, the right text might be a report of findings for a science class or a nonfiction book for a history class. The unit is one I believe can be used in any subject to challenge students to see themselves as learners.

In the original curriculum, the unit's daily lessons were based on the Folger Library's *Shakespeare Set Free* series, specifically *Teaching Twelfth Night and Othello* (O'Brien, 1995). The Folger's curriculum presents a series of lessons with an emphasis on a close reading of the text leading to performing informally and formally many partial and full scenes (pp. xii-xiii). Combining an emphasis on reading skills with performance underpins the Folger Library's approach to teaching Shakespeare's texts in ways that make them come alive for students. I chose these lessons for the constant dialogue of Folger's pedagogical approach; students dialogue with the text through multiple readings and with each other through performances and class discussions. Dialogue is at the heart of authentic communication (Moffett, 1968), and the writing process is based on dialogue between writers, their writing, and their audience. Extending this dialogue to the reading matched how the Franklin Academy English department already taught writing. The close reading the students would do and the intimate interaction with the text they would have through this dialoguing became the basis for my addition to the Folger curriculum: a research paper analyzing whether the student's chosen character had achieved his or her superobjective.[4]

To establish the writing process from the outset of the students' reading of the primary text, each student chose one of the major characters in the play to follow in writing. The students chose and began to follow their characters after meeting each of the major characters in the first scenes of the play (except for Emilia, whom I introduced myself, as she does not appear until later in the play). This process of tracking a single character was the aspect of the unit I experimented with the most in the redesign. In the original unit, students used a character card, a graphic organizer I created (see Figure 1). They completed these cards individually for homework, as supplemental work to the in-class discussions and informal performances.

After approaching the play through these many dialogues, the students performed the fifth act formally. The prior system of discussion, impromptu acting, and character card entries ended, and instead, the students read the fifth act on their own then worked in small groups to formally perform a

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[4] Superobjective is an acting term meaning a character's final or overall goal of the play, taken from Stanislavski's system of training actors to fully understand their characters' emotions (Hobgood, 1973).

section of the act. They cut down the script, but they did not change Shakespeare's language, the language they had become so familiar with through their close reading of the first four acts. They memorized their lines, chose their scene's setting, made costumes and props, and performed in front of teachers and students. This was the Folger Library's culmination of its emphasis on performance, but it also served my added research paper assignment beautifully. While students could not always play the parts of the characters they were following on their character cards, they helped their classmates bring their characters to life (and death, as is the case for nearly all the major characters in this tragedy), deepening their understanding of the characters' superobjectives and how they sought to achieve them. Writing the research paper followed this formal performance.

CHARACTER CARD FOR THE CHARACTER:

COMPILED BY:

As we read *Othello*, follow closely your character. Record facts you learn about him/her and then react to those facts, ultimately creating a full picture of your character.

FACTS and CITATIONS (you should have at least 15 by the end of the play)	REACTIONS (write your reaction to each fact)
Example: Santiago tries to use Urim & Thummin but can't (22)	*Example:* This shows that he is not ready yet to accept responsibility for his destiny

Figure 1. Character card template. Using a word processor, students completed this graphic organizer by recording primary text quotes with MLA citations in the first column and their thoughts about the quote in the second column.

As I came to understand as I experimented with this unit for five years before formalizing the empirical study, the constant dialogue with the text and the reading/writing integration of reading the text, completing the character cards, and writing the research paper were at the heart of the original unit. I carried these essential elements into the redesigned unit, transforming them with the inclusion of an authentic audience and the affordances of pedagogically-integrated digital collaboration.

The Redesigned Unit: Adding the Asynchronous Digital Collaboration

In the redesigned unit, each secondary school student (the group named "students" for the remainder of this dissertation), after choosing a character to follow in the same process as the original unit, joined a discussion forum in the online community focused on this character rather than completing an individual character card. One or two peers and two or three mentors (the term I used to describe to the students their new digital audience, the college students, and the term I use for the remainder of this dissertation) interested in studying the same character were also in each character forum. The directions at the top of each forum were:

> Together, you will record quotes you have about [character's name] then react to those, ultimately creating a full picture of your character by thinking on your own and learning from others' thoughts. In the end, this character forum must trace [character's name] from his/her entry into the play until his/her final scene, so work together to compile this study. You must post five new quotes (with correct citations) and 10 reactions.

While these directions were in many ways the same as for the original character cards (Figure 1), one word made all the difference: together. By using an asynchronous digital collaboration tool, the students could engage in written dialogues about their chosen characters with at least three people. The mentors read *Othello* at the same pace as the students, and in these forums, they collaborated with the students in discussing the characters[5]. The students would post quotes said by or about the character then reflect on and analyze others' quotes and posts. The mentors would ask questions to push the students to think more deeply and would provide outside context and different interpretations to broaden the students' thinking (see Figure 2).

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[5] While the mentors were assigned to read the primary text of *Othello* for their class, they did not discuss the text in class. Instead, they focused on discussing their work with the students through a pedagogical lens. The effects of these classroom discussions on the mentors' work are an aspect I will explore when I revisit this research to focus on the collaboration's impact on college students training to be teachers.

> **⊙ Reply by** _____ on February 13, 2015 at 12:04am
>
> By Act III, Othello doesn't seem as confident and collected anymore. If he was truly as confident as he seems, he should have been able to easily dismiss Iago's comments as overly suspicious or a silly overreaction. Instead, despite his declared confidence in Cassio and Desdemona, the slightest hint from Iago that something was amiss seems to have given him a small panic attack. He actually seemed almost childlike in his desire to know what Iago suspected, and was definitely terrified of what those suspicions might mean. Perhaps he's actually been fearing something like this could happen for quite awhile and Iago's merely providing the confirmation? On the flip side, I was also very surprised at how tough he was during the fight between Cassio and Montano when he declared "He that stirs next to carve his own rage/Holds his soul light" (II.iii.162-163). Despite the fact that Othello is a military officer, this is the first time we've ever actually seen him threaten violence. Even in the confrontation with Brabantio, the first thing he did was have everyone lower their weapons. Perhaps its a signal that he felt less in control of the situation and needed to resort to more drastic measures in order to fix it. I am curious about whether Othello would have actually killed Cassio or Montano. I was thinking about a quote Iago told Othello while manipulating his suspicions. "Men should be what they seem; Or those that be not, would they might seem none!" (III.iii.126-127). We all know that Iago isn't what he seems. But I think it's also possible that Othello is living a lie. He seems so cool, confident, and collected, but, in reality, he's terrified.
>
> ► Reply   ✉ Message   ✎ Edit

> **⊙ Reply by** _____ on February 18, 2015 at 2:23pm
>
> I definitely think you are onto something here. I get the same impression from Othello and I think that he is hiding a great deal of insecurity. The way he reacts to Iago's suspicions implies that he has already anticipated that Desdemona's infidelity could be possible. Where do you think his insecurity comes from? Does it all come back to race? I think it may be possible that Othello feels inferior because he is African and has tried to mask that lack of self-worth or self-assuredness by marrying a very coveted girl, fighting valiantly in the military, and seeming very calm and composed. When Iago first suggests that Desdemona could have been unfaithful to Othello he subtly slips in that she chose him over a lot of other suitors even though he was a little less desirable (aka he's saying "because you are black you weren't the obvious choice") and mentions that she might regret her decision. This seems to be where Othello really falls off the deep end, which leads me to believe his diffidence comes from his issues with his racial difference.
>
> ► Reply   ✉ Message   ✎ Edit

> **⊙ Reply by** _____ on March 6, 2015 at 1:33am
>
> It seemed like Othello referred to the race issue at the very end of the play. Right before killing himself, he referred to a time when he faced a "malignant and a turbaned Turk" (V.ii.353) who had beaten a Venetian citizen, making his own suicide a demonstration of how he ultimately killed the Turk. I thought this story may have been a metaphor for his own situation. He was seeing himself as the violent foreigner who killed the noble Venetian Desdemona. And in his horror, he gave himself the punishment he felt he deserved. So perhaps one of the factors in his decision to kill himself was the realization that he would now be an outcast forevermore, never again to regain the acceptance he had strived so hard to achieve.

Figure 2. Digital character forum excerpt. A Franklin Academy student in the first and third response and a Davis University mentor in the second response discussed the development of the character Othello from Shakespeare's *Othello*.

These forums were the heart of the redesigned unit, and in them, I hoped to challenge the students more deeply than in the original unit by having them work with an authentic, responsive audience. The students would "hear" new ideas as they read what their mentors wrote about the characters then work to integrate these ideas into their thinking and future forum posts. The students

would also "hear" what their peers wrote. The asynchronous digital collaboration expanded the students' reading from one text of *Othello* to five texts: *Othello,* the mentors' questions and comments, their peers' cited quotes, their peers' analyses, and their own prior comments in the forum. What I came to see as I watched this interaction unfold was an incredibly complex process of reading/writing integration. The students were reading the primary text of *Othello* while also reading peers' and mentors' ideas. At the same time, the students were writing their ideas as they developed from these layers of reading and also as they developed from knowing that a very real audience was waiting to read and respond to that writing. In this way, much of the writing process that would normally be in one's head was externalized in each student's analysis posts in the discussion forums. At any given moment, each of the students was working to integrate into her writing this multifaceted dialogue of primary text chosen by herself and others, her own interpretations, two or more outside opinions, and the needs of an authentic audience.

The Redesigned Unit: The Daily Lessons

In the redesigned unit, the daily lessons maintained the critical aspect of dialogue of the Shakespeare Set Free curriculum of the original unit, following one of two basic patterns. For one, students read for homework a section of the text and dialogued with this section by adding quotes and/or reading and responding to others' reactions in their character forums. In this way, the authentic audience of the redesigned unit was integrated into the students' work versus the students individually completing character cards in the original unit. In class, we extended the dialogue by rereading smaller sections to glean further meaning and by doing impromptu performances of key pieces of scenes to inhabit the characters' emotions and goals. The students then added new quotes and/or reflections to their character forums that night based on the class discussions and performances, as well as read a new section of the text. The second format reversed the order. Students read together in class a new scene and did impromptu performances of sections of this scene to understand them better. Then for homework, they extended the dialogue by rereading the scene and writing in their character forums with their authentic audience. Overall, whichever lesson format was used, the students read most of the play at least two times and performed or watched their classmates perform about half of the play. These multiple readings/viewings were discussed together in class as well as processed with the authentic audience in the character forums both pre- and post-discussion for homework.

The Redesigned Unit: The Research Paper

After the final performance, which remained the same as in the original unit, the students in the redesigned unit returned to their digital character forums to make their final entries. They added and

discussed in writing with their audience new quotes from the fifth act then tried to state their characters' superobjectives in a single sentence. They thought about whether their characters had achieved these superobjectives, incorporating what they had learned from this intensive performance dialoguing with the text of the fifth act. They also read others' attempts to state the superobjectives, using these to deepen their own understanding.

As in the original unit, only after all of this reading, rereading, thinking, rethinking, and performing did the students turn to secondary sources. In the context of college preparation, I hoped in the original unit that, by this time, the students saw they had much to say on their own about the play (the character cards being tangible proof of this) and therefore read these secondary sources as co-voices in an ongoing discussion – the approach to research expected in college (Brockman, Taylor, Kreth, & Crawford, 2011; Barton; 1993; Bartholomae, 1985). In the redesigned unit, I hoped students felt even more a part of the conversation they were reading about in the secondary sources because they had been writing their own conversations in the asynchronous digital collaboration. The students read two academic journal articles together about the characters in *Othello*, looking at how the articles were written as style examples for their own writing as well as at what they said about the characters. The students then chose one or both of these articles to use in their research papers and/or found other secondary sources that informed their views of their characters.

The research paper was also transformed in the redesign by the collaborative character forums. In the original unit, I instructed the students to study their character cards as prewriting for their papers, looking to see the characters' paths they had individually defined through Shakespeare's words and their reactions and responses. They then considered their superobjective statements, revising them into theses. Next they wrote first drafts that I conferenced with them about if they wished. This was not a required step, as I was training these second-semester seniors in one of the department's measurements for success: seeking out professors to communicate with them about their writing. The students then wrote final papers they turned in to me for the largest grade of the year. Overall, in the original unit, the students worked individually on their papers with the teacher as the sole audience.

In the redesigned unit, the students' ongoing dialogue with their authentic audience was the basis for their research papers. The nature of the asynchronous digital collaboration being written meant the students had the complete reading/writing process to look back on, and the last requirement in the redesigned unit before they began a draft was to reread the entire discussion forum. I hoped this would help them understand how their thinking had developed with the inclusion of an audience, making this extended process of learning overt for them as lifelong learners. Each of the students then

shared her draft with her mentor and two classmates. Each reader provided feedback, and the students read two classmates' papers. The students also, if they wished, conferenced with me, in the same process as the original unit. The students integrated all of these readings as they revised their papers into final copies to present to their wider audience—each paper was posted in the online community for peers, mentors, and me to read. The mentors then graded the research papers, as did I.

The Redesigned Unit: The Final Stages of Action Research

As I came to see in my five years of action research from 2009 to 2013, the students' writing processes were changing in the redesigned unit. The students wrote in their character forums from nearly the first moment of their reading, and they wrote to an authentic, responsive audience. Their audience of mentors was with them on the entire journey through the primary text, and I observed that what began as an unfamiliar audience became a familiar one for the students. The students' nervousness about the unfamiliar audience, while a good place to start to break them out of their comfort zones of homogeneity, transformed into a desire to produce writing worthy for an audience they cared about.

As the students started their first drafts, I also saw that they had already written first drafts in the forums. So, while I still called this stage in the redesigned unit "writing first drafts," the students were really writing second, third, fourth … drafts. Then the exchange of drafts with mentors and peers added five (or six if they conferenced with me) more layers to the reading/writing integration: the mentor's comments, both of the peers' comments, and the two peer drafts each student read.

After the first year teaching the redesigned unit, I added one more element to better understand, as a teacher researcher engaged in action research, the changes I sensed were happening. The students at the end of the unit wrote short reflections answering two questions: (1) How did the discussion forum work prepare you for writing the final paper?, and (2) How did it go writing the draft? In the AP English Literature and Composition curriculum, I ended the two units preceding the research paper unit with a reflective assignment, as student feedback is something I depend on for my planning. I also believe reflection helps students cement their learning in one unit of study before moving on to the next. So the students were familiar with this reflective process and completed this reflection on the redesigned unit as a routine part of the course.

DESIGNING THE FORMAL STUDY AND THE RESEARCH QUESTIONS

After the class of 2009 graduated, I continued to teach and develop the unit for four more years, fine-tuning and continually asking myself if I sensed the same or new growth in the students. While I

initially redesigned the unit to include a digital collaboration in the context of wanting to push the students out of their over-confidence by introducing a new audience into their work, my informal observations over these five years of the students' thinking, reading, and writing development, engendered by what I came to understand as a complex reading/writing integration (still involving that authentic audience but also involving much more), were much richer and deeper than my original goals. I decided to undertake an empirical study beginning in the 2013-2014 school year to formally document and analyze the effects of the redesigned unit.

As I made plans for collecting data, which I detail below, my methodology evolved from action research to case study, a methodology widely used in composition (Casanave, 2010; Dyson, 1984; Perl, 1979; Emig, 1971). The process of data collection in this study extended beyond the bounds of action research because it occurred over two school years and included data outside the actual teaching in the classroom. "A case study is an in-depth exploration of a bounded system (e.g., activity, event, process, or individuals) based on extensive data collection" (Creswell, 2012, Chapter 14, Section 2, para. 6). I collected extensive data over two years of teaching the redesigned unit (the bounded system): pre- and post-interviews with volunteer students and mentors, memoing about these interviews and the unit, final reflections from all participants, written transcripts of the character forum discussions, students' draft and final research papers, and students' research papers from junior year.

Researchers in case studies seek to develop existing theory by isolating and describing specific variables. For this case study, I developed research questions focused on (1) identifying if there were ways, both changes I had perceived and unanticipated changes, that the students' learning was changing as a result of participating in the redesigned unit and then (2) on trying to understand the variables in the redesigned unit that brought about any observed changes. This study's research questions are:

- What changes occurred in the students' learning as a result of their participation in the redesigned unit featuring an asynchronous digital collaboration with an authentic audience? First, what evidence exists to prove or disprove the following hypotheses, which I observed in my five years of teaching this unit leading to this study? Second, what other changes occurred in the students' learning as a result of their participation in the redesigned unit?
  - Participation in the redesigned unit resulted in students engaging more deeply in reading the primary text.
  - Participation in the redesigned unit resulted in students articulating their ideas more effectively in their research papers.

- o Participation in the redesigned unit resulted in students seeing research as engaging in a conversation.
- o Participation in the redesigned unit resulted in students having more confidence in themselves as writers.
- How and in what specific ways did the process and features of the redesigned unit bring about such changes in the students as thinkers, readers, and writers?

The first research question is directly derived from my observations during my action research, seeking confirmation or disconfirmation of these observations as well as allowing for the discovery, in this formal study, of new changes. The second question seeks to analyze more deeply what about the redesigned unit caused these changes. Case study methodology provides the most effective process for investigating these questions because of its focus on understanding the many aspects involved in the bounded system.

CASE STUDY METHODS

Observing the Writing Process

The work of three major composition case study researchers shaped this study's methodology: Emig (1971), Dyson (1984), and Casanave (2010). Emig's dissertation is considered the foundational case study in composition, and she was the first to argue for case study research to be made a high priority in composition studies (Lauer & Asher, 1988, p. 17). As with this dissertation's study, Emig was focused on the process of writing. Emig adapted case study methodology to try to see the internal composing process by asking eight secondary school students to write specific assignments for her and to talk as they wrote, creating what became the widely used method of "compose alouds" for trying to see the internal writing process. Emig recognized the limits of her study, particularly the artificial nature of the writing environment and her own (and her tape recorder's) presence (Emig, 1971, pp. 95-96).

In Situ Composing

Dyson, in a shift from action research to case study that has since defined the focus of her research, completed *in situ* observations, versus Emig's artificial writing environment. Dyson's attempt to observe the actual writing process was a critical step in composition case study methodology. Descriptive studies such as case studies are part of the pairing of experimental and descriptive research:

These two types of research are not hierarchical but instead should work together because experimental idealizes while descriptive stays in the real world: experimentals "are partial

representations or perspectives that are adequations but not equal to primary experience" the descriptive provides (Lauer & Asher, 1988, p. 19).

By entering the actual writing classroom, Dyson sought to capture and describe the primary experience of composing. This dissertation's study was also an *in situ* study, as the students and mentors were writing within the asynchronous digital collaboration.

Teacher as Researcher

While this study follows Dyson's *in situ* structure, I was the teacher in the classroom, unlike Dyson, who did not observe her own classroom. Casanave addressed in her case study methodology what she saw as the power of the teacher as researcher. For Casanave, personal connections were crucial for collecting her data. In her longitudinal study of dissertation students she was advising, she presented her personal connections to these students directly and explained how these close connections allowed her a deeper look into their choices as writers (p. 3). As the teacher in this study, I had access to students for much longer (an entire school year for all, and for most, I was also their freshman English teacher) and, as a result, had much closer interactions than an outside observer would have. My personal connection to the students helped me define the problem at the outset of this study. Because I knew the class of 2009 well, I could see I might not be providing these students the best instruction I could to help them become lifelong learners. Second, my personal connections helped me understand more deeply what I saw in the students' reading and writing processes in this study, as I knew both the struggles and successes they had had as readers and writers. For example, in the discussion in Chapters Four and Five of the specific case of Kathy, I knew she struggled prior to this unit with organizing and honing her ideas in writing. So when she spoke in her post-interview about how easy writing the research paper was, and when her mentor and I could see how clear and concise her argument was in the final paper, I knew something major had changed for Kathy. This unit brought her a clarity of thought she had not achieved in prior writings.

Therefore, as both the teacher and researcher in this study, I was not merely an outside observer, and while benefits exist with this dual role, acknowledging the impact of my role as teacher is critical for this study. As the teacher, I was influenced by two outside forces. First was the Franklin Academy English department. The English department was often held up by the administration as a model for other departments in how the teachers worked together to achieve the department's and the school's missions and to confirm these results with graduates. As I introduced in my discussion of conferencing with me about the research paper, the department measured its success by informally tracking alumni, asking three things: if they participated actively in college classes, if they met with their

professors outside of class without being required, and if they felt they had writing skills that met or exceeded the writing tasks of their college majors. The department sought to gauge the students' overall communication skills, both oral and written, and their confidence in using those skills. When the department completed this informal polling of the graduates, the main feedback was that they, no matter their majors, felt they could write better than their college peers, something they saw evidenced as their peers struggled with papers they wrote with ease. They also reported back that they often became the go-to peer editor and that professors, when the graduates chose to meet with them, which they often did, would praise them for their more developed writing skills. The confirmation of the English department's efforts in achieving Franklin Academy's and the department's missions from both the administration and graduates defined my work as a teacher when I was faced with the Class of 2009. I wanted to continue the department's success.

The second influence was Franklin Academy's grading policies. As the teacher each day in class, I held the power role of assigning grades. I tried to mitigate this in this study as much as I could. I did not participate in the digital character forums, seeking to minimize any influence my role as the teacher had on the students. I also tried to minimize the grading impact on the character forum work by using Franklin Academy's policy that homework in AP classes is not graded, since it is most often not graded in college. As the directions in the forums indicated, I assigned a minimum completion level for their entries. In order to sustain, without daily grading of homework, the delicate balance of spurring secondary school students to complete the forums while allowing for the college-level freedom of when and how, I explained to the students at the start of the redesigned unit that I would check the forums after the class had read the entire play and assign a quiz grade based on completion. If a student had the minimum entries, she would earn an A; if she had more, she would earn an A+; and if she had fewer, her grade would be docked accordingly. I never graded or provided feedback on the forums during the process of reading the play, thus I was not a presence in their forum work beyond their awareness that I would eventually grade the forums for completion. When I checked the forums at the end, I merely assigned the completion grade and did not provide feedback on the choice of quotes or development of ideas, removing myself as much as I could from their work. I did grade the research paper, so my role as the teacher reappeared in full in the last phase of the unit. To mitigate this, I have not examined the grades students actually received on this paper; instead, I have examined the writing process they used through the evidence of the forums, the first drafts, and the final papers.

My role as the teacher was inescapable in this study, and I both embraced this as an aspect of the study's methodology and tried to minimize my teacher influence as much as I could for the

objectiveness of this study, and even more so for the power of the students' learning. Learners who feel a stake in what they are learning learn more deeply than those whose learning is controlled by others (Dewey, 1938).

Digital Affordances for Case Study Data Collection

Casanave's study also showed the changes in data collection processes for composition case studies, from tape recorders and handwritten notes to emails and Skype calls (p. 4-5). Email exchanges were a particular method for Casanave in her data collection, as these became a tapestry of thought Casanave could return to in order to further examine connections. She added to these her "access [as their dissertation advisor] to ongoing email discussions [with others] about various aspects of the dissertation work, research memos and reflective writing that the women did along the way, [and] drafts of pieces of the dissertation as they got written" (p. 5). Digital data collection methods allowed Casanave a much wider view into the writing of these women. I also cast a wide digital net for collecting data in this study, data I could subsequently revisit due to its digitally recorded nature. The data I collected digitally was:

- all of the writing captured in the character discussions through the affordances of the asynchronous digital collaboration tool;
- all of the students' research papers written at the end of the redesigned unit;
- the mentors' written feedback on the students' drafts and final papers;
- all of the students' and mentors' written end-of-unit reflections;
- the audio recordings via a "smartpen" and written transcripts of the pre- and post-interviews with a subset of students and mentors;
- the junior year research papers written by the sub-set of students interviewed; and
- the memos I wrote after the pre- and post-interviews and while teaching the redesigned unit.

The composition case study has changed in many ways since Emig's 1971 dissertation, while in others way it has stayed the same. Trying to observe the actual writing process remains an elusive goal because much of it is internal. Some researchers still use the compose alouds and artificial writing environments Emig used, while most have shifted to studying writing *in situ* like Dyson. Observer effects for *in situ* studies remain an issue, unless a researcher, like Casanave, sees the relationship between the researcher and the subjects as crucial to the data collection and analysis. Digital tools however have made data collection easier and could be a partial solution to observer effects.

The Role and Study of Digital Collaboration Tools in Case Studies

These three foundational studies show case study has been widely used in print-based composition research. However case study's use in digital composition research has been mostly focused on digital composition pedagogy, that is how to teach effectively with digital tools (Lea, 2001, 2004; Minocha, 2009; Walch 2010). This study takes what I believe is the next natural step in composition research: using composition case study methodology to study one of the most relevant issues in today's digital world, students composing with digital collaboration tools. Other digital tools, such as eye tracking programs, allow researchers to "see" what students are thinking as they compose by looking at what they are looking at but without the observer being present (Berninger, 2012). The existence of such a broad array of digital tools for researchers begs a definition of how, in this study, composing with digital collaboration tools is defined. This study focused on digital collaboration tools being used for composition itself, so it focused on the digital collaboration tools used by the students to compose. These digital tools are also ones researchers can use because they record the digital composing. This study did not, however, use other technological developments available for conducting research, like the eye-tracking program. The use of digital collaboration tools by the participants in this study affected its methodology in three ways.

First, the asynchronous digital collaboration allowed for recording data without an observer present, thus greatly reducing observer effects. So although I as the teacher-researcher knew the students well and used this knowledge to better understand their work, I did not participate in the digital collaboration itself. By the nature of the online site, the work was done asynchronously and written down, so I could read and examine the writing without being a presence when the participants were writing. As their teacher, I was still a perceived presence and a real one, as I explained above. However, I believe this reduction of observer presence was one of the strengths of this study because I could see the stages of writing without affecting them as much as I would have if I had been sitting beside a student watching her write.

This leads to the second way digital tools defined this case study. This digital record that could be observed without the observer being involved also created a more complete transcription of the writing process, offering a new way to *try* to uncover the elusive internal writing process. Because the writing began with some of the earliest ideas students had about the text, the digital record started recording at a much earlier stage than the traditional first steps of the writing process, brainstorming or the first draft. In addition to the students writing these early ideas, they were also interacting with and incorporating audience in their writing from these early moments to the final paper, engaging in the

internalization and re-externalization of Moffett's discourse dialogue between I—you—it (1966, 1968). In the character forum discussions, the students had to internalize two audiences, their peers and their mentors, and imagine the written responses they then re-externalized as posts in the discussion. I hope to glimpse if and how students' research papers derived from these earlier written discussions by seeing all of this written down. In Chapters Four and Five, I track the evolution of the students' written ideas: the words they found for expressing initial ideas in the forums, how a particular idea was modified in later forum posts by consideration of audience, how developing ideas were chunked and elaborated into full paragraphs in posts, and finally how these paragraphs were developed into a complete written argument in the research paper.

The final affordance of the digital tools was the most important for this goal of uncovering evidence of extended composing: I could revisit all stages of the collaboration through the digital record, thus reducing the methodology weakness of first impressions and allowing for close study of the development of ideas. As Casanave did with her emails, I could see a much more complete picture of the participants' thinking, talking, and writing by having their work in writing in the forums that I could revisit as often as I wanted. However, I was limited to how much of the students' thinking and conversations I could collect. I could not collect them all, as thinking and conversations invariably happened beyond the work in the forums. Yet this study captured a large amount of their thinking and talking through their writing in the forums, and this thinking and talking started very early and nearly coincident with the onset of their reading. I was able in the analysis to revisit all of the thinking and talking done through the students' writing in the forums, which constituted a majority of the students' work in their extended composing process, although not all that they did.

PARTICIPANT SELECTION

The participants involved in this study were high school seniors, the group named "students" in this dissertation, and undergraduate and graduate students studying to be English teachers, the group named "mentors." The students and mentors were chosen by their enrollment in the specific courses involved in the asynchronous digital collaborations in the two phases of the study. The first phase was from January to March, 2014, and the second was from January to March, 2015.

All students in AP English Literature and Composition at Franklin Academy for both school years participated in the collaboration, as the redesigned unit was the normal unit for the course. I was the teacher of all of the student participants. 22 students were enrolled in AP English Literature and Composition in the first phase, and eight seniors were in the second phase. The noticeable drop in

student numbers was not a cause or product of this study; it was the varying sizes of senior classes at Franklin Academy. The class of 2014 was significantly larger than the class of 2015.

As with the Franklin Academy students, the mentors participated in the collaboration as a normal assignment for their courses. The group of seven preservice teachers in the first phase were graduate students in the Davis University Masters of Education program and participated in the collaboration as the required practicum for their Teaching Composition course. In the second phase, the mentors were 23 undergraduate students at Reynolds University enrolled in Adolescent Literature, and the collaboration was one of their major course assignments. The two groups of mentors had different professors, as well as were at different locations and stages in their education. The effects of these changes on the collaboration will be studied more specifically when I revisit the data to understand the impact of the collaboration on teacher preparation. For this study, the changes in venue and mentor age were undertaken for testing the consistency of the effects of the redesigned unit on the students' learning even with variation in the type and location of mentor. As the student perceptions and attitudes analyzed in Chapter Three showed, consistency was indeed evident across the two phases of the collaboration, strengthening the generalizability of the findings.

Finally, I obtained IRB approval in December 2013 for exempt research since this collaboration was the normal curriculum and classroom instruction of all three participating institutions. Notification forms were given to all participants (Appendix A), and all findings, as noted on the notification forms, have been reported anonymously with pseudonyms given to the students, their mentors, and the participating institutions.

DATA COLLECTION AND INTERVIEW PROTOCOLS

This study has many layers of data. Table 1 is a visual overview of the process I followed in collecting these many layers, listing the data sets in order of collection and noting the participants involved. As evident in Table 1, all of the data sets except for the interviews and the junior year research papers involved data collected from all students and mentors participating in the collaborations in both phases because their individual and collaborative work was entirely in writing. All of the interactions between the students and mentors were written down, from their discussions of the characters in the asynchronous digital collaboration to the feedback on and revision of the final research papers. All students also turned in the first and final drafts of their research papers to me as the teacher. Finally, all students and mentors wrote reflections at the end of the unit on what they experienced and learned as part of the regular course.

Table 1

Chronology and participants of data sets

Data Set	Participants Involved
Pre-interviews	• Volunteer students who were 18 years old • Volunteer mentors
Transcripts of the written interaction in the digital character forums	• All students • All mentors
First drafts of the research papers	• All students
Feedback on the first drafts of the research papers	• All mentors
Final drafts of the research papers	• All students
End-of-unit reflections	• All students • All mentors
Post-interviews	• Volunteer students who were 18 years old • Volunteer mentors
Junior year research papers	• Volunteer students who were 18 years old
Researcher memos (these were written throughout the collection of data)	• Teacher/researcher

I conducted pre- and post-interviews with a selection of students and mentors to collect experiential evidence to further understand the trends identified in their written work, collaborations, and reflections. As explained on the notification statements (Appendix A), high school seniors who were 18 at the outset of the collaboration and all mentors were asked if they were willing to be interviewed. The notification statements made it clear that accepting or turning down these interviews would have no effect on grades received for the coursework. Each participant could decline being interviewed without any risk to course performance. The students and mentors who chose to be interviewed also were aware the interviews had no bearing on their performance in the classes, so they could be honest without fear of penalty or hope of extra credit. In the first phase, six students (three females and three males) and six mentors (four females and two males) volunteered to be interviewed; in the second phase, three students (three females) and two mentors (two females) volunteered to be interviewed. The gender parity of the first phase, while coincidental, allowed for the findings to better represent all students. Unfortunately, the second phase did not have this gender parity. While nothing could be done

about this under the IRB protocol of this study, future research should work to ensure gender parity to help the findings' generalizability.

I completed these interviews face-to-face with the students and with one of two digital video conferencing tools, Google Hangout or Skype, with the mentors, who were by the nature of the collaboration geographically distant from me. I recorded all of the interviews with a "smartpen" then transcribed them. I used the open-ended questions in Appendix B to guide the interviews. This format is recommended for interviews in qualitative studies so "participants can best voice their experiences unconstrained by any perspectives of the researcher or past research findings" (Creswell, 2012, Chapter 7, Section 4, para. 14). I also prepared the sub-questions shown in Appendix B in case the students or mentors needed help understanding or discussing the larger questions. I used these sub-questions in about two-thirds of the interviews.

The two-phase nature of this case study helped me refine the data collection in the interview stage. For example, in the first phase, many students told me in the post-interviews that, after they began writing what they thought were the first drafts of their research papers, they came to see the character forums as their actual first drafts. They talked about how the asynchronous digital collaboration intertwined their reading and writing processes, expressing an extended view of themselves as composers. Many of the mentors I interviewed after the redesigned unit was completed in this first phase also spoke of seeing extended composition in the students' writing, making specific notes of connections from the character forum discussions to the first formal drafts to the final papers. I therefore added to the interview questions for the second phase questions asking how, when, and why the students and mentors thought these connections between the discussion forums and the formal writing had happened. I made notes on the interview questions of all such changes between the two phases (see Appendix B).

I also asked the students I interviewed to provide their junior year research papers. During the post-interviews, we discussed their recollections of their feelings about writing these papers compared to writing the research papers they had just completed. As the final data set and as recommended by grounded theory methodology (Bryant & Charmaz, 2007), I memoed regularly in both phases starting with the pre-interviews through the unit itself and ending with the post-interviews, recording my observations about and early connections in I was seeing. While grounded theory is not specifically a methodology in this study, its protocols for coding are valued for their care and precision, so I used this step of memoing to strengthen this study's coding process. Other case studies have used this practice as well (Stake, 1995).

DATA ANALYSIS

After observing and gathering data, case study researchers "face the task of coding, of sorting information into categories, of noticing patterns and relationships—in short, of interpreting" (Lauer & Asher, 1988, p. 15). Coding is a qualitative analysis process for "condens[ing] raw data into categories or themes based on valid inference and interpretation. This process uses inductive reasoning, by which themes and categories emerge from the data through the researcher's careful examination and constant comparison" (Zhang & Wildemuth, 2009, p. 2). The steps of the coding process of this study as outlined below are from Zhang and Wildemuth.

The first step was preparing the data by transcribing it into written form. As I explained above, due to the nature of the asynchronous digital collaboration, all of the data except the interviews was already in written form. I transcribed most of the interviews in the week following completing them. In both phases, I transcribed about two-thirds of the interviews in this manner, leaving about one-third to be transcribed in the months following the end of the unit in each phase.

The second step was to define the units of analysis, the themes that would be the basis for the categorizing and coding of the third step. This step was the start of my layered analysis process, as what I discovered analyzing early data sets defined the analyses of later data sets. In this way, the coding of each layer of data informed subsequent coding. As an overview, I read and analyzed the data sets in the order shown in Table 2. A data set listed twice indicates I read then reread it at the two phases in the coding process. I offset this rereading with italics.

I started by reading the transcripts of the pre- and post-interviews with both students and mentors, the end-of-unit reflections by all students and mentors, and my memos. I began with these three data sets because the interviews and reflections presented overviews of experiences and perceptions from the participants, and my memos provided early connections and context I had noticed. This broad overview provided the "expressions of an idea" (Zhang & Wildemuth, 2009, p. 3) needed to formulate early themes.

I broke this large combined data set into layers of reading. First, I combined the data layers from the student groups of each phase into consecutive data sets to read together. I started by reading the pre-interviews with students from the first phase and memoed, then I read the pre-interviews with students from the second phase and memoed on things I noticed as similar and different between the phases. I then collated both years into one picture of the student population of nine students prior to the collaboration. I combined the findings of the two phases because the number of interviewees in each phase was relatively small, particularly the 2014-2015 school year when I had only three

Table 2

Reading phases of the layered coding process

Reading Phase	Data Read and Coded
Phase 1	Transcripts of student pre-interviews from 2013-2014
	Transcripts of student pre-interviews from 2014-2015
Phase 2	Transcripts of mentor pre-interviews from 2013-2014
	Transcripts of mentor pre-interviews from 2014-2015
Phase 3	Researcher memos from 2013-2014
	Researcher memos from 2014-2015
	Transcripts of student post-interviews from 2013-2014
	Transcripts of student post-interviews from 2014-2015
	End-of-unit reflections by students from 2013-2014
	End-of-unit reflections by students from 2014-2015
Phase 4	*Researcher memos from 2013-2014*
	Researcher memos from 2014-2015
	Transcripts of student post-interviews from 2013-2014
	Transcripts of student post-interviews from 2014-2015
	End-of-unit reflections by students from 2013-2014
	End-of-unit reflections by students from 2014-2015
Phase 5	Transcripts of mentor post-interviews from 2013-2014
	Transcripts of mentor post-interviews from 2014-2015
	End-of-unit reflections by mentors from 2013-2014
	End-of-unit reflections by mentors from 2014-2015
Phase 6	*Transcripts of mentor post-interviews from 2013-2014*
	Transcripts of mentor post-interviews from 2014-2015
	End-of-unit reflections by mentors from 2013-2014
	End-of-unit reflections by mentors from 2014-2015
Phase 7	*Transcripts of student pre-interviews from 2013-2014*
	Transcripts of student pre-interviews from 2014-2015
	Transcripts of student post-interviews from 2013-2014
	Transcripts of student post-interviews from 2014-2015
	End-of-unit reflections by students from 2013-2014
	End-of-unit reflections by students from 2014-2015
Phase 8	*Transcripts of mentor post-interviews from 2013-2014*
	Transcripts of mentor post-interviews from 2014-2015
	End-of-unit reflections by mentors from 2013-2014
	End-of-unit reflections by mentors from 2014-2015
Phase 9	Character forum transcripts for 3 students
	First drafts of papers and mentor feedback for 3 students
	Final drafts of papers for 3 students
	Junior year research papers for 3 students
Phase 10	*All of the data listed in all prior phases for a final accuracy check*

interviewees. By combining the data across two years, the data pool was larger; therefore there was less chance of similar findings being mere coincidence. I developed early categories based on the ideas at the foundation of the questions I asked the students in the interviews (see Appendix B). Table 3 shows these early categories defining who the student population perceived themselves to be before the collaboration. The numbers in parentheses are the number of students who expressed the perception or attitude out of the total of nine students.

Table 3

Categories from the first reading of student pre-interviews

Category	Perception before Collaboration
Research	The students had an overall positive view of research as fun because it allowed them to learn more (7/9). However, they did recognize the hard work involved and did not always like it (2/9).
Writing	The students had an overall negative view of writing as difficult because it was hard to get their thoughts together (7/9). The two who spoke positively of writing said it helped them organize their ideas (2/9).
Technology	The students had a positive view of technology as a research and writing tool (9/9). This was even true for two of them who talked about not loving tech for their personal use but appreciating it in their learning (2/9).
Audience	The students were excited about working with older students to learn more and get feedback/new ideas (7/9). The only negative was a sense of nerves or stress, but each who commented on this said that in the end, the pressure would produce better learning and writing (2/9).
Collaboration	The students saw collaboration as helping research (8/9) and writing (9/9).

I then repeated this process of reading and memoing with the second layer of data: the two phases of the mentor pre-interviews. It became evident in this reading that this data set was not applicable to this study, as the interview questions focused on defining specifically who the mentor population was through their educational experiences and teacher training. For this study, the mentors' role as teachers-in-training was all that was needed to define their work with the students. I set this data aside for the remainder of this study; these interviews will be critical when I revisit the data to study the impact of this asynchronous digital collaboration through the lens of teacher training.

The next layer of data I read for the unit analysis consisted of three data sets: my memos during the interviews and while teaching the unit, the student post-interviews, and the end-of-unit student

reflections, all from both phases. I made multiple lists of similar ideas expressed by the students about their perceptions of their work. I then reread all of the pieces of this data set to be sure the emerging list of categories was accurate, a recursive, time-consuming, but important step in ensuring that the coding process was tightly founded in the data. Table 4 shows three of the most often expressed ideas. As a reminder, all names are pseudonyms according to the study's IRB protocol.

Table 4

Coding of the student post-interviews and end-of-unit reflections

Idea	Examples from Data
The collaboration as a written discussion made the students think more.	• "Creative goldmine" (Ann). • "I think it was just that double aspect to it, that there was another component besides just laying out your own thoughts. It was also having to really put them against or towards another person's thoughts" (Jody). • "You know, you see the discussion from when it was happening and then you see the later perspectives, so you start to see again the long term connections, connections to how it relates to the end of the book" (Sebastian).
Writing in the discussion forums made the paper easier.	• "Made me distill what my thoughts were" (Jacob). • "By the time the [character forum] was done, my ideas were pretty much formed" (Max). • The paper did not take as long to write because the ideas "were already there. . . . The [forum] helped me . . . refine my thoughts and put them into actual words" (Ann).
Their ideas changed because of the collaboration in the character forums.	• "I thought it was a really good way for the Davis University people to push you out of your comfort zone and to like really ask you . . . one of the Davis University students asked me a question about my blog post and really pushed me to think beyond what I had written. I thought that was a really good way to again push myself" (Sebastian). • "It was like the ideas that had been compiled from back and forth conversation. Cause like I would start with an idea, he would add something, like Ann and Lucy would add something, and then I would kind of form like a bigger picture from that" (Kathy).

Finally, I read each of the mentor post-interviews and reflections from both phases twice, cross-referencing their ideas to those on the student lists to determine if evidence existed in the data for the students' perceptions. For example, many mentors spoke about the deep thinking they saw in the

students' work in the character forums, giving evidence for the students' perceptions that they were thinking more, the first idea in Table 4.

I then moved back through the findings of each of these layers of data and identified these emerging themes (the second step of the coding process):

- The character forum discussion engendered deeper thinking in the students during the reading of the text.
- Being able to reflect on their processes of reading and thinking through the written record of the character forums was pivotal to the students writing their research papers.
- Collaborating during the reading and the writing changed the students' thinking. This included all layers of reading (text, character forum discussions, mentors' feedback, and others' papers).
- The character forum discussions made writing the research paper "easy."

For each of these themes, I had copious evidence of student perceptions and attitudes and mentor confirmation of these in the analysis lists I had made in the first step of coding the multiple data layers.

Having read all of the interviews, reflections, and memos at least twice to establish these early themes, I began the third step of the coding process: developing specific categories and a coding scheme. Using the above themes as a framework, I returned to the data and the analysis lists as guides, distilling these and memoing about the larger elements coming to the forefront. This process followed the constant comparative method (Glaser & Strauss, 1967) as explained by Zhang and Wildemuth:

> (1) the systematic comparison of each text assigned to a category with each of those already assigned to that category, in order to fully understand the theoretical properties of the category; and (2) integrating categories and their properties through the development of interpretive memos (p. 4).

I began with rereading the student pre- and post-interviews and end-of-unit reflections, marking specific changes students noted in themselves. This layer of analysis led to three categories of students' perceptions of changes in themselves as a result of participating in the redesigned unit: stronger thinking skills, an understanding of reflection in the learning process, and increased confidence in themselves as writers. Using both the students' explanations of these changes and my personal knowledge as the teacher of this unit, I asked myself what elements of the asynchronous digital collaboration were behind these changes. I developed five specific codes that accounted for these elements: audience, collaboration, layers of reading, expanded space and time, and reading/writing integration.

I then tested these codes (step four) by rereading the mentor post-interviews and reflections and applying the codes to see if the evidence in their responses of the student changes supported the coding scheme. I also asked a colleague to read the transcripts and compare them against the five codes to test them as a final validation of their accuracy before I moved to coding all of the data (step five). She confirmed the codes were represented strongly in the data. Next, I chose three specific students, two from the first phase and one from the second, to code the final layers of the data, the character forums and the junior and senior year research papers, in connection with the earlier layers. I chose these students as representative of the three notable student approaches to the work in the redesigned unit: Kathy completed every step of the assigned work, Jacob stayed mostly on task except for one slip-up that knocked him off course, and Allison did not engage in the digital character forum. I also compared these specific students with each other to find trends or differences across students and school years to validate the findings. This comparison allowed me to determine aspects of the study's findings that might be replicable and are therefore worth researching more, even acknowledging this study's small sample size. Finally, I reread all of the data once more to assess the consistency of the coding (step six), another recursive and critical step to ensuring the validity of the study's findings.

While much of what I found through this layered coding process confirmed my sense as a teacher that the students were undergoing positive changes in their learning as a result of the redesigned unit, there were surprising findings, confirming that I was keeping an open mind as a researcher versus simply seeking confirmation of my perceptions as a teacher from my action research. First, I was surprised the students entered the collaboration with an overall negative view of writing. As their teacher, I had seen them as generally strong writers who had possibly too much confidence, so seeing that they did not share this sense of confidence was unexpected. This caused me to examine more deeply their overall sense of themselves as writers after the collaboration as shown in the post-interviews and end-of-unit reflections to find evidence of how the students' positive views of writing after participating in the unit developed from the collaboration.

Second, as I mentioned above, both the students and mentors spoke specifically and at length about the writing in the character forums becoming a first draft for the research paper. This understanding of a long-term composing process integrated with reading from the very first piece of writing became another of the major aspects I explored in the study's findings, using the three student examples to tease out what was happening in this complex integration of reading and writing.

STRUCTURE OF FINDINGS

While I explore the study's findings in depth in the following chapters, Table 5 presents the five final codes that articulate the elements at work in the students' growth as thinkers, readers, and writers with supporting evidence from the three specific students: Kathy, Jacob, and Allison.

Table 5

Final codes

Major Codes	Example Evidence
Audience	The audience "makes it easier . . . because you get their input on what they think you should do, and then you know what you want to do. So you kind of compromise to find the perfect balance" (Allison).
Collaboration	"Once Jeremy [the mentor] started commenting [in the character forum], it got me thinking about things that I didn't think about before because he has more experience with the text and with Shakespeare" (Kathy).
Layers of Reading	The mentor's posts in the character forum "made me think of her [Emilia] in a different light in certain situations because I can be very fixed minded at times. But it kind of forced me to think of her as possibly being a bad person or being the person who's kind of evil, even though I didn't see her in that light before. . . . I ended up [going back and] looking at what she had done that was wrong and really . . . tried to understand her motives because what she did was wrong in certain situations" (Allison).
Expanded Space and Time	"At the end [of the forum work], I went through every page [of the discussion] and saw everything. So that was good at the end" (Jacob).
Reading/Writing Integration	"I think the collaboration definitely helped because I know I would not have been able to get to those ideas by myself. . . . [Having the forum] to make me write [my ideas] down and put it in a thoughtful manner definitely helped with the paper. Allowed me to think my ideas through and not just go in kind of blindly" (Jacob).

These examples of the students' reflections and understandings illustrate the most important aspect to recognize about the five codes as a precursor to understanding the findings: the codes are not individual or isolated. The collaboration depended on the audience; the inclusion of an authentic

audience became the inclusion of co-readers and co- writers. Then the layers of reading contributed to the thinking developed by the collaboration, as the students cycled among the reading layers of the primary text and the comments written by their collaborators in the character forums. The expanded space and time allowed for these layers of reading as well as for the reading/writing integration. Therefore, in the following chapters, I have approached the data as layers to be unfolded and understood first on their own and then, more importantly, as integrated aspects of the complex reading/writing process at the heart of the redesigned unit's asynchronous digital collaboration with an authentic audience.

CHAPTER 3

DEVELOPMENT OF STUDENTS' THINKING SKILLS AND REFLEXIVITY

Having established that the data collected in this study was multi-layered just as the redesigned unit was a multi-layered reading and writing process, I have chosen to present the study's findings layer by layer, building on the foundation of the pedagogy of the unit, to understand each layer both separately and intertwined within the whole unit.

In this chapter, I analyze two data layers to start defining how students' learning changed as a result of participating in the redesigned unit. This analysis focuses on the study's first research question:

- What changes occurred in the students' learning as a result of their participation in the redesigned unit featuring an asynchronous digital collaboration with an authentic audience? First, what evidence exists to prove or disprove the following hypotheses, which I observed in my five years of teaching this unit leading to this study? Second, what other changes occurred in the students' learning as a result of their participation in the redesigned unit?
    - o Participation in the redesigned unit resulted in students engaging more deeply in reading the primary text.
    - o Participation in the redesigned unit resulted in students articulating their ideas more effectively in their research papers.
    - o Participation in the redesigned unit resulted in students seeing research as engaging in a conversation.
    - o Participation in the redesigned unit resulted in students having more confidence in themselves as writers.

The first data layer consists of the students' and my thoughts on the unit: (1) the pre- and post-interviews from both study phases with the students who were 18 years old and volunteered to be interviewed, (2) the end-of-unit reflections written by all students in both phases, and (3) the memos I wrote after the interviews and during the collaborations. I then turn to the second data layer, the post-interviews with volunteer mentors, to triangulate the findings from the first layer. Through this layered reading of these two data sets, I identify changes the students perceived in themselves as readers, writers, and thinkers then determine if these perceived changes are confirmed by the mentors' observations of the students.

I then reread these two data sets to better understand what the students actually did as they participated in the redesigned unit, as explained by students in the first data layer and confirmed by

mentors in the second, to begin to see how the redesigned unit changed students' actions and/or processes. This analysis focuses on the study's second research question:

- How and in what specific ways did the process and features of the redesigned unit bring about such changes in the students as thinkers, readers, and writers?

Through this analysis, I delineate the five features of the redesigned unit at the foundation of the students' growth, the five major codes of the study: audience, collaboration, layers of reading, expanded space and time, and reading/writing integration. I will then examine these five features closely in Chapters Four and Five, seeking to uncover how they helped bring about such powerful growth in student learning.

CHANGES IN STUDENT PERCEPTION

In the pre- and post-interviews with the volunteer students who were 18, the students talked about their perceptions of learning as shown in their attitudes towards their work. By comparing the interviews before and after they participated in the redesigned unit, any effects of the unit on the students' perceptions of learning could be observed. The required end-of-unit reflections added the perceptions of the non-interviewed students to these findings.

I chose to begin with students' perceptions because research has shown perception often drives whether a student learns and grows. Research has supported the direct correlation between student perceptions of themselves as writers and their writing output. A variety of studies tested the widespread applicability of this correlation by focusing on diverse populations of writers: new graduate students (Cameron, Nairn, & Higgins, 2009), undergraduates studying biology (Ellis, Taylor, & Drury, 2007), preservice English teachers (Dymoke & Hughes, 2009), and elementary students (Woo, Chu, Ho, & Li, 2011). This array of populations showed the impact of perception existed no matter the population; writers' perceptions of themselves affect what they write. Writers' negative perceptions of writing and themselves as writers negatively affect their output. Cameron, Nairn, and Higgins (2009) found that if graduate students felt they had not been taught the specific writing task, they saw the task as more challenging and did not do as well. Second, graduate students brought past baggage to all new writing, and this baggage included fear of and a lack of confidence in becoming academic writers. Other studies (Wingate, 2010; Lee and Boud, 2003) also observed the impact of prior negative experiences on writers, noting this impact not only affected the writing act itself, but it also determined if a writer heeded formative feedback (Wingate, 2010, p. 521). Students with low writing perceptions were found to be unable to recall they had received feedback on their writing (Wingate, 2010, p. 526). These studies have

also examined the impact of positive perceptions of writing (Wingate, 2010; Woo, Chu, Ho, & Li, 2011). Wingate found that writers with positive writing perceptions read feedback closely, as evidenced by their ability to accurately recall and apply the feedback received, thus producing a stronger end product (p. 528). Since feedback on students' ideas and writing was an integral aspect of the inclusion of an authentic audience in the redesigned unit, understanding student perceptions was critical to knowing if the students were benefiting or not from the many writing and feedback opportunities.

Although these student pre- and post-interviews took place over two years, in the analysis below, I have combined both years into one data set of nine students. As explained in Chapter Two, the findings from the combined phases can better indicate that changes were tied to the unit rather than to individual factors defining each year of the study. I have noted the division between the two years for transparency of analysis, but I have focused on the combined data in my discussion of the findings.

Student Perceptions before Participating in the Redesigned Unit

In the pre-interviews, the students were defined most by their overall positive perception of learning as engaging and rewarding. They expressed that they liked to learn. Seven of nine (5/6; 2/3)[6] said they enjoyed the act of researching because they learned more. Jacob said doing research was "my favorite part, learning about everything," and Sebastian explained, "I really enjoy research papers because it [the research] gives you a chance to learn more about a certain subject." The two negative comments on research were about the process being time-consuming and the formatting requirements being hard to follow, not about a lack of engagement in learning. For example, Jody said, "Really making sure it's all correct, that gets really time-consuming. And then you have to do so many footnotes and making sure your citations are right, which I sometimes have trouble with." Jody did not like the writing of the research paper, not the learning that comes with research.

The students' positive perception of learning was further shown in their attitudes toward technology as a learning tool. All nine (6/6; 3/3) felt technology helped them learn more; therefore they liked using technology for coursework. Some said technology made learning easier; for example, digital secondary sources are more readily available than print sources. Sebastian said, "Technology is a great tool, especially for research papers because it allows you to really search a lot more sources instead of just the local library. You're not as limited." Others said word processing made writing easier. Alexa said:

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[6] Each parenthetical note delineates the findings split by year. The first set of numbers is from the six students interviewed in the 2013-2014 school year; the second set is from the three students interviewed in the 2014-2015 school year. I maintain this same structure for all subsequent findings.

> Normally, I'm not really into technology, which is interesting because I'm so young and that's our generation's thing. But as far as writing, I would rather type out a paper . . . than handwrite it just so I can keep my ideas flowing.

Being able to use technology to facilitate their learning was an aspect of the students' overall positive perception of learning.

Finally, their positive perception of learning was supported by their attitudes towards collaboration; they believed they learned more working with others and therefore welcomed the chance to work with a new audience in the redesigned unit. Seven of the nine (4/6; 3/3) said they were excited to work with the mentors. Emma explained that a new audience equaled new learning for her:

> I'm really excited to work with college students and to get to see how their college experiences furthered their English education. And I'm looking forward to the insights they give. . . . I think that will make me understand the book a little bit more.

The two students who expressed some anxiety about working with new people followed this by saying this extra stress would spur them to produce their best work. Max said:

> It [the new audience] would add a bit of stress, having to constantly supply good work. But that's also the point: you're supposed to have that stress as you work through the paper to make sure you're on track. So it's a good thing overall.

So overall, nine of nine (6/6; 3/3) saw positive learning benefits from working with a new audience, thus collaboration was another tool they felt helped make learning engaging and rewarding.

As shown in these pre-interviews, the students already felt that many of the key components of the redesigned unit—research, technology, and collaboration—supported their overall positive perception of learning. Therefore, if the redesigned unit was a positive experience for the students, their responses in the post-interviews would need to show at least the same level of positivity, if not more.

However, in the midst of this positivity, the negativity the students expressed in the pre-interviews about writing was striking. Overall, they lacked a general confidence in their writing skills, something opposite of what I had thought about them as their teacher. Some had already spoken of not liking the writing involved with the formatting of research papers, but seven of the nine (4/6; 3/3) also said they found expository writing in general to be hard. They expressed that they struggled with presenting their ideas and the ideas of others in effective prose. Emma said:

> The writing is a little bit more tedious because you have to make sure you're integrating specific quotes in a seamless way, and some parts you have to kind of paraphrase. Knowing how to mesh the information with your own style of writing is hard.

Jacob said he did not like the process of expository writing: "It's just uninteresting finding the right way to state it in a correct manner . . ., right organization, and everything." Two students who spoke positively about the process of writing still expressed a lack of confidence in their skills. Alexa said, "I enjoy writing. Sometimes it's hard for me to get my thoughts going, but I enjoy writing and reading my final product." Jody agreed: "Pulling it all together is definitely the hardest part for me. I love writing . . . but for a graded assessment and really needing it to be so clear and formal, [it is hard]." A lack of confidence in their writing skills was damaging these students' positive perceptions of the act of writing.

The only two students who expressed positive perceptions of the act of writing indicated this positivity was rooted in a confidence in their writing skills. Sebastian said, "It [writing] usually gives me a chance to organize my thoughts . . . and also it's fun to make a persuasive essay about it." Writing was fun for Sebastian because he felt he was able to handle the challenge of organizing of his ideas that other students felt they could not. Sebastian's sense of writing skill and enjoyment using these skills are things I, as a writing teacher, had hoped, and even assumed, all my students felt about their writing. In fact, I even worried they felt too much confidence as writers, and that was why I began experimenting with this research paper unit. Therefore, seeing that more than three-quarters of the students did not have confidence in their skills as expository writers gave me pause. Despite being excited learners, the students' lack of confidence in their writing skills, therefore their negative perception of themselves as effective expository writers, indicated they needed more support as writers.

Student Perceptions after Participating in the Redesigned Unit

The post-interviews showed the redesigned unit provided some form of this support because the students' perceptions of themselves as writers changed sharply after participating in the unit. First, the post-interviews showed a continuation of the students' positive perceptions of learning, with nine of nine (6/6; 3/3) still expressing positive attitudes towards the learning tools of research, technology, and collaboration. Clearly, the redesigned unit had at least maintained their existing positive perceptions of learning and their attitudes towards these specific tools. Then came the change: nine of nine (6/6; 3/3) also felt positive about the research papers they had written, a striking counterpoint to the two of nine who went into the unit with confidence in their writing skills. All nine said this paper (a reminder: this was a literary research paper requiring complex thought, argumentation, and integration of multiple sources) was *easy* to write. Kathy, in relaying her writing process, exhibited her surprise when she found writing the first draft so easy:

> I had just gotten home from my neighbor's house . . . and wrote it [the paper draft] at like 1:00
>
> in the morning. And so I just didn't really want to write a lot, so I just put my ideas down and put

the support down. . . . So originally I thought my first draft was like kind of bad, but then when I went back, because I didn't read it before I finished it, but then when I went back and read it, I was like, "Wow, this all really did work."

The general tenor of the interviews also showed the students' facility with the content and skills required for writing their papers, as they guided me readily and excitedly through the development of their ideas in the asynchronous digital collaboration then how they captured those as they wrote their papers. Emma spoke of writing her first draft, quoting from memory part of the digital collaboration:

One of our Reynolds University mentors was like, "Iago is already formulating his revenge against Othello, so why would he want to do that?" And she suggested that it was to protect himself from individuals, and because he distrusted other people, that also drew into his hatred and fear, and it made Iago sound very paranoid. So I took that into consideration of my thesis and said that Iago was very aware as to other characters' personalities and how he could manipulate that.

Emma understood deeply and portrayed strong confidence in the process of writing she had used to formulate her thesis.

The end-of-unit reflections completed by all of the students also revealed strong positive perceptions of themselves as effective expository writers. In response to the second question, "How did writing the draft go?," 22 of the 26 students (15/18; 7/8) responded with a positive answer. Nine of these were students who had been interviewed, so 13 of the 17 other students expressed a positive perception of their skills with writing the papers. While the data did not indicate if this was a change in perception, since these students were not interviewed before the unit, it can be assumed that participating in the unit at least maintained positive perceptions. Roger encapsulated the general positivity: "I thought that it went very well emphasis-wise in incorporating my ideas into my draft." Selena wrote an intriguing response:

The only difficulty I had when writing this paper . . . was that I had so much I wanted to say and I knew that I couldn't really brain dump in my paper. I think it was easy to tie my own ideas together with the story of *Othello*.

Selena's first sentence seemed to indicate she was feeling negatively about herself as a writer, but then she switched to saying she felt confident managing both her multi-faceted argument and the primary text in her paper. This illustrated again the point made above that students, after their participation in the redesigned unit, understood the processes they needed to use as writers to best portray their

thinking, and this awareness allowed them to deal readily with the complexity of their arguments in their writing. The students felt confident they had the skills needed to be strong expository writers.

The students' pre-interviews, post-interviews, and end-of-unit reflections clearly showed they experienced either a maintenance of positivity or a positive change in their perceptions of learning and expository writing by participating in the redesigned unit. This evidence supported my sense as the teacher that the students were changing during this unit, thus partly answering this study's first research question. Yes, concrete evidence existed of positive changes in the students as learners and writers after their participation in the redesigned unit: the students' positive perceptions of themselves as writers as shown through their attitudes towards their research papers, their understanding of the processes of writing, and their new or sustained confidence as writers. These student narratives of their growth supported the fourth hypothesis:

- o Participation in the redesigned unit resulted in students having more confidence in themselves as writers.

The students also felt their participation in the redesigned unit resulted in their being able to articulate their ideas more effectively in their research papers, a step towards proving the second hypothesis:

- o Participation in the redesigned unit resulted in students articulating their ideas more effectively in their research papers.

More analysis is needed to confirm that the students' sense of having produced more effective writing was backed up by actual writing changes in their papers, but the existing research into student perceptions indicates such evidence is likely to be found, since research has shown positive perceptions generally lead to improved student writing and learning.

THE FOUNDATION OF STUDENTS' CHANGE: THINKING AND REFLEXIVITY

Rereading these two data layers provided an initial answer to the second research question:

- How and in what specific ways did the process and features of the redesigned unit bring about such changes in the students as thinkers, readers, and writers?

I shifted the focus of my analysis for this second reading of these data layers from student perception to actual student activity, seeking to uncover the activities that resulted in the positive perceptions by focusing on what the students explained they did during the unit. After multiple rounds of coding, the student responses coalesced around three specific ways the redesigned unit helped them grow as learners: (1) the development of thinking skills, both deepening and honing their ideas; (2) an understanding of the power of reflection in their thinking and learning processes; and (3) an

understanding of themselves as writers and therefore more confidence in their writing skills. The students' awareness of their own learning as shown in these three understandings was rooted in one commonality: the development of thinking and reflexivity. I had hypothesized in the first and fourth hypotheses that students' experienced changes in their thinking skills and writing confidence:

- o Participation in the redesigned unit resulted in students engaging more deeply in reading the primary text.
- o Participation in the redesigned unit resulted in students having more confidence in themselves as writers.

Yet I had not anticipated the students' understanding of reflection. This second reading of the data was uncovering changes in the students as learners that went beyond the hypothesized perceptions.

This rereading of data also was the initial step in defining the five major codes that will serve as the framework for fully exploring the second research question in Chapters Four and Five. While these codes are formally presented in the next section, I have sought to make the layered nature of this study visible by identifying the seeds of these concepts throughout this section's discussion. In Table 6, I present the word clusters I found in the data that, through the coding process, led to the identification of the five major codes. These word clusters appear throughout the analysis in the remainder of this section, exhibiting the threads that ultimately led to the determination of the final codes.

Table 6

Word clusters used to identify the final codes

Major Codes	Word Clusters
Audience	- Mentor/name of a mentor - Peer/name of a peer - Mentors' questioning, responding, etc.
Collaboration	- Perspectives - Collaboration - Dialogue
Layers of Reading	- Multiple texts - Continually reading ideas and others' writing
Expanded Space and Time	- Time - Written record/transcript
Reading/Writing Integration	- Layers of text - Writing ideas versus speaking them - Reading others' writing - Process/processes

Student Understanding of Learning #1: The Development of Thinking Skills

First, students expressed repeatedly an awareness of the development of their thinking skills, specifically of having thought more deeply and precisely. They spoke of three aspects of the redesigned unit that caused this development in their thinking: other perspectives, mentors' questioning, and their own writing.

In speaking of other perspectives, they said the constant exposure to ideas through the digital character forums caused them to regularly compare and contrast their ideas with those of others. Ann spoke explicitly of how she came to her final ideas about her character, Iago, through this exchange with her peers and mentor, showing the depth of analysis she had done as well as a reflexive awareness of how she had completed this analysis:

> So we already know that Iago wants to ruin their relationship in the future, and I think if we didn't know that, we would perceive Desdemona and Othello as being invincible like they themselves do. And she [a classmate] says [writes in the discussion forum] that it shows how innocent the characters are and how they don't expect anything to happen. And then Jeremy [the mentor] replies that stories play a big role in the play, and that kind of goes with like Iago's always telling stories, Othello won Desdemona over by telling stories. But Iago's stories are more like a web of lies. . . . I just thought that was interesting because it made me think about how Iago, since we're viewing this . . . not really through the eyes of Iago, but we see Iago's part in the play . . . it helps us realize what's going to happen in the future, and we can build the foundation [of our papers] upon those stories going on everywhere.

Ann delineated the layers of reading underpinning the effects of collaborating with others' ideas. She spoke about her ideas about her character deepening as she read two layers of text simultaneously: others' ideas presented in the forum and the primary text. She then spoke about how these layers of reading linked directly to her writing, as she used this deeper thinking to intertwine the importance of story-telling to her concept of Iago's superobjective. The layers of reading led to students' ability to think more deeply.

The second aspect of their growth in thinking skills was how the mentors' regular questioning in the discussion forums exacted more precise thought. Jacob explained:

> So we're talking [writing in the discussion forum], we're starting to get at what Iago's trying to do here, what his motives . . . . Then we have Barbara [the mentor] saying, "Well, what are his motives? What can we push further into this?" And then we have Monique [another mentor] . . . add another push. Brooks [a classmate] then says, "Why not both?" . . . But then it made me

realize that . . . it can't be just both . . . It has to be one or the other. And so, it kind of sets the

tone for me for the book because I realized like if I wasn't going to treat him as a motiveless

malignity, which I didn't think he was, then he had to have some reason. And so that made me

read more critically and think about it harder.

Jacob reflexively articulated how his reading process had changed in conjunction with his more developed thinking process.

The students' responses also illustrated the third way they saw their thinking deepening and sharpening: having to express each idea in writing. Since the character discussions were asynchronous digital collaborations, the required mode of communication was writing so the conversation was recorded for whenever other members entered the forum. As they read and learned from layers of text, the students also wrote layers of text as they posted new ideas and revisited them in follow-up posts. The students spoke about how writing their ideas was different than speaking them. Max said, "In a class discussion, I would be giving an answer . . . in about five seconds of thought. When I wrote these [his forum posts], each one took about ten minutes." This commitment of time led to more careful thinking. Ann said, "It [writing] helped refine my thoughts and put them into actual words." Ultimately, the written record was the distilling of the students' ideas. Kathy said:

It was really helpful [writing in the forum] because I had all of these ideas that I had already

thought about that like if I hadn't have written them down, it would have taken me much longer

and I would have had a harder time writing the paper, trying to come up with all these ideas.

Students' thinking deepened and sharpened through writing in this digital collaboration, and they understood this through their reflections on their processes of reading and writing.

Overall, the students clearly articulated the activities in the redesigned unit that deepened and sharpened their thinking skills. The many layers of reading led to their constant interaction with others' ideas, including their mentors' specific questioning, and the constant writing of their ideas led to their increased confidence in their writing skills.

Student Understanding of Learning #2: The Power of Reflection

The students then spoke directly of the second way they changed through their work in the redesigned unit: they gained an understanding of the power of reflection in their thinking process. The digital character forums as written records of the students' thinking and reading were the pivotal reflective tools for the students as they started to think about their research papers. All of the students (20/20; 8/8) looked back on their character forums when they were planning for their papers. Lucy wrote about how the digital record was a reflective thinking tool for her:

The [character forum] helped me because all of my ideas were organized, and I was also able to remember what I was thinking at different times throughout the book. It made it easier to see how my character developed over the entire book, rather than just focusing on the end.

Jacob agreed:

It [the character forum] allowed us to reflect back and see what we had done and what conclusions we came to earlier in the book. As the character progressed, our knowledge of the character progressed also, so it was good to see our understanding expand and change as the book continued.

Sebastian spoke about how reading the written transcript of the character forum illuminated the extended threads within his argument: "You see the discussion from when it was happening and then you see the later perspectives, so you start to see the long-terms connections, connections to how it relates to the end of the book."

The students, after participating in the redesigned unit, articulated the importance of reflection as a learning tool. They believed they were deeper thinkers and better learners as a result of their participation in the redesigned unit, and they achieved this reflexivity from their work in the digital character forums, specifically looking back on the written record created due to the asynchronous nature of the forums.

Student Understanding of Learning #3: Understanding Themselves as Writers

Finally, the students spoke of reflection as an integral part of understanding their own writing processes. First, they recognized that, because they were writing all of the time in this asynchronous digital collaboration, they felt more practiced at writing. Emma spoke of her approach to her character forum writing:

I thought it was practice. Like here I am about to go to college. I don't want to keep using mediocre words, and I actually want to expand my vocabulary, and a way to do that is to practice. So as I was writing [my forum posts] . . . that's what I was trying to do.

Max spoke of polishing his writing through the act of writing in the discussion forum:

Because even one sentence can be pretty striking, in my writing at least. . . . There was one line where I tried to use repetition. It was essentially like, "Roderigo didn't love. Roderigo was losing a dream," or something like that. . . . It was two sentences that brought my ideas from [the character forum] to my paper.

These students used the smaller chunks of writing done in the character forum to focus on their diction and syntax as writers.

Students also recognized how continually reading others' writing in the forums and drafts gave them perspective on and valid confidence in their own thinking and writing processes. Max explained:

> It wasn't like I was using someone else's ideas [in the paper]. . . . I was looking at other people's ideas, taking them in, thinking about them, and then spitting my own ideas based off of or not based off of, but my ideas were altered by the ideas of the others.

Max knew his ideas had been developed by reading others' ideas in the character forum, but he also had confidence that his final ideas were his own. Sebastian talked of reading others' writing when the students exchanged drafts of their research papers:

> I felt like especially reading each other's drafts really affected my writing because that was an interesting aspect to see. For example, [one of the drafts I read] took a very different perspective than my own, and so it made me think about my whole perspective and it really evolved my idea.

Finally, the students also expressed how reading the mentors' feedback helped them in the process of revising their drafts. Alexa wrote:

> After my draft, when I started going to the final paper, I felt more comfortable about the way I was sounding, and I think that was having the Reynolds University students [mentors] look over the writing to kind of confirm that there are some good points in here. You just have to tweak it, make your points sturdier.

Emma said, "[The mentors] were encouraging with their comments on our research paper, so it was nice to have more feedback than just peers but people of a higher education level." The collaboration with their mentors gave the students even more confidence that they could write as well as an understanding of revision as a growth process of producing stronger writing.

As the students spoke of this understanding of writing, they were not just speaking about the writing they had produced. They were speaking about themselves as writers by explaining the processes in the redesigned unit that had helped them to become confident writers: writing regularly, reading, collaboration, and revision as growth. This was their reflexivity laid bare: the students understood how the process of their writing and the product of their writing confidence were intertwined. That is, they had an explicit understanding of their skills, and this meant they were prepared to keep writing even as the writing challenges increased in their future education and careers.

Evidence of Student Change

I turned to the second data layer, the post-interviews with the volunteer mentors from both years, to cross-reference the students' perceptions of their growth with the perspective of the mentors.

I was seeking concrete evidence of the growth the students had perceived in their thinking and reflexive skills. As with the student interviews, although the mentor post-interviews took place over two years, I have combined both years into one data set of eight total mentors. However, I have not noted in my analysis the division between the two years because these findings were notably unanimous.

First, all of the mentors repeatedly spoke of the students' thinking skill development. The mentors explained how they directed the character forums at the start by contributing a great deal, but by the final acts of the play, they were mostly just observing the forums because the students had taken charge of the thinking. Margaret said:

> At first, I was really conscientious of what I was posting and making sure that everyone felt involved in the conversation. . . . Then when they were kind of carrying the conversations themselves and were making some really good points, I didn't need questions to prod them.

Michael saw the students' posts change as their thinking deepened with the deepening collaboration: "Their initial posts were mainly just surface, and then when they started replying to each other, it started looking deeper and deeper into the character and the quote itself. And they started drawing in other quotes they found." Jeremy initially felt badly about dropping off in his forum participation, but through his own reflection, he realized it was a sign of the students' growth in thinking:

> This is when they got really far into the play . . . and I really dropped off on keeping up with them. However, looking back through it now, they were dialoguing with each other, and so honestly I don't feel too bad because especially, after reading their papers and seeing their final products, it worked out for them because they are dialoguing well.

This evidence from the mentors supported the first hypothesis:

- o Participation in the redesigned unit resulted in students engaging more deeply in reading the primary text.

The mentors could see the students deeply engaging with the text in how the students used the primary text so readily and effectively in their deepening dialogues in the character forums.

The mentors also spoke of the reflexivity they saw in the students. They described how the students clearly had reflected on the character forums in the process of writing their papers because the mentors could see the thought development they had observed in the forums finalized in the papers. Jeremy tracked this process:

> I could read their papers, and I could track with all my students and see how they reached the conclusion of, "I'm going to write about this," through reading their forum posts and seeing what quotes they're quoting and seeing how they're discussing with each other. It's very easy to

> see, "That's why they wrote about this because that's what caught their attention since the beginning of February until the beginning of April."

The mentors could not speak to the students actively being reflexive because, having never talked to the students directly, they did not know if the students were aware of their own processes. However, combining student reports of their active reflection with mentor reports of seeing the process of reflection in the final papers, it can be assumed the students did actively use their reflexive skills.

The Power of Thinking and Reflexivity

As these findings exhibit, the students repeatedly spoke in the interviews or wrote in the end-of-unit reflections about the development of their thinking and reflexivity, skills research has shown are imperative to strong learning (Lea, 2004; Yancey, 1998; Dewey, 1910), and the mentors confirmed this growth. This finding was an unanticipated change in the students: the redesigned unit helped students become active, reflexive thinkers who understood the importance of this reflexivity to their learning. Research has shown that developing flexible, persistent thinking is critical for continued learning (Council of Writing Program Administrators, National Council of Teachers of English, & National Writing Project, 2011; Costa and Kallick, 2008; Dewey, 1910), so the redesigned unit achieved my initial goal of helping the students to see learning as lifelong, but in a way I had not anticipated. Dewey (1938) was the original proponent for teaching what he termed habits of thought, as he proposed that thinking be approached in education as a habit to be developed. Perkins, Jay, and Tishman (1993) wrote that these habits, what they called dispositions of thought, were best achieved through a developmental pedagogy in which teachers created classroom environments that supported and required good thinking in order for students to truly gain such habits (p. 43). Costa and Kallick (2008) developed Dewey's ideas into habits of mind, defining these habits as productive ways of thinking that with time students learned to use unconsciously across all areas of their lives. The redesigned unit layered onto the traditional classroom environment of the original unit a new learning environment centered in the asynchronous digital collaboration, a learning environment that this study showed required and therefore promoted thinking by the students (Tishman, Perkins, & Jay, 1995; Wenger, 2000). In this new learning environment, the students practiced habits of mind and, more importantly, recognized this practice and understood the thinking skills they were using.

One value of this growth in thinking and reflexivity is the transfer it can promote. Researchers have proposed that dispositions for good thinking or habits of mind are what transfer from a known environment to an unknown one (Costa & Kallick, 2008; Perkins, Jay, & Tishman, 1993; Dewey, 1938). The concept of transfer was first defined by Thorndike and Woodworth in 1901 when they were

researching assumptions of education and found that traditional methods of education, specifically learning Latin, did not create the "'general skill' or 'mental muscle' that affected a wide range of performances" that educators purported the practices achieved (Committee, 2000, Chapter 3, para. 3). Perkins, Jay, and Tishman defined transfer as "whenever we connect up one area of knowledge to another, to help us understand or gain leverage on a problem" and therefore as "fundamental to education" (p. 156). They explained, as Thorndike and Woodworth had shown, that transfer did not happen automatically; thus a pedagogy of teaching transfer would achieve their goal of "building a culture of thinking in the classroom" (p. 159). Costa and Kallick also found that students tackled new and unfamiliar challenges using their learned habits of mind (p. xxii). Habits of mind (this has become the accepted term in the field versus dispositions of good thinking) have ever since been closely linked with transfer theory as the habits are seen as pedagogical tools for helping students achieve transfer. Sullivan (2014) proposed "a pedagogy focused on listening, empathy, and reflection . . . to help students move toward thinking in more cognitively sophisticated ways about the world, their place in it, and the production of meaning and value" (p. 24).

The development of thinking and reflexivity skills achieved by students through participating in the new learning environment of the asynchronous digital collaboration indicated that this redesigned unit could be a model pedagogy for designing learning environments that help students develop the thinking and reflexivity skills they need to continue learning in college and beyond. These academically strong students were clearly challenged to become even stronger thinkers through their participation in the redesigned unit, and they understood the thinking and writing processes they had developed and used to achieve their learning. In this way, they were prepared to transfer these skills to tackle new and unfamiliar challenges in college or other environments. However, this study did not follow students to other learning environments to test for actual transfer. This limitation suggests a theme for further research with multi-year studies seeking evidence of transfer.

OVERVIEW OF FINDINGS

The findings in this chapters have provided answers to the first research question, including proving two hypotheses:

- What changes occurred in the students' learning as a result of their participation in the redesigned unit featuring an asynchronous digital collaboration with an authentic audience? First, what evidence exists to prove or disprove the following hypotheses, which I observed in

my five years of teaching this unit leading to this study? Second, what other changes occurred in the students' learning as a result of their participation in the redesigned unit?

- o Participation in the redesigned unit resulted in students engaging more deeply in reading the primary text.
- o Participation in the redesigned unit resulted in students having more confidence in themselves as writers.

Students recognized they had changed in two ways due to their participation in the redesigned unit. First, as writers, they developed an increased understanding of their own writing processes and therefore had valid confidence in their writing skills and their written products. Second, as thinkers, they developed stronger skills that allowed them to go deeper in their textual analyses. The mentors' confirmation of these perceptions of growth and the activities driving this growth proved the first and fourth hypotheses. These data layers also uncovered the unanticipated change in students' reflexivity. The redesigned unit created a new learning environment that helped students become active, reflexive thinkers who understood the importance of this reflexivity to their learning. These three identified changes in the students proved that participation in the redesigned unit resulted in positive growth in the students as readers, thinkers, and writers. These academically strong students, after participating in the redesigned unit, were even stronger learners who had the reflexive skills to continue learning at even higher levels.

DEFINING FEATURES OF THE REDESIGNED UNIT

The word clusters that appeared again and again in these two data layers of student and mentor interviews ultimately defined the structure for answering the second research question:

- How and in what specific ways did the process and features of the redesigned unit bring about such changes in the students as thinkers, readers, and writers?

The students and mentors pointed repeatedly to specific features of the unit that lay behind the growth students achieved as reflexive thinkers in this new learning environment: audience, collaboration, layers of reading, expanded space and time, and reading/writing integration. These five key features are the framework for investigating the second research question in Chapters Four and Five.

The written collaboration in the digital character forum discussions with an authentic audience was woven with the layers of reading (the primary text, classmates' posts, and mentors' posts). This reading/writing integration that is the nature of an asynchronous digital collaboration engendered deeper thinking in the students by helping them develop and hone their analyses. Next, these same

written digital discussions led directly to students developing a deeper understanding of themselves as writers, specifically that writing was easy for them because they were long-term composers. The affordances for expanded space and time of the digital collaboration tool allowed for reflection through the written record on the processes of reading, thinking, and writing, both during and after the digital collaboration. Through this reflection, the students saw they had already developed and organized their arguments before officially starting their papers. Therefore, presenting these ideas in the research papers was easy, since they knew they had already defined their arguments. Then they realized they had been practicing their writing skills in the same expanded space and time. They spoke of lifting chunks wholesale from their digital discussions, tweaking some wording for overall flow, and placing them in their final papers. Finally, the collaboration and layers of reading continued with their reading of mentors' feedback and others' papers. They felt support from the mentors in the discussion and in the feedback, and they normed themselves against their peers' papers, another form of support.

I closely examine these five key features of the redesigned unit in the following two chapters, seeking to continue identifying changes in answer to the first research question and working to uncover the process at the heart of the second research question. In Chapter Four, I explore audience and collaboration, two long-time ideas in composition pedagogy, as well as layers of reading. Then in Chapter Five, I place these three features within the digital framework of the collaboration tool that afforded the expanded space and time and reading/writing integration so critical to students' drafting and revision.

CHAPTER 4

AUDIENCE, COLLABORATION, AND LAYERS OF READING:

COMPLEXITY THROUGH INTEGRATION

I now turn to the next layer of data: (1) the students' first and final drafts of their research papers, (2) their mentors' feedback on this writing, and (3) the students' junior year research papers. As I analyze this layer, I also reread the prior two layers: the student and mentor pre- and post-interviews, the student end-of-unit reflections, and my memoing. In this multi-layered analysis, I now narrow my reading to three specific students and their corresponding mentors to track more closely the complex processes at work in the redesigned unit that led to the changes in students' thinking, reading, and writing. The specific students and mentors are Kathy and her mentor Jeremy, Jacob and his mentors Barbara and Monique, and Allison and her mentor Gina.

In the analysis of the data surrounding these three students and their mentors, I continue exploring the first research question, seeking to identify and understand changes in the students' learning as tied to the hypotheses that remain unproven or unanticipated changes:

- What changes occurred in the students' learning as a result of their participation in the redesigned unit featuring an asynchronous digital collaboration with an authentic audience? First, what evidence exists to prove or disprove the following hypotheses, which I observed in my five years of teaching this unit leading to this study? Second, what other changes occurred in the students' learning as a result of their participation in the redesigned unit?
    - Participation in the redesigned unit resulted in students articulating their ideas more effectively in their research papers.
    - Participation in the redesigned unit resulted in students seeing research as engaging in a conversation.

I also begin to look more deeply into the second research question:

- How and in what specific ways did the process and features of the redesigned unit bring about such changes in the students as thinkers, readers, and writers?

In seeking to understand specifically how the process of the redesigned unit caused the changes identified in the students' learning, I frame this chapter around the first three core features of the unit: audience, collaboration, and layers of reading.

CORE FEATURE #1: AUDIENCE

As I explained in earlier chapters, while I redesigned this unit to put into practice the composition theory of authentic audience, the redesigned unit became much more complex than I understood when I created it. This complexity first appeared in the feature of audience, as the actuality of the audience in this integrated reading/writing process turned out to be different from the traditional theory of authentic audience. I begin therefore by looking at the traditional theory, then I explore the complexity that developed as the audience expanded into a community of practice (Wenger, 2000).

Traditional Authentic Audience

Working with an authentic audience affected the students as thinkers and writers in the traditional ways research has shown audience affects writers: by making them think about their writing as a communication device that must meet the needs of their audience (Townsend, Nail, Cheveallier, & Browning, 2013; Flower, 1979; Moffett, 1968). The students expressed in their pre-interviews their anticipation that the presence of an authentic audience in the redesigned unit would create this traditional writing process partnership—an audience giving feedback, and the writer revising accordingly. Kathy said, "I think it . . . will be cool to get their [the mentors'] feedback on what we're writing." For Kathy, the audience's role was to assist her as she revised and finalized her paper. Allison confirmed this notion: "It [working with the mentors] will be helpful too because if [I] get stuck in a rut . . . with my paper, you have someone to try to help pull you out of that rut and get you back on track." The students anticipated prior to the collaboration a one-faceted relationship where they shared their writing with the mentors as audience and received feedback to incorporate into revisions. In this writing process relationship, the authentic audience would act as a source of refinement for the student writing.

After their participation in the redesigned unit, the students spoke of how the authentic audience of mentors had indeed served this writing process function. The students spoke of how they considered the feedback from and needs of their audience and how this made them more careful in their writing. Allison spoke in her post-interview of considering her mentor's needs as expressed in the feedback to be sure her ideas were clear:

> There were some moments, or some parts of my paper, where she [Gina] said that it was unclear, that I needed to kind of change it to make it so that the reader could understand what I was trying to say. So, I tried that.

Allison then talked about the skill involved in blending her style as a writer with her audience's needs: "You do get their input on what they think you should do, and then you know what you want to do. So you kind of compromise to find the perfect balance." She recognized the benefits of having feedback

from an authentic audience as well as the challenge of integrating this feedback with her writing style so both the writer's and the audience's needs are met. The presence of an authentic audience in the redesigned unit helped the students understand their writing as a communication device and therefore pushed them to think more about their composing choices as choices for specific audiences. This understanding followed the traditional concept of the authentic audience as a writing process partner.

If I were to stop here, this feature of the unit is noteworthy because, as Applebee and Langer (2011) found, despite widespread understanding of the benefits of such a writing process relationship with an authentic audience, little inclusion of authentic audiences is happening in secondary school writing instruction in today's classrooms. In this redesigned unit, the theory of authentic audience was put into practice and helped the students see writing as an ongoing communication challenge.

Becoming a Community of Practice

However, more was happening with audience in the redesigned unit than this writing process partnership. I initially chose an older audience in my redesign because I wanted to bring college to the students, but the effects of this choice went deeper. The mentors were in college, thus the students saw them as more knowledgeable and experienced. Allison explained this in her pre-interview: "I mean, they're college students, so they got into college, so that says something that they know what they're doing." In theory, an authentic audience does not have to be an expert audience, but when it is, a zone of proximal development is created for the students.

> Vygotsky (1930) explained how a zone of proximal development is critical to learning:
>
> Using imitation, children are capable of doing much more in collective activity or under the guidance of adults. This fact . . . is of fundamental importance in that it demands a radical alteration of the entire doctrine concerning the relation between learning and development in children . . . the notion of a zone of proximal development enables us to propound a new formula, namely that the only 'good learning' is that which is in advance of development . . . We propose that an essential feature of learning is that it creates the zone of proximal development (pp. 81-83).

The mentors, with skills beyond the students' skills, were the source of imitation that led to an increase in students' learning. Kathy said in her pre-interview:

> [W]e're working with people who know a lot about what they're studying because they're probably going to major in it . . . or I think they're majoring in it? [I reply yes.] Okay, and so they know a lot about what we're researching, and I think it will be cool to get their feedback on what we're writing.

She was speaking of the power of an expert audience, one more experienced than she was, to help her learn more; in turn, she was showing she knew she had more to learn. Jacob articulated in his pre-interview his understanding of the zone of proximal development:

> Admittedly, I am kind of intimidated about working with grad students. I mean, I think about it, and they're probably what, five or six years older than me? Gone through whole undergraduate work. I want to sound smart in front of them. That's what it comes down to. . . . I want it to at least *look* like I know what I'm talking about. And so, in that right, if anything, it's gonna make me read harder.

Jacob planned to push himself to do more because of this expert audience. Allison showed in her post-interview that she had followed this plan: "As I was writing my paper, I was worried about it being the quality it should be, being up to par. . . . I didn't really want them to think of me as the kind of person that produces sub-par work." The choice of audience in this unit created a zone of proximal development out of what, at first glance, was simply a traditional authentic audience, and this resulted in doubled learning for students. They had the experience of writing for a real audience, and they were motivated to do even more in their writing as they wrote within this zone of proximal development.

Yet the audience for each student was not just the older mentor; each student had an audience of peers as well. When the students spoke in their post-interviews of the exchanges they had in their character forums, they spoke specifically of the role of the peer audience. Rather than describing peers as they had described the mentors, as an expert audience, the students talked about their peers as co-thinkers. They spoke of the many voices in the character forum discussions, discussions in which their peers played just as active a role as their mentors but in a different way. Kathy talked of the power of reading differing opinions to be sure she had considered all ideas in the construction of her argument:

> If you're writing a paper or a discussion or whatever will always be stronger when you have other people's input because a lot of times you write something, and you don't think of the other ways it could be interpreted or the other ways that you could present the argument.

Jacob saw other opinions strengthening his argument in a slightly different way:

> Having more perspectives gives you the ability to not only believe in others' ideas and thoughts, but it also gives you the chance to also reinforce your own whether you are contradicting others saying that that is wrong or you use them to base your opinions.

To Jacob, his large audience allowed him to strengthen his own argument. Allison summed up, "Two heads are better than one," and working with others was just fun: "I got excited when I would read the comments." The redesigned unit broke the homogeneity of these students' learning, and as a result,

they saw how they could learn more, even from their homogeneous peers, in this new environment. The peers, whom the students had not even considered as an audience at the outset of the unit, were now critical members of their authentic audience.

These students showed that their sense of audience was not just a relationship for developing their skills as writers. They started out anticipating such a writing process relationship with their mentor audience and anticipating that their mentors' expert skills would help them grow as writers. But they talked after the unit about an even deeper role the audience had played: their mentors and peers had become co-thinkers whose ideas helped shape their own all along the way. The character forum groups within the new learning environment of the asynchronous digital collaboration developed into communities of practice (Wenger, 2000). The students saw they had "negotiate[d] competence through an experience of direct participation" (p. 229) in this group bound together by the shared task of understanding the character. The audience feature of the redesigned unit brought the traditional value of authentic audience to the students' thinking and writing. Then the audience became something more complex for the students as it evolved into a community of practice for each student with her peers and her mentor(s). As they worked through this unit, the students ultimately became part of a thinking partnership as the feature of audience evolved to include the next feature, collaboration.

CORE FEATURE #2: COLLABORATION

As one of the foundational theories of composition pedagogy, Moffett's model of three-way discourse (1968) is critical to understanding the feature of collaboration in the environment of the asynchronous digital collaboration. I will first present Moffett's theory, then I will return to the data, cycling between evidence and theory to uncover and understand the complexity of the feature of collaboration and its effects on students' thinking, reading, and writing.

Three-Way Discourse as Composition Pedagogy

Moffett's three-way discourse model included the speaker/writer, the audience, and the subject. His theory was built on two axes of distance: distance between a speaker/writer and the audience (I—you), as defined by space and time, and distance between a speaker/writer and the subject (I—It), as defined by abstractive distance (p. 11). His inclusion of audience was revolutionary, as school writing had been mostly teacher-directed up to this point. Moffett understood what the Council of Writing Program Administrators defined in their *WPA Outcomes Statement for First-Year Composition (v3.0)* (2014) nearly 50 years later: speaking/reading and listening/writing are inextricably linked. All discourse is dialogue. Moffett defined this dialogue as deeper than the concept of authentic audience as

writing process partner. The internalization of the dialogue allowed the speaker/writer to think both sides of the dialogue, playing the role of the partner, then to re-externalize this in speech or writing, continuing to account for the audience (p. 10).

In every discourse action, distance exists. Moffett defined the goal of composition pedagogy as helping students travel the natural expansion of space, time, and abstraction in the two aspects of discourse, I—It and I—You. As shown in Figure 3, by placing these distances on two axes, Moffett mapped their interplay. This ever-increasing distance became the pedagogical basis of Moffett's theory: teachers were to strive to balance for their students (I) the cognitive load of audience (You) against the cognitive load of abstraction (It) (Blau, 2012, p. 95). Teachers were to structure discourse assignments on a graduated scale to support their students as they thought through then externalized increasingly challenging discourse. Discourse began internally about familiar subjects, the closest I—it and I—you (Moffett, 1968, p. 59); an example assignment would be a journal entry about one's pet (Point A in Figure 3). The highest discourse challenge was publishing about an abstract subject with infinite space and time between the writer and audience, the most distant I—it and I—you, requiring a student to envision and externalize this abstract dialogue (Moffett, 1968, p. 59). An example assignment would be to write a reflective essay on a literary theory for publication to a distant audience (Point B in Figure 3). Increase in distance between the speaker/writer and the subject brought one set of discourse challenges, as subject matter became increasingly abstract in conjunction with students' cognitive development. Distance between speaker/writer and audience brought another set of challenges, as the speaker/writer had to conceptualize communicating with increasingly unfamiliar audiences.
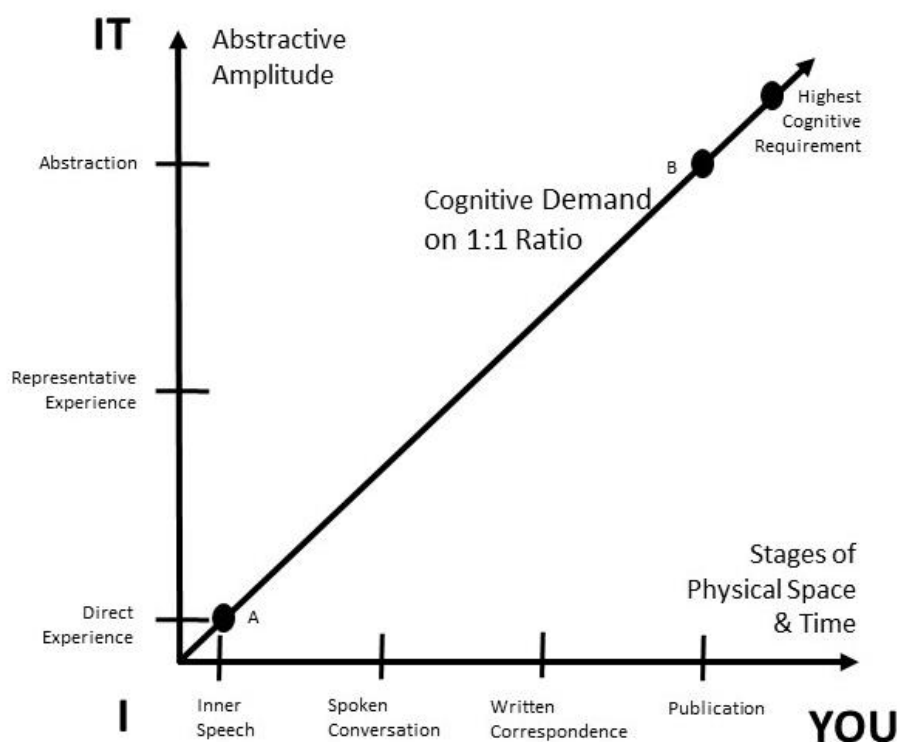
Figure 3. Moffett's discourse theory. The I—It longitudinal axis and the I—You latitudinal axis illustrate increasing discourse challenges with increased distance, both in abstractive amplitude and physical space and time.[7]

Moffett's theory that students needed to regularly play the different roles of dialogue was at the heart of the students' shifting roles in the redesigned unit's asynchronous digital collaboration. In the character forums, the students participated in a continuous dialogue from the beginning of their study of *Othello*, just as Moffett proposed that both thought and writing began with dialogue. In the asynchronous digital collaboration, the student's role constantly changed between writer and reader, and as both writer and reader, each student had to envision and internalize two different audiences.

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[7] This figure is not created by Moffett or theorists who worked with his ideas. Instead, I created this figure, adding the cognitive demand tangent to show the direct ratio of increasing distance through space and time. This ratio is changed in digital space and time, which I discuss below as I build on the understanding of Moffett achieved through this figure.

Rather than playing the sole role of writer composing for the authentic audience of the mentor as writing process partner (the traditional discourse between student and authentic audience), each student was a writer for two audiences, peers and mentor(s), and a reader of two discourses, peer and mentor ideas. This double audience both stretched and supported the students. Heathcote and Herbert (1985), in their pedagogical application of Moffett's theory, explained that teachers had to give their students the "mantle of expert" (p. 174) to empower the dialogue of the group. However, they recognized that students were still students:

> A teacher cannot presume to give direct information to experts but instead must set up ways in which the experts will discover what they know while at the same time protecting them from the awareness that they do not as yet have this expertise. In other words, through structuring the teacher protects the student from the debilitating effects of ignorance (p. 174).

In the learning environment of the redesigned unit, the students were not experts at the beginning of their study of the text. As they and the mentors collaborated to understand the characters, the students played multiple roles in the vibrant discourse dialogue that resulted, and the mentors provided the expert guidance students needed to assume the "mantles of expert" through the process of dialogue.

Expanding the Three-Way Discourse

Foregrounding this dialogue with both mentors and peers in students' discourse practices during the redesigned unit had deep effects on the students as thinkers and readers, including the development of a community of practice through an expansion of Moffett's conception of dialogue. As I turn to the data for evidence of this impact, I jump over for now *how* students were collaborating in the forums—they were writing—to keep focused solely on the act of collaborating—the on-going dialogue with peers and mentors in the forums and final papers. (I will return to the method of writing in Chapter Five when I explore the final two features of the unit: expanded space and time and reading/writing integration.) The two pedagogical pieces of Moffett's theory, dialogue and ever-increasing distance, were both at work in the feature of collaboration within the redesigned unit.

As explained above, each student, in the constant dialogue of the forums, played the roles of writer and reader regularly, internalizing the dialogue as she composed each subsequent post for her peer and mentor audiences. Kathy spoke about how being both a reader and a writer in her forum helped her develop woven threads of thought:

> You post something, and then somebody will reply to it and then you just get more and more replies. . . . It like builds on each other so you can look back at previous things, and it's like a thread rather than separate posts. More like tied together.

Allison recognized that, by being a reader of others' ideas, her role as thinker and writer of her ideas developed more: "The fact that you had to face other opinions meant you had to strengthen your own."

The students also explained that their peers and mentors played different roles in the dialogue due to the shifting distance between writer and audience. The peers were close in distance from the outset since the students knew each other well, and this closeness resulted in an easy dialogue that changed the students' thinking just by the act of reading and responding to their peers' ideas. Kathy pointed to a specific place where a peer's post changed her thinking:

> So she [a peer] posted a quote about like Desdemona and Othello's love and then just said like, "I chose this quote because it shows their love." . . . I kind of took it a little further and said [wrote] like, "I think this is showing that together they think they're invincible, which shows how blind they are to Iago and that we know Iago is going to ruin their relationship. So it shows how they are so focused on love that they're not seeing what everyone else is seeing."

After reading a peer's selected primary text in her role as audience, Kathy shifted to her role as writer and composed a response incorporating this evidence into her own developing argument. In this way, the peers were equal idea sharers in the community of practice, close in distance from the outset.

The mentors played a different role in the community of practice. The students talked repeatedly about how the mentors directly pushed them to think more deeply. Jacob said:

> We [he and his peers] put down good ideas, and we were just skimming the surface, and it was nice that she [Monique, the mentor] just pushed us to go a little bit further, to analyze a little bit deeper. . . . The collaboration definitely helped because I know I would not have been able to get to those ideas by myself.

Barbara confirmed her questioning role as a mentor:

> A lot of times it became very repetitive in what they [the students] were saying, you know: "Iago's just really manipulative." We [she and Monique] were like, "Okay, but like why do you think he's manipulative? What are his goals?"

The mentors retained their expert audience role even as they became collaborators in the dialogue. They used the distance inherent in their role as an older mentor to push the students to articulate their ideas more clearly and with more depth, and in doing so, the mentors became the boundary brokers of the community (Wenger, 2000). Wenger proposed that the greatest learning happens at the boundary of what the community members understand, that is, Vygotsky's zone of proximal development. The boundary broker helps members approach and even cross this boundary in their learning, and only certain types of individuals in the community of practice can play this role: "Brokering knowledge is

delicate. It requires enough legitimacy to be listened to and enough distance to bring something really new" (p. 236). The students' appreciation that the mentors were older and more experienced allowed the mentors to become boundary brokers of the communities of practice within the character forums.

Thus the dialogue absorbed this complexity of peer and expert voices within a community of practice. These two collaborating roles created one total collaborative dialogue, as Kathy explained:

> [T]he ideas had been compiled from back and forth conversation. . . . I would start with an idea, he [Jeremy, the mentor] would add something, like Ann and Lucy [peers] would add something, and then I would kind of form like a bigger picture from that.

In this collaboration, both ends of Moffett's distance between writer and reader were simultaneously at work. Students worked with peers at a close proximity of sharing ideas and with mentors at a further distance of pressing for more thought. This complicated the students' work in the dialogue, as they had to consider two types of audience each time they were in the role of writer. This four-way discourse practice—the student as I, the subject as It, and the mentor(s) and peers as two Yous—required even more thinking and skill development than Moffett proposed in his three-way model. It was no surprise therefore that, by the final days of the character forums, the students had internalized the skills of the dialogue. Jacob said, "Towards the end, it was just like, 'We have to delve deeper into this quote or Monique or Barbara are going to keep saying, "Think further. Think further."' But I mean that helped of course." This result confirmed the impact of the mentors as boundary brokers in the zone of proximal development. "Internalizing group exchanges into individual habits of thought and speech also illustrates Piaget's concept, which was shared by Lev Vygotsky" (Moffett & Wagner, 1992, p. 29) of the growth achieved by working with others in a zone of proximal development. The students' thinking and reading skills changed due to the collaboration within the digital learning environment of the redesigned unit: they internalized the deeper thinking of their audience-cum-collaborators and worked to read and analyze within these new understandings. Barbara spoke in her post-interview of seeing this happen with her students:

> I noticed that posts began to get longer as they went on, and they also got deeper, and they're having more thoughtful conversations between each other as they went on. And I think they started to form their own ideas and solidify things that they were planning on writing about.

Collaborators as Audience

I then turned to reading the first data sets of the new layer, the students' papers and the mentors' feedback on these papers, seeking to discover if these reported effects of constant dialogue

within the collaboration bore out in the students' formal discourse, addressing the second hypothesis of the first research question:

- o Participation in the redesigned unit resulted in students articulating their ideas more effectively in their research papers.

What was striking as I read this data layer was how the sense of expert audience the students anticipated in their pre-interviews changed by the time the students actually shared their drafts with their mentors. Jacob said in his post-interview:

It was nice because we knew these people [the mentors] . . . and we had that level of trust in them. In that way, we were able to take their criticisms and their suggestions and their pushing us more sincerely than we would just anybody else.

Jacob articulated that the closeness created by the collaboration within a community of practice made the mentors' expert role more effective, a seemingly contradictory point at first glance. Could a mentor be both a close and distant audience in Moffett's three-way discourse? Jacob said yes. Because he developed a relationship with his mentor, shrinking the sense of distance between himself and this part of his audience, Jacob learned more from his mentor about how to write for an imagined distant audience in a formal paper. He was more capable of spanning the distance of abstraction, the distance between I and It, because of the thinking development he achieved during the forum collaboration, and he was more capable of spanning the distance to an unknown audience, the distance between I and You, because of the collaborative relationship he had with his mentor.

Jacob's understanding of Monique's feedback on his paper draft proved his increased skills with these abstractive and audience distances. Monique wrote on his draft:

I think there might be too much to your introduction; it is always difficult to be concise with such a complex character analysis, but I think stating your claim more clearly with less "fluff" will make your introduction stronger. I really like your point about Iago's cunning; he does not just kill Othello but instead manipulates him. This analysis gives Iago more depth. Overall, I would work on being more concise and avoiding summary. You have a very good draft here with some great insights. Keep up the good work :)

Jacob explained how his revision was impacted by the collaboration and by Monique's feedback:

It [the character forum] made me distill what my thoughts were. Because . . . if I hadn't had the collaboration, my paper would have been much more broad to kind of include everything, just an all-encompassing kind of idea. . . . And then especially as the draft came in, Monique was like,

> "You can distill this down even further. You can cut this down and make it even that more
>
> powerful."

For Jacob, the collaboration led to a deeper abstractive understanding of his argument and the text plus a deeper relationship with the expert audience. He felt both of these helped him strengthen his writing (writing that, again, I will discuss in detail in the next chapter).

Collaboration affected another aspect of the traditional role of an authentic audience—giving feedback. By the time the students and mentors reached this stage of the unit, their closeness was not just perceived by the students. The mentors felt they truly knew the students' intellectual work and therefore felt they could give specifically directed feedback. Gina saw a major hole in Allison's first draft; her final comment on Allison's draft was:

> [A]s you revise this, I think it will be important for you to create a strong thesis. You seem to be
>
> arguing that Emilia is "good" and that the oppressive society she lives in makes her act poorly.
>
> This is true, and you give great evidence for it. But, you could definitely grasp onto something
>
> more specific to focus all this evidence on something more than a close reading of the text. With
>
> the awesome outside sources you have found, think about why Shakespeare would make a
>
> character like Emilia. Desdemona is not like Emilia, and they are both women. As we see,
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> Shakespeare's characters cannot easily be categorized as good or bad. And if you want to
>
> defend Emilia as good, tell the reader (without using "I think") why that matters. How will
>
> viewing Emilia as good change the way we read the play? I'll be excited to read your final
>
> product! You are on your way to a great paper! Keep up the good work!

This was a major revision recommendation: redoing a thesis. Gina spoke in her post-interview about why she felt she could give this kind of feedback: "[Allison] would respond really well directly to what I was saying and what other group members said [in the forum]." The collaboration led to the comfort Gina felt with Allison and, in turn, Allison felt with Gina, as her revision of her thesis revealed. Allison's original thesis was: "Emilia is trying to simply be a good and honest person but at a time when society dictates that a good person is one who obeys their husband." Her final thesis was:

> Emilia is trying to be the person that she wants to be, but she is experiencing a terrible struggle
>
> that has created an environment in which she is never completely comfortable. In essence
>
> Emilia is trying to be the kind of person that she wants to be in a society that does not value that
>
> kind of person, but rather the woman who obeys and follows her husband no matter what they
>
> wish to be.

The impact of Gina's feedback was clear in how Allison complicated her presentation of Emilia; Emilia was no longer just "good."

Response theory has advocated for decades for this kind of authentic conversation between writer and reader. Research in the 1980s and early 1990s sought to change traditional teacher response from a focus on error to a conversation of revision (Sommers, 1982; Anson, 1989). Straub and Lunsford (1995) distilled this research into a set of best practices for response to writing: "well-developed and text-specific comments;" "global, not local, concerns;" "nonauthoritative modes;" "carefully thought out and purposeful;" "help students approach writing as a process;" "mindful of rhetorical situation of writing;" and "adapted to student writer behind the text" (p. 347). However, as recently as 2014, these practices, while still considered the best practices for teacher response, were not being used in most college composition classrooms (Ferris, 2014).

Revisiting Gina's feedback above, these best practices can be seen in action. Gina gave "well-developed and text-specific comments" about the "global, not local, concern" of Allison's thesis. Gina's comment was "carefully thought-out" to "help students approach writing as a process," as she worked to show Allison that she understood where she was coming from rather than dismissing her work on the original thesis. Then because of the relationship that had developed between Allison and Gina in the character forum collaboration, Gina's feedback was "nonauthoritative" and "adapted to student writer behind the text." It is important to note that the mentors were not instructed specifically in these best practices in preparation for this collaboration. They did talk with their professor and classmates about how to respond to students in a supportive manner, but their professor did not give them this list of best practices to apply during the paper feedback. The best practices developed naturally from the collaborative work the mentors did in the redesigned unit, and Phelps (1998) argued for this inextricable integration of growth, collaboration, and reflection:

> [M]y work has thrived on relationships with reflective counterparts, through whom it is constantly challenged, transformed, expanded, and refreshed. Textual others [that is, books, articles, etc.] have an extraordinary part to play in enlarging reflection beyond the merely personal, as the teachers' conversations and materials emphasize. But face-to-face or other intimate reflective interactions . . . are a necessity for continuing growth in rich teaching and learning (pp. 139-140).

That was the complexity of audience and collaboration within the redesigned unit. The students grew as reflexive thinkers through the deep relationships with mentors and peers they built from the constant dialogue. Expanding the concept of audience into a community of practice opened up Moffett's full

pedagogy of dialogue. The students acted as both writer and reader, and the collaborators started as two parts, mentors and peers, who became one thinking collaboration within a zone of proximal development. The long-term collaboration ultimately transformed the one-faceted writing process audience into multi-faceted co-readers, co-thinkers, and co-writers.

Applebee and Langer (2011) found that peer collaboration happens often in secondary classrooms, and this study added to the evidence of the positive effects of peer collaboration, as the dialogue with peers played a role in changing students' thinking processes. However, the collaboration with expert audiences is not happening in classrooms because teachers are not yet even bringing authentic audiences regularly into their classrooms (Applebee & Langer, 2011). Despite an age difference that at the outset made the mentors a perceived distant audience, the students and mentors dialoguing from the beginning of their reading of the text led to a relationship that allowed the feedback process on the research paper to follow best practices of response theory. The mentor's role as an unfamiliar audience at the outset made each student see there was more to learn, an aspect of the student's growth in this zone of proximal development. Then, as the student wrote her research paper with the skills she had developed and honed in the collaboration, she was primed to truly internalize her now close collaborator's, her mentor's, feedback.

CORE FEATURE #3: LAYERS OF READING

The complexity of roles played by the students in their collaboration with the different members of their audience was further complicated by the many layers of reading the students tackled in their reader roles. Ultimately, the students read at least ten different layers: (1) the primary text, (2) peer posts in the character forum, (3) mentor posts in the character forum, (4 and 5+) two or more secondary sources, (6 and 7) two sets of peer feedback on the drafts, (8 and 9) two peer drafts, and (10) mentor feedback on the draft. The students' reading of these layers overlapped, all while they switched roles between reader and writer. For this discussion of the layers of reading feature of the redesigned unit, I focus on the students in their role as reader, once again leaving their role as writer for the discussion of the reading/writing integration feature in Chapter Five. I discuss each layer of reading in order of when the students first started the reading, moving into the interweaving of the readings, then to the findings.

Layers 1, 2, and 3: Primary Text, Peer Posts, and Mentor Posts

From the outset of the unit, students read the primary text of *Othello*. After reading the first scenes of the play, each student chose the character she wished to follow and started her work in the character forum. This added two layers of reading almost simultaneously with the beginning of the

students' reading of the primary text: the mentor and peer posts in the character forum. In this way, the unit intertwined reading the primary text with reading about the primary text from nearly the onset of the reading process, and this integrated reading process changed the students as readers.

Kathy talked about her reading process in her post-interview. I used the first part of this quote above to show how the peer audience developed students' thinking. Looking at the whole exchange uncovered even deeper changes in Kathy as a reader:

So she [a peer] posted a quote about like Desdemona and Othello's love and then just said like, "I chose this quote because it shows their love." . . . I kind of took it a little further and said [wrote] like, "I think this is showing that together they think they're invincible, which shows how blind they are to Iago and that we know Iago is going to ruin their relationship. So it shows how they are so focused on love that they're not seeing what everyone else is seeing." And then Jeremy [her mentor] said . . . Othello won Desdemona's heart with his storytelling, and we know Iago has this web that catches Cassio, so he brought up like the theme of stories. Then I replied and said like, "I hadn't thought about that!" And then I kind of talked about how all the different little stories that we've seen, like Desdemona with Othello, Iago was wooing Othello differently. . . . And he was just kind of bringing up like look for stories throughout the whole thing because I hadn't really thought about that. After the initial story with wooing Desdemona, I kind of forgot about that, so I didn't really think that that would really impact it. But then I was saying like maybe that would incorporate to the end of the book, looking ahead, about like storytelling. Because Iago's whole thing was a giant story that he had like made up. It was one big story.

By reading the dialogue between her peer and Jeremy in her character forum, Kathy's approach to reading the primary text changed. She started to look for the theme of stories as she read, anticipating how it might affect the end of the play. Kathy's ideas expanded as she read, and this expansion affected subsequent readings, showing her developing skills as a reflective reader. Yancey (2004), the leading voice in using reflection in the secondary classroom, proposed that while teachers who used writing portfolios were incorporating reflection into student writing, a pedagogical hole existed in using reflection to develop students' reading processes. "Asking students to explore not-understanding as a means of understanding asks students implicitly to develop a reading process" (p. 56). Yancey believed reflective reading was a way to teach students the metacognition that later research (Council of Writing Program Administrators, National Council of Teachers of English, National Writing Project, 2011) proposed as essential to post-secondary success. The findings of this study have already shown that

students developed reflective practices that strengthened their growth and confidence as writers, and Kathy's experience here showed the students developed as reflective readers as well.

I asked Kathy if this dialogue affected her research paper to see if the reflective reading process affected her final thoughts on her character. She replied, "I . . . used this quote [the peer's original quote] in my paper and talked about rather than story-telling, how blind their love was, so more of the beginning of this discussion." Kathy then developed the idea of stories in her paper by delineating the difference between Othello's stories, which she called stories, and Iago's stories, which she called lies. Two quotes from her final paper showed the effect of her reflective reading on her final argument. "She [Desdemona] is wooed by his [Othello's] stories, his battles, and the survivals that even the Duke believes are sure to draw a woman in. Desdemona is Othello's catch." Later in the paper, she wrote:

> At the time, Desdemona doesn't realize that she is tangled in Iago's web of lies, but she falls in the perfect position as she vies for Cassio. Iago tries to convince her that her doubts are wrong and it is all political.

The idea of story-telling stayed with Kathy, becoming an aspect of her developing argument as she focused her reading of the play on looking for stories of love and stories of lies.

Jacob and Allison also talked about how their reading processes changed with the layers of reading in the forums. Once again, I revisit a quote from above to uncover even more growth in Jacob:

> So we're talking, we're starting to get at what Iago's trying to do here, what his motives are. And so we have Brooks [a peer] giving a pretty general post. Then we have Barbara [his mentor] saying, "Well, what are his motives? What can we push further into this?" And then we have Monique [his other mentor] talking about . . . [Me: It looks like she adds another . . .] Yea, push. Exactly. Brooks then says, "Why not both?" . . . But then it made me realize that Iago . . . it can't be just both . . . it's not one . . . it's not both. It has to be one or the other. And so, it kind of set the tone for me for the book because I realized like if I wasn't going to treat him as a motiveless malignity, which I didn't think he was, then he had to have some reason. And so that made me read more critically and think harder because I didn't agree with this post. Because I did not agree with, "Why not both?"

Jacob's thesis in his final paper showed he had found an answer to Iago's reasons through his reflective reading, a process that began after he read Brooks's post in the forum that he discussed in the above quote. His thesis articulated the motive he saw behind Iago's actions:

The workings of Iago's mind may be blurred from his insanity, but this does not mean he lacks a motive. For what is to be found is a fatal lack of self-confidence and destructive desire to feel more empowered than others.

Allison also spoke of her reading process changing because she read others' opinions:

It allowed me to delve deeper into my character and see other people's perspective on her so it wasn't just my ideas. . . . It made me think of her [Emilia] in a different light in certain situations because I can be very fixed minded at times. But it kind of forced me to think of her as possibly being a bad person or being the person who's kind of evil, even though I didn't see her in that light before.

Allison recognized her tendencies as a reader to be set in her ideas and sought to change her reading process, a direct attempt to break from homogeneity by learning from the heterogeneous collaboration.

The mentors also talked about the students' reflective development that came through the layers of reading in the character forums. The mentors intentionally crafted their responses as prompts to alter the students' reading of the primary text. Gina said:

I did give a lot of questions. To consider more like women in the Shakespearean era because . . . it's easy for us to in general as readers to like think of stories in this time period, and that just doesn't work all the time.

Gina anticipated a reading issue many students have: reading through the lens of their own experiences, and used her posts to direct Allison to read through the lens of Shakespeare's time.

Ultimately, Gina felt the layers of reading of primary text and peer and mentor posts helped students engage at every step in the reading process versus the skimming that could happen when students individually read just the layer of primary text. She said:

There's more conversation with other students and other perspectives. And even if basically like Johnny doesn't understand what this chapter or verse or section of text is about, another student might, and that little bit of information might help Johnny understand what was going on so they're not stuck at reading. It's more clear. And on just a paper or worksheet, they would just skip that question altogether.

The students in turn confirmed Gina's ideas on how this layered reading process helped them think more deeply about their reading and themselves as readers, specifically when they took the final step required of them in the character forum work: rereading the entire forum before formally drafting their papers. Kathy spoke of this rereading as part of her reflective reading process: "I think having it digitally had the ideas down on 'paper,' so you could read them, go back to them, and think more about them

than just like saying something to somebody." Jacob spoke of how reading others' analyses along with the primary text as he reread the forum resulted in deeper analysis in his research paper:

> Those [the quotes posted in the character forum] were very helpful because we had explained them and talked about them a lot. So to have those examples, which I knew totally and completely what they were about, that really helped in my paper.

Finally, I step away from the three specific students to quote Sebastian simply because he articulated the reflective reading process so clearly in his post-interview:

> You know, it's one thing to go through the book and find a quote and to think what you think it means, but to see all the different collaborations [in the forum] and to see how . . . they focused much more on one quote. They spent a lot of time talking about and seeing it more . . . especially in the end, when you go back and you see the massive effect that quote had . . . like they look at the long-term effects of the quote, as opposed to if you are just looking through the book, you say, "Well, this quote's interesting. I'll use this."

As a mentor, Gina saw this rereading process as so critical that she suggested a redesign of the redesigned unit: having students read other forums as reflective tools as well. "It would have been interesting if Allison had . . . at least read through conversations about Iago or about Desdemona before she wrote her paper to try to get maybe a more full idea [of her character Emilia]." The opportunity for increasing reflection even more only took adding another reading layer, a step in the process I, as the teacher, had not thought to add.

Layers 4 and 5: Secondary Sources

The next layers of reading in the unit consisted of two or more secondary sources. To understand these layers, I expanded my reading of the second data layer to include the junior year research papers of the three specific students.

> The data quickly proved the third hypothesis:
>
> o Participation in the asynchronous digital collaboration resulted in students seeing research as engaging in a conversation.

Jacob said:

> I even came to a contradicting conclusion from the article [secondary source] I chose to quote in my paper. I didn't look for answers elsewhere and realized that I could answer this question myself so I felt more confident in my own critical thinking skills.

Jacob, using his reflexive skills, understood how the deeper thinking skills he had developed throughout his work in the redesigned unit led to his confidence in developing his own argument for his research

paper. This was a change from how he approached his junior year research paper. Jacob wrote about Ernest Hemingway in this junior paper, a similar literary research assignment to the redesigned unit's paper. In the introduction to his junior paper, he presented his argument, and the thought he had put into developing it was evident:

> Good writing is how to tell a story that people listen to and enjoy. However, great writing has the ability to teach the reader something about life, and about themselves. Ernest Hemingway lived in a time of tragedy and suffering. The shine of the new 20th century had worn quickly as the First World War had ravaged the globe. A time that was supposed to usher in a new age of progress and reform was blown away. A sense of despair came from the world as it mourned its fallen members. Terrified at the destruction of not only human life, but human hope, the Lost Generation came to prominence in Paris, France. One of its great members was an American who had seen his fair share of suffering throughout the years as he had grown up. But it was not just the Great War that had disenfranchised him, but even more. Ernest Hemingway was fundamentally obsessed with the idea of an omnipresent suffering; this interest in pain throughout his life is a keystone to Hemingway's writing.

Jacob built his presentation of Hemingway on the issues of the time period and on the cultural movement of the Lost Generation, showing he had connected information across research areas to craft his argument. However, his ultimate thesis was not his own idea, as shown in a quote from a secondary source he included later in the paper:

> "He has progressed from grasshoppers and trout through bulls and lions and kudus to Chinamen and Cubans, and now to Fascists. Hitherto the act of destruction has given rise for him two complex emotions: he has identified himself not merely with the injurer but also with the injured. There has been a masochistic complement to the sadism" (Wilson 28).

This secondary source provided Jacob the idea that Hemingway was deeply focused on suffering and pain, beyond the frustrations that were more culturally normal in his time. Jacob chose to use this idea as the foundation of his thesis.

Jacob's introduction to his research paper in the redesigned unit showed a different approach to research: he dialogued with, and ultimately contradicted, the secondary source.

> It will forever be difficult to understand the machinations of a mad man's mind. It is a brain where lines are equally as blurred as the ideals and morals upon where they are built. The beauty of the insane is the improbable and impossible ways they validate and choose their actions. In his article "*Othello:* Total Allegiance to Justice", Jerry L. Crawford states after

explaining some of Iago's possible motivations, "While any of these might well be Iago's true motive, none of them, in the light of what Iago does and the manner in which he does it, provides sufficient motive for a completely sane individual." Yet this idea of claiming Iago to be the infamous "motiveless malignity" does not delve deep enough into the deeper seated reasoning of Iago. Judging by his manic actions and terribly deceitful plans, it is easy to simply say it is impossible to understand the man who has no reasons himself. Iago, whether the reader can understand them or not, still has his own reasons and motivations. It would be easy to disconnect completely from a character so bound to evil. Instead what the reader must see is Iago's fundamental insecurity in his own self-image and his incessant need to be superior to others. Throughout the play every action of Iago's is an attempt to improve his own standings and to impose himself on the other characters. The workings of Iago's mind may be blurred from his insanity, but this does not mean he lacks a motive. For what is to be found is a fatal lack of self-confidence and destructive desire to feel more empowered than others.

Jacob presented the secondary source in this introduction as the springboard for his differing ideas; that is, he presented the existing conversation around his character then added his voice to the dialogue.

Allison and Kathy also showed a change in their engagement with research between their junior and senior papers. When they spoke of the research they did for the junior papers, they said, "It was fact-based" (Allison), and, "I just like went and got a book and then wrote down a bunch of facts from the book and kind of incorporated those into my paper" (Kathy). They did not speak of questioning the facts or incorporating them into their own thinking, and the structure of their junior papers showed this. Both of them had factual theses, ones that were not even opinion-based like Jacob's (even though his was based on someone else's opinion). Kathy's junior thesis was, "African Americans came to hold a prominent position on the influence of music and artistic style during the Harlem Renaissance after the Great Migration," a fact she could, and did, prove with historical research. Kathy and Allison both then followed a structure within each paragraph of fact/citation/fact/citation, as they laid out the research they had found supporting their theses. Allison's second paragraph showed this structure clearly:

Hemingway lived through many different events in his life that added to the way that he felt about life itself. These events included the relationship that he had with his family. Hemingway's family life was never the best. His father committed suicide within Hemingway's lifetime, but that did not have a great effect on Hemingway (Gilley, Shawn). The more interesting thing was that Hemingway refused to go to his father's funeral and the way in which his mother reacted. After his father committed suicide his mother did not take Hemingway's decision to not attend

the funeral very well. She sent him the gun that two of the four family members, including his father, killed themselves with (Gilley, Shawn). Hemingway had never truly had a functioning relationship with his mother. The dysfunctional nature of the relationship between Hemingway and his mother can first be drawn back to when Hemingway was a child and his mother would dress him like a girl and refer to him as '"Dutch Dolly"' (Qtd in Walsh, John). With this she also praised him for doing things that little boys would do and this caused great confusion for Hemingway and fueled the hatred that sat in his heart for his mother where there should have been love (Walsh, John). Hemingway's relationship with his father was also strained. Hemingway wrote about how much he hated his mother as well. He said '"I hate her guts and she hates mine"' (Qtd. in Walsh, John), while also in the same letter blaming his mother for the suicide of his father. His father was abusive and would "beat his son with a razor strop" (Walsh, John). Hemingway did not cope with the abuse very well and started to hate his father, but not as much as his mother. Another signal that the family life of the Hemingway's was dysfunctional was the fact that Hemingway's brother, sister and granddaughter also killed themselves (Walsh, John), which signals a problem that lies deeper than what was first thought.

She had seven citations in this one paragraph, and each sentence prior to a citation was introducing the fact to be cited. This was not a dialogue with research but instead a presentation of research.

Allison's second paragraph of her paper from the redesigned unit was strikingly different. She introduced a key idea from her research, then she built her own view of her character onto this idea. I have bolded where Allison's own ideas build on her research to visually show the balance.

Ruth Vanita delved deep into the lives and expectations of woman during this time period in her article ""Proper" Men and "Fallen" Women: The Unprotectedness of Wives in *Othello*". She explains the actions of Emilia and in fact justifies the way in which Emilia acted when she was around Iago by exploring the roles of women and the way in which society dictated the actions of women and the appropriate way for them to interact with their husbands. By delving into the motivations of not only Emilia, but also the woman of this time, it allows the readers to dig even deeper into what Emilia was experiencing emotionally **and the final bravery that she shows once she decides to go against Iago**. Emilia was "Given the absence of viable options" and to her "patient submission is the best survival strategy" (Vanita 344) and this explains the behavior of Emilia when it comes to betraying those who she cares about most for Iago. Emilia is simply trying to survive the situation that she has found herself in and that means for her to obey her husband no matter what. **From that comes an inner struggle of doing what she is told to do in**

order to survive or to be the kind of person that she wants to be . . . Emilia is trying to be the person that she wants to be, but she is experiencing a terrible struggle that has created an environment in which she is never completely comfortable. In essence Emilia is trying to be the kind of person that she wants to be in a society that does not value that kind of person, but rather the woman who obeys and follows her husband no matter what they wish to be. This colors Emilia's judgement and forces her to choose between the man, who has been abusing her for their entire marriage and who has made her reliant on him, and those who provide her with hope for the future and what she is capable of.

Notice how the second half of the paragraph was Allison's ideas. The research Allison read presented Emilia as having few options as a woman in her time, and Allison built onto that her view of Emilia as a strong character who had to balance her strength with the realities of her position in her society.

I found it striking how deeply the students felt they could dialogue with the secondary sources in the redesigned unit. I had hypothesized this from what I had seen in student papers prior to this study, but I did not understand how much students had changed their approach to research. While this study was not controlled to prove this change in students' view of research was due to the redesigned unit, the evidence seemed to suggest the students used the reflective reading skills they developed through the reading layers of the character forums to read the secondary sources. This was partly due to the expanded time of the unit, which I discuss in detail below but will touch on here. The students did not start reading the secondary sources until approximately five weeks into the unit. They spent those first five weeks in the character forums thinking about the primary text and others' views, developing their reading and thinking skills as well as their own expertise in the subject (Wagner, 1985). When they started to read secondary sources, they appeared to approach this reading in the same way they had approached the prior layers of reading: each secondary source was another person's view of the primary text that the students saw as part of their thinking process. They were not reading research as an expert voice that would give them their ideas; they were reading research as a co-voice to inform their understandings. In a future extension of this study, I would like to explore this parallel reading process, seeking evidence of what lies behind this marked change in students' reading of research.

Layers 6, 7, 8, and 9: Peer Drafts and Peer Feedback

Next, students read two peers' papers and feedback from two peers. I required these readings because I wanted students to receive more feedback in addition to their mentors' feedback. However, the findings from these layers of reading surprised me.

First, the students spoke about how the peer feedback they received was not that helpful, so my goal for having these two reading layers as additional feedback was not successful. Jacob and Allison both said their peer feedback was all about grammar. As a result, Jacob said, "I really didn't pay attention to . . . the peer reviews. . . . He [his peer reviewer] was talking mainly about like grammar and stuff, and so I knew that was a problem and already was going to address it." Only Kathy reported using her peers' feedback: "Like I split my screen, and then I would go through by paragraph by paragraph and look at like [one peer's] comments and then change what I thought . . . could be taken from her comment." However, Kathy did not say the feedback was necessarily helpful; instead she said she read it all and used what she could. As Kathy's teacher, I conjecture that this was more due to her personality than evidence of helpful peer feedback. Kathy always did everything she was supposed to do, never skipping a step. So the fact that she used the peer feedback like this did not surprise me and did not confirm that overall the feedback was helpful.

However, reading the two peer papers produced an unanticipated result. Kathy said:

I read Zeke's and Lucy's. And Lucy's gave me good ideas, but my paper was very different from hers, even though it was about the same person, so I didn't really incorporate those into mine. But it just gave me a different way of thinking about Desdemona. But then Zeke's I looked at more of the style that he had done, and I kind of incorporated that into my work with the sub-headlines. . . . And it just made . . . like I saw that they were doing the same type of thing I was doing, so that was kind of reassuring. Because at first, I was like, "Alright. I have a blank document. What do I write about?"

Jacob talked of the same reassurance:

I read Roger's, a very good rough draft. So Roger's, it helped me because it made me double-check how I formatted quotes . . . and it made me reassure myself in that he had a really good structure with his paper. It was very well-thought-out and very cleanly organized. [Me: Did that make you think about yours?] Mm-hmm.

Research (Uccelli, Dobbs, & Scott, 2013; Wardle & Downs, 2007; Sommers & Saltz, 2004) has argued that students gain confidence and skill in formal writing by reading models and thinking about the discourse expectations of the genre. Both Kathy and Jacob showed how reading models did give them more confidence in their own writing. These were particular models though. As explained in Chapter Two, the students read professional secondary sources and discussed in class how these were models for their own writing. However, with the reading layers of the two peer papers, the students expressed that student-written models gave them confidence in their own writing. They were trying to use what

they had learned from the professional models; for example, the use of sub-headlines Kathy talked about was a specific style trait of the professional secondary sources the class read together. When they saw how their peers were working with the same style features, they felt reassured that they understood the genre and were doing a good job. Reading professional models was important for the students in writing their drafts, but the pairing of professional and student models had the most impact.

Layer 10: Mentor Feedback

The final layer of reading was the mentor feedback, and, as explained in the collaboration feature discussion, this reading was informed by the relationship the students had built with their mentors that transformed the mentors from expert audience into thinking partners. I shared examples above of feedback the students found meaningful as a result of this closeness. Now I looked at the data from the perspective of how the actual reading of the feedback affected the students' other readings.

> Kathy spoke about how reading Jeremy's feedback changed how she read her paper:
>
> My draft was pretty complete. I was just missing some of the extra like backing up of my ideas. Like I had all my ideas there; it was more of just like constructing them and saying them in the right way. But then, Jeremy . . . left a final comment that was like, "Take this idea," and he like builds on the idea a little bit, and then he said, "Flow that back through your paper." So then I kind of went back and wove that through.

Kathy had seen her paper as complete until she read Jeremy's feedback. The comment from Jeremy Kathy was referring to was:

> While she may have been killed, is she not the only redeemable character? This truly builds the tension of tragedy, but it is almost better that she stayed true to herself, and now no longer has to deal with such wily characters.

Kathy was not just reporting that she read her paper differently after this; her original and revised conclusions show how she transformed her argument by considering Desdemona's death as a positive outcome. Her original conclusion was:

> Desdemona doesn't falter from her kindness, dedication, loving manner, or protective nature once throughout the whole play. Her superobjective was just that, and she fully accomplished it. Iago recognized these qualities as her weakness, and he took her down by what she was best at. She took her superobjectives so far that with the help of the surrounding characters, they killed her.

Her conclusion in her final paper was:

Desdemona doesn't falter from her kindness, dedication, loving manner, or protective nature once throughout the whole play. Her superobjective is just that, and she fully accomplishes it. Iago recognizes these qualities as her weakness, and he takes her down by what she is best at. She takes her superobjectives so far that with the help of the surrounding characters, they kill her. This may be the best of all possible outcomes. Desdemona is saved from a life of lying, scheming, and questioning that would interfere with her character's true lifelong commitments.

She also added a new sub-headline before her revised conclusion that drew directly from Jeremy's feedback: "Chaotic World with an Unfaltering Demeanor." Jeremy explained in his post-interview that he saw Kathy not only reread her paper but also reread the primary text to push herself further into understanding them:

[Kathy] took what I said and . . . looked deeper into it, as opposed to just taking what I said, making the changes, and calling it quits. I feel like [she] actually took my suggestions and then applied it to [her] process instead of just inserting it.

The Multi-Layered Reading Process

One aspect of these many reading layers that the mentors expressed initial concern about was how the collaborative reading process might lead students to similar conclusions. They were worried they would read the same arguments in the students' papers because the students had been reading each other's ideas all along with their reading of the primary text. However, the mentors ultimately saw this collaborative reading as inspiring rather than reductive. They did see the layered reading coming through in the final papers. Jeremy said, "I could read their papers, and I could track with all of my students and see how they reached the conclusion of 'I'm going to write about this.'" Gina agreed: "And then in reading her paper, I did see a lot of our conversation coming through." However, the papers were not the same. Jeremy explained:

But it was fun to be able to look through Desdemona and to read the papers that end up being produced through her character and just seeing how it kind of aligned . . . how all three papers aligned with each other but then also had their differences. A lot of similar quotes were used, but they weren't used to always support the exact same fact. So it was cool to see how the same quotes were used to support little different facets of what each student thought the superobjective was . . . Each paper was different.

Collaborating through a multi-layered reading process created the possibly unexpected effect of stronger *individual* thinking, comprehension, and reflection.

Ultimately, the layered reading of the redesigned unit ensured constant intellectual movement during the students' reading process, with pieces of insight building to a whole analysis. First, the collaborative nature of the layered reading process made the students work harder at understanding their reading. Jacob said, "There were times, like especially for the quotes, I felt like I would just kind of quote drop. Getting the assignment done. Here's a quote for the [character forum]. But then when I went into this discussion, it made me think harder about it." Through this hard work, the students' reading processes changed. They read differently having read others' ideas in the process, and in a counterintuitive result that highlights the complexity of the redesigned unit, the more layers the students read, the more they distilled their own ideas.

OVERVIEW OF FINDINGS

When taken together, the features of audience, collaboration, and layers of reading complicated students' learning. The students developed complex processes of thinking, reading, and writing—changes that further answered the first research question, including proving one more hypothesis:

- What changes occurred in the students' learning as a result of their participation in the redesigned unit featuring an asynchronous digital collaboration with an authentic audience? First, what evidence exists to prove or disprove the following hypotheses, which I observed in my five years of teaching this unit leading to this study? Second, what other changes occurred in the students' learning as a result of their participation in the redesigned unit?
    - Participation in the redesigned unit resulted in students seeing research as engaging in a conversation.

The students' process of writing for an audience transformed into a collaborative, multi-faceted thinking dialogue. By engaging in this thinking process, the students were able to express more developed ideas in their character forum writing, as they had internalized the roles of reader and writer at the heart of composing. Reading also changed for them, becoming an evolving conversation among sources, others' ideas, and the student's own ideas. The students became reflectively active readers who understood how to read for deeper comprehension and writers who had more confidence through their reading. Ultimately, the students became stronger thinkers, readers, and writers through these complex relationships, understanding through their participation in the redesigned unit that, in learning, more is better.

These three key features also provided answers to the second research question:

- How and in what specific ways did the process and features of the redesigned unit bring about such changes in the students as thinkers, readers, and writers?

By integrating the traditional practice of an authentic audience with collaboration in an asynchronous digital space, the redesigned unit reshaped the dialogue practice at the heart of effective composition pedagogy. Students played the roles of reader and writer over and over and in ever-changing ways, as they interacted with different audience members/co-thinkers and different layers of reading. The dialogue was therefore always shifting, but it was shifting in a supportive environment developed from the relationships built through the community of practice formed from the collaboration. The students' thinking, reading, and writing skills were strengthened accordingly. The relationships that developed with the collaborative audience also allowed the mentors to follow best practices in responding to students' writing, creating another supportive layer for the students as they worked to use their new skills.

The data layers examined in this chapter showed students were engaged in highly complex thinking, reading, and writing as they participated in this redesigned unit, and they were doing this complicated learning and growing in a supportive collaborative community also engendered by the redesigned unit, a broader community than any one teacher alone could offer to her students. These findings hint at the two remaining key features of the redesigned unit: expanded space and time and reading/writing integration. Clearly, it took time for the strong relationships among students and mentors to build in the collaboration, and I have resisted thus far looking at the actual act of writing, despite its constant presence in the asynchronous digital collaboration. In Chapter Five, I turn to these final two features, seeking to understand them individually then to integrate them into a final understanding of the complex reading/writing process created by the redesigned unit.

CHAPTER FIVE

EXPANDED SPACE AND TIME AND READING/WRITING INTEGRATION:

DIGITAL AFFORDANCES ALLOWING FOR DEEPER LEARNING

As I have written many times but not yet discussed, students' work in the asynchronous digital collaboration space of the redesigned unit was solely in writing. Having explored the impact of switching dialogue roles between writer and reader in Chapter Four through the evolving features of audience, collaboration, and layers of reading, I now finally turn to exploring how the students were doing their work: in writing. In this chapter, I examine the final two features of the redesigned unit: expanded space and time and reading/writing integration. Expanded space and time are affordances of digital collaboration tools that allowed for the reading/writing integration that happened in this unit. By exploring these two integrated features, I seek to confirm or disprove the remaining hypothesis as well as continue to look for unanticipated changes in the students, as guided by the first research question:

- What changes occurred in the students' learning as a result of their participation in the redesigned unit featuring an asynchronous digital collaboration with an authentic audience? First, what evidence exists to prove or disprove the following hypothesis, which I observed in my five years of teaching this unit leading to this study? Second, what other changes occurred in the students' learning as a result of their participation in the redesigned unit?
    - Participation in the redesigned unit resulted in students articulating their ideas more effectively in their research papers.

These two features also provide the final aspects of the answer to the second research question that has been developing through Chapters Three and Four:

- How and in what specific ways did the process and features of the redesigned unit bring about such changes in the students as thinkers, readers, and writers?

In the following analysis, I add the last data layer: the written transcript of the character forums. My reading and analysis of this layer also informs the rereading I do of the prior data layers of the interviews and research papers. I focus this reading, rereading, and analysis on the same three students and their mentors from Chapter Four. However, now my choice of these specific student examples comes into play: I chose them to see the effects of doing and not doing the work. Kathy completed every step of the redesigned unit. Jacob stumbled at one key moment in the process and had to recover without the support of his collaborators. Allison recognized only afterward what she could have gained from doing the work asked of her. Through these students' successes and struggles, I triangulate the

findings to test if a result that appears to be linked to one student completing the work was missing when another student did not do the work. Ultimately, I examine how these students were changed by the intertwining of expanded space and time with reading/writing integration in the redesigned unit, specifically in the asynchronous digital collaboration space.

CORE FEATURE #4: EXPANDED SPACE AND TIME

As I worked through the layered coding process towards defining the five main features of the redesigned unit, the codes of "audience" and "collaboration" were evident nearly at first glance because the students used these words themselves. The phrase "layers of reading" appeared with a little closer analysis of the data, as students repeatedly used some form of the word "read" as they discussed the different texts. In contrast to the relative clarity of these three codes, I defined the feature of expanded space and time only by first asking a question: what was behind the students speaking so often of reflection? The answer was the character forum itself. Allison said, "You need to do it [the character forum] . . . to completely understand the play. Because you need to think about it and actually reflect on what you are thinking and then get thoughts back on whether or not that's correct." Kathy said:

> I think the best part . . . is that it [the character forum] is all in like chronological order because we did the posts as we read the book. So like in the beginning of my paper, I would read like these things [pointing to the start of the character forum discussion] and then kind of summarize them and take my ideas from here and move them into Desdemona's superobjective. So it made it easier to like flow my paper.

Jacob said the character forum turned out to be his paper draft:

> I had all my ideas laid out [in the character forum], and it was just adding some extra citations and extra supporting arguments with quotes. And so, basically everything that I needed [for my paper] was on the [character forum].

The students were connecting their reflective skills and the resulting ease in writing their papers to the character forums, both the work done in the forum and the actual forum itself. That is, they spoke of the importance of the time spent doing the forum work as well as the space where this work was housed.

Actual Time

The first aspect of the redesigned unit that led to the students' sense of expanded time was a straightforward one: the unit lasted for approximately eight weeks. As a secondary school English teacher for over 20 years, I knew this was a markedly long time to spend on one text. This unit was the

longest I taught in any of my courses. Applebee and Langer (2011) outlined the time pressures on secondary school English teachers:

> Given the constraints imposed by high-stakes tests, writing as a way to study, learn and go beyond—as a way to construct knowledge or generate new networks of understandings (Langer, *Envisioning Knowledge, Envisioning Literature*)—is rare. In the various phases of the National Study of Writing Instruction, we also saw examples of teachers and schools that were very successful in creating rich and engaging programs. The challenge for the profession is how to ensure that such programs can continue to flourish and spread to other schools in spite of the constraints and pressures that are generated by the demands of high-stakes tests, those that omit writing altogether or lead to formulaic teaching (p. 26).

However, even while the length of this unit meant I had to drop another text from Franklin Academy's AP English Literature and Composition course, the redesigned unit's emphasis on thinking, reading, and writing was what I felt the students should be doing with their time. Such time is at the heart of Moffett's pedagogy of dialogue, as evidenced by Heathcote's application of his theories (Wagner, 1985). Heathcote employed drama to slow the pacing of her class to allow for the development of reflective skills and appreciation for writing that she wanted her students to gain (p. 167). She understood that "to insist that students write before they have accessed what they know or have collected some material is to court disaster" (p. 167). Students need time to develop this foundation for their writing.

The students in this study had eight weeks to think, read, and write, and they spent those eight weeks engaged in a collaborative written dialogue within a community of practice that deepened their understanding of themselves as thinkers, readers, and writers. It should not be surprising then that the writing they did in the asynchronous digital collaboration became the foundation of their research papers, as Jacob said above. The students accessed through their forum work all they knew and pushed even further into comprehension and analysis because they had the time to do so.

Digital Time and Space

The actual timeline of the unit was only part of the feature of expanded space and time. A long unit in and of itself is not necessarily successful; in fact, spending such time on one text raises very real risks of killing the students' interest completely, as most of us have likely experienced at least one time when we were students ourselves.

The affordances of the digital collaboration tool ensured that the expanded time and space for the work was effective. Research into computer-mediated conferencing in education (Lin, 2015; Lea, 2004, 2001; Garrison, Andersen, & Archer, 2001, 2000) has found that this type of conferencing gives

students a space for ideas to be recorded and a control of time for visiting this space that positively affects learning. "Conferencing enables students to benefit from the understandings and learning of their peers; the texts of the discussions are permanent and students can return to them throughout the course" (Lea, 2001, p. 167). These digital written collaborations encourage deeper thinking than traditional oral discussions because the participants control time in this digital space: "text-based communication provides time for reflection. For this reason, written communication may actually be preferable to oral communication when the objective is higher-order cognitive learning" (Garrison et al., 2000, p. 90). The students in this study sensed this expanded space and time for their work. The character forums were digital spaces that expanded to hold as much thinking as the students and mentors could produce, and the written transcript of this thinking remained in the digital space for whenever the students wished to revisit and reflect on it. The students understood this, as rereading this quote from Kathy showed: "I think having it digitally had the ideas down on 'paper,' so you could read them, go back to them, and think more about them than just like saying something to somebody." The space and time created by the digital collaboration tool provided the space and time needed for the reflective reading the students did. The digital space also housed many of the actual layers of reading: the students', peers', and mentors' character forum posts.

The expanded space and time of the digital collaboration tool of the character forums also expanded the dialoguing by the students. As explained in Chapter Three, Moffett's three-way discourse is built on two axes of distance: distance between a speaker/writer and the audience (I—you), as defined by space and time, and distance between a speaker/writer and the subject (I—It), as defined by abstractive distance (Moffett, 1968, p. 11). Moffett's first axis, the axis of actual space and time, was transformed by the affordance of digital collaboration tools for expanding space and time.

Moffett's discourse model was a speaker speaking to a present audience or a writer writing his ideas and sending them out in increasingly distant ways (mailing a letter, publishing an article) to an increasingly distant audience (geographically-distant friend to unknown journal reader). Digital collaboration is the discourse that happens with digital collaboration tools, not discourse mimicking Moffett's print discourse with digital means (such as an email mimicking a letter). In digital collaboration, the discourse is always recorded, either in video, audio, or written words, by the very nature of it taking place using a digital collaboration tool. In this unit, the students and mentors wrote all of their interactions, creating the final feature of reading/writing integration I discuss in the next section. For now, I simply wish to establish that this digital discourse was recorded in writing in order to explore the expanded space and time that allowed for creating and revisiting this written record.

The I—You relationship in digital collaboration is where space and time are redefined because they are no longer in the one-to-one relationship of Moffett's theory (see Figure 4). For Moffett and all of us before the creation of digital collaboration tools, moving through space took time. In digital collaboration, this is no longer the case. One can digitally jump space in an instant. The accepted space/time connection is completely reoriented in digital collaboration's expanded space and time.
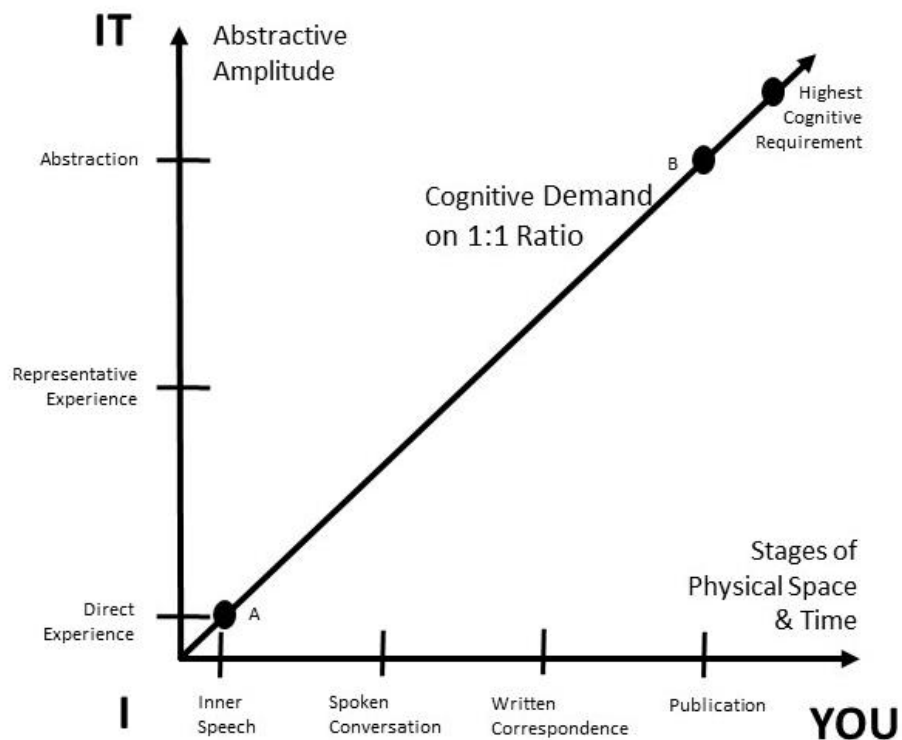

Figure 4. Moffett's discourse theory. The I—It longitudinal axis and the I—You latitudinal axis illustrate increasing discourse challenges with increased distance, both in abstractive amplitude and physical space and time.

Space in Digital Collaboration

Physical space is always distant in digital collaboration, as communication with a digital collaboration tool puts space between the writer and reader, if only in the form of two people in the

same room with a camera on the writer's end and a monitor on the reader's end. So while digital collaboration can happen with two people side by side, the tools themselves create space (which in turn leads to the reality of people usually not sitting in the same room communicating over monitors!). Digital collaboration tools are therefore by definition methods of connecting across physical space with the ideal digital collaboration tool making physical space disappear. The I and the You can be together in a synchronous digital collaboration even though they are physically separated by thousands of miles.

Digital collaboration tools are designed toward this ideal of becoming transparent, an ideal with roots in print composition. Print composition tools are actually not transparent (think of a pencil and paper) but have become transparent to most composers. We do not consider how our pencil affects our writing until the tip breaks. Digital collaboration tools seek the same transparency as they try to remediate traditional methods by maintaining transparency while becoming more useful (Bolter & Grusin, 1999). A synchronous digital chat brings a writer and reader seemingly together, unlike a mailed letter. McLuhan (1964/2003) argued however that the ideal of a medium's transparency could not be achieved: "For the 'message' of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs" (p. 20). The tool could not disappear because it helped shape the message.

Digital space therefore concerns researchers because the ideal of transparency is not always the reality. Boon and Sinclair (2009) identified this issue in students who struggled with equating a digital presence with a physical discourse partner. Chen, Liao, Chen, and Lee (2011) recognized the value of tutors being available from geographically distant locations to help underserved populations, while they also tried to mitigate, through the use of video meetings, the struggles of students and tutors not feeling as committed to this virtual relationship as they might have been to a face-to-face one.

This dissertation's study did not provide a single answer to this concern over digital space. I asked students and mentors I interviewed if they thought a face-to-face component using a digital video tool such as Google Chat or Skype would have helped, hurt, or not affected the sense of collaboration with real people, and I found an intriguing split in their responses. The students said that, while a video meeting would have been fine, they did not need it to feel connected in their asynchronous collaborative work with the mentors. Jacob's response echoed the overall student feeling: "I don't think it would have had an effect on me personally." However, the mentors said they would have liked a face-to-face aspect to the collaboration. Gina said:

We could [do] without it, but I think it [could add] more personality to the whole assignment so

we didn't like . . . at least us college students didn't feel like we were just giving busy work.

Talking with someone, and we didn't know who they were.

Barbara agreed: "I think that it [a face-to-face video meeting] could be really positive." The mentors felt the asynchronous digital collaboration might not feel real across digital space without using a digital tool to mimic face-to-face interaction. What was even more interesting was some of the students anticipated this feeling in the mentors. Kathy said, "Maybe [a face-to-face video component] would have just gotten them [the mentors] more involved. . . . That might have helped make it more real [for the mentors]."

This study could not answer why this different sense of digital space existed between the two groups. One possible cause was the age difference between the groups, with the students having communicated across digital space for more of their lives than the mentors. Digital collaboration tools possibly have become transparent for many high school students, as pencils and paper have been for most people for decades. Another possible cause was the difference in experiences of the two groups. The students had been integrating technology into their education at Franklin Academy for three years; they were comfortable using digital tools as learners. Many mentors, however, spoke in their interviews about how they had little experience with technology in education, either as students themselves in high school or college or in their teacher training. This lack of experience could have led to the mentors being more comfortable with a version of traditional physical connection across digital space. Related to this, the mentors were also training to be teachers in brick-and-mortar classrooms, thus they anticipated having physical connections in physical space with their students. It was clear in their interview responses that their college education had yet to show them much about pedagogical uses of technology integrated into actual classrooms. Future research is needed into how to best understand, and therefore mitigate if needed, the impact of digital space in classrooms. The data collected on the mentors from their interviews could inform this area of research when I revisit this work in the future.

Time in Digital Collaboration

Time in digital collaboration is an even more complex concept than space because time is controlled by both the writer and the audience. This dual control of time is what makes digital collaboration so different from traditional print discourse.

In all written discourse, time exists for acting without reacting. McLuhan theorized this distance between acting and reacting in his examination of print literacy:

Civilization is built on literacy because literacy is a uniform processing of a culture by a visual

sense extended in space and time by the alphabet. . . . Oral cultures act and react at the same

time. Phonetic culture endows men with the means of repressing their feelings and emotions when engaged in action. To act without reacting, without involvement, is the peculiar advantage of the Western literate man (p. 122).

McLuhan saw the ability to control time through print literacy as powerful because the writer and the reader could formulate their reactions rather than be controlled by their presence in the moment.

This control over time is powerful in digital collaboration too but in a different way because of the collaborative nature. The writer and the reader are simultaneously in control of time: "The power of technology [is in] . . . alternately grasping and letting go in order to enlarge the scope of action" (McLuhan, 1964/2003, p. 85). That is, even in a verbal interaction, which was Moffett's second level of discourse, only one level above his easiest level of internal dialogue, the audience in a digital collaboration is just as in control of time as the speaker. The audience can choose to listen to the speaker as she speaks, choosing synchronous digital collaboration, or to return to the digital recording of the speech at a later time, choosing asynchronous digital collaboration. Therefore, time in digital discourse is defined by the discourse being synchronous or asynchronous, which in turn is defined by the choices the writer and the reader make for when they join the discourse. Figure 5 illustrates this by mapping time control on the two axes, with the I in control on the longitudinal axis and the You in control on the latitudinal axis. Space is represented as the fading background circle because physical space, as discussed above, is meant to disappear, or at least fade to the background, in digital collaboration. With the central dotted line representing when the I and the You are in the digital collaboration space synchronously, points A, B, and C are moments when the discourse follows Moffett's theory. Point A, for example, would be a synchronous chat with no time distance, and Point C would be a synchronous discourse after time has passed for both participants to reflect.

The tangential lines off the central dotted line are the most important aspects in Figure 5, as they illustrate how time is the defining factor of asynchronous digital collaboration. Both the writer—the I—and the reader—the You—are in control of time by choosing when to enter the digital collaboration. The double line tangents represent one member entering the collaboration space at the same time as the other and then choosing which role, reader or writer, to take. The single line tangents represent one member entering at a time removed from the other member then choosing which role to assume. In this way, a member can use time to deepen her reading and writing skills by determining how much time she needs to think through others' posts and her own ideas before responding (the same as in print composition) as well as by being able as a reader to rewind time to past discourse, since it is recorded in the digital space, to help her compose her own discourse (Lea, 2004). The writer can

simultaneously be the reader (and vice versa), reading others' ideas in the same visit as when she presents her own ideas. Each person determines at any moment whether she is the writer or the reader, defined by what actions she chooses to take in the digital collaboration space. This might sound like a verbal discussion, with people talking and listening, but it is not quite the same. In digital collaboration, a person is completely in control of the role she plays, versus in a verbal discussion where she must listen when people talk or talk over them and risk not hearing their ideas or being heard herself.
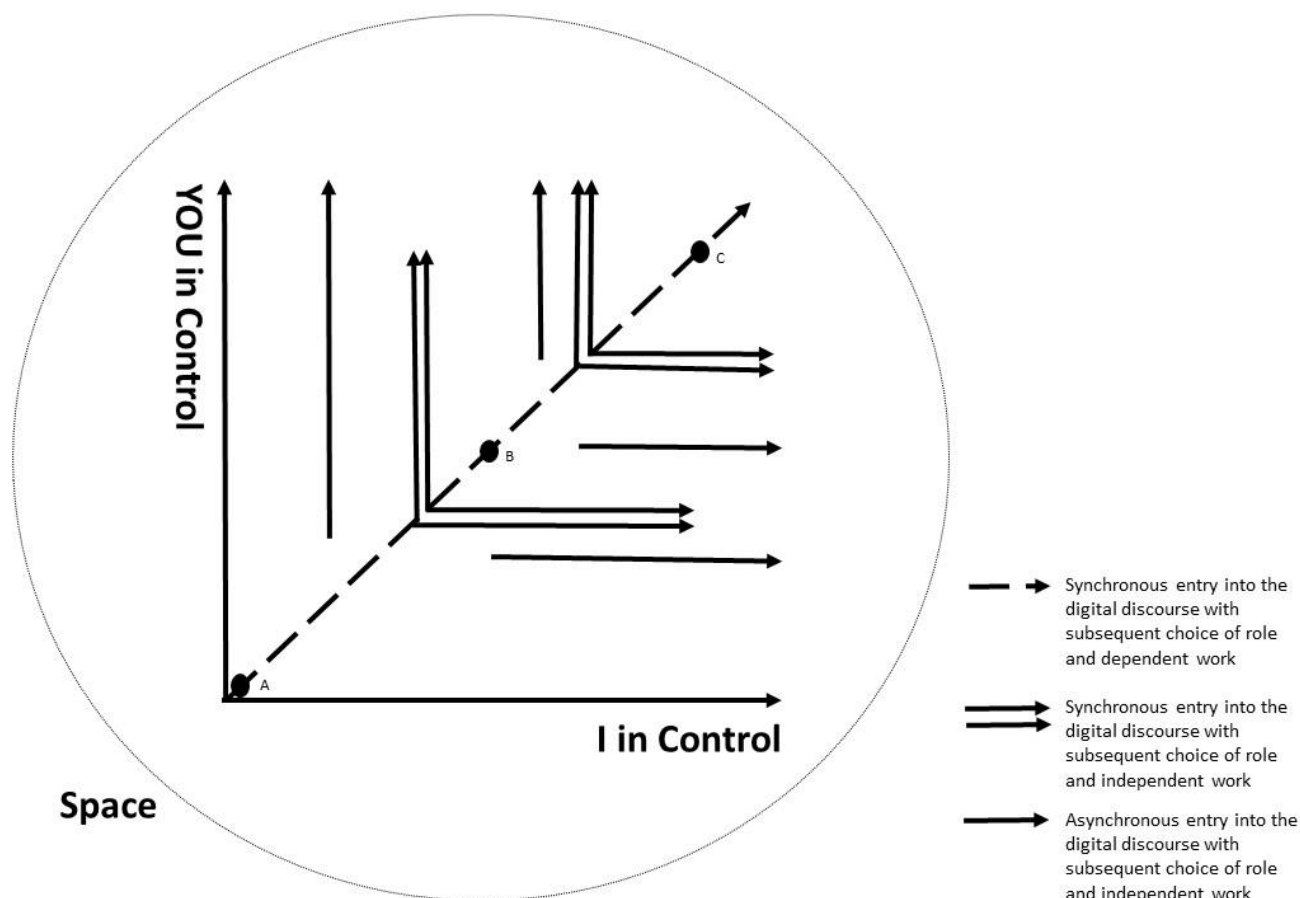

Figure 5. Time in digital discourse. The graph maps the dual control of time by the I and the You over the ideally transparent background of space.

This control of time is what the students were pointing to when they talked about their reflective skills being strengthened by the asynchronous digital collaboration. With complete control of

time, the students could move between Moffett's dialogue roles of writer and reader as much as they needed to develop their thinking, reading, and writing. Allison talked about a post her mentor Gina wrote in the digital space of the forum that gave Allison pause:

> She [Gina] brought up how Emilia was acting and how that could be perceived as being evil . . . being a bad person. So I had to think about that and I kind of connected it back to what I was thinking in the beginning of how she was forced to be a bad person. She isn't a bad person in reality, but she had to be to survive.

Allison had entered the forum space when Gina was not there, found Gina's post, and taken on the role of reader. Allison then took time to think through this post, going all the way back in time to the beginning of her analysis of Emilia before returning to her present moment in the digital space. Then she changed to the role of writer and responded. In another example, Kathy entered the forum in its final days, looking to play the role of reader. As she counted to be sure she had done all the required posts, she said, "I was kind of reading what I had written about, which was just kind of like reminding me of how much my thoughts had changed through the play." All of time existed in the expanded digital space of the forum for Kathy to do this reflective work. Gina expressed the benefit of this that she saw in her role as mentor:

> If they do take the time to internalize what they wrote, they could find that they have no idea what they're talking about or if they have to interpret a part of the play and they realize like, "Oh, I have to look up these words because I'm not really sure what's going on," that can be a nice self-check.

Exploring the digital space by being able to scroll through digital time allowed the students to reflect and integrate their reflections into their developing ideas.

Jacob illustrated what happened when a student did not take advantage of this control of time in the asynchronous digital collaboration space to move between the dialogue roles of reader and writer. Jacob talked about how the collaboration was powerful for him as a *reader*: "At the end [of the character forum work], I went through every page and saw everything. So that was good at the end." He put a great deal of time into reading and thinking, completing all of those steps of the redesigned unit. However, he did not take on the role of *writer* at a crucial point in the development of his argument. About halfway through reading the play, each student was required to write a post in her character forum trying to put her current understanding of the character's superobjective into words. Each student was to start in the role of writer with this post then shift to reader and read other students' attempts at articulating the superobjective. Jacob said:

So I shot myself in the foot, and I didn't do the superobjective . . . post. So that was tough for me because I didn't have the motives set . . . I could have gotten that done [before writing the paper], but I had all of these examples, and I had thought about them critically and what they meant about Iago. But . . . they were all individual posts, and I never really tried to link them together, which would have been what that superobjective post would have been about.

Jacob's stumble in the process illustrated that expanded time alone was not what led to the students' developing their thinking and reflective skills. Simply spending eight weeks reading the primary text and his peers' and mentors' posts did not help Jacob produce a clear idea of his character's superobjective. Playing both roles of Moffett's dialogue—the I and you, the writer and reader—again and again in the expanse of space and time afforded by the asynchronous digital collaboration led to the students developing as thinkers, readers, and writers.

CORE FEATURE #5: READING/WRITING INTEGRATION

Jacob's honest report of his own misstep leads into the final feature of the asynchronous digital collaboration: reading/writing integration. Jacob realized that by not integrating his reading and writing, by not moving continually between the roles of reader and writer, he hindered his development. As a reminder, Jacob was the student who, through the collaboration, determined he had to define Iago's motives for his superobjective statement because it "was not both." Ultimately, Jacob did write his way into this understanding, catching up on missed time when he wrote his first draft:

I wrote the first page of my paper four times because I would go back and forth about what Iago's motivations are, and so I mean that was tough. And trying to come up with a clear concise thesis where I could fit the examples I had into and work it so it made sense . . . it was challenging.

In this way, Jacob did solidify his understanding, as he would have had he participated in the superobjective writing in the character forum. But he had to do it alone, and he explained that he struggled writing his first draft. After this individual writing of his first draft, Jacob fortunately had his mentor Monique to offer meaningful feedback due to the relationship they had built in the collaboration, and as I examined in Chapter Four, he was able to achieve his goal of defining Iago's motive that he had been working on since the early forum exchange when he knew it "was not both."

The Pedagogy of Reading/Writing Integration

As Jacob illustrated, the students had positive perceptions of the impact of the reading/writing integration on their thinking and writing skills. Dialogue journals, a reading/writing tool in which

teachers and students write back and forth to each other, have long been used for students who are learning English as a second language (Cummings, 2004; Holmes & Moulton, 1997). Regular writing with an expert dialogue partner helped these students learn the conventions of English more quickly and feel more confident in their skills. This was due both to the "freedom of expression in the journal unfettered by the act of translation and the focus on structure" and "the connection between writing frequently and developing fluency" (Holmes & Moulton, p. 618). The online character forums were a type of dialogue journal for the students in this study to learn the language of academic writing and to see they did have more to learn. By writing constantly in an informal exchange, the students developed stronger writing skills and confidence in these skills.

The students and the mentors both spoke about this strengthening process. Kathy said the writing she did and the writing skills she developed by participating in the forum supported her directly as she wrote her paper:

> I used [in my research paper] a ton of the ideas that we had talked about [in the written posts in the forum]. Like from Jeremy spitting out ideas, I would reply to them and then take my responses and use them to build on [Desdemona's] superobjective.

Jeremy spoke at length about the power of the reading/writing integration he saw in the students he worked with:

> I think they [the students] are framing their papers without recognizing that they're doing it … What I think is so great about the [character forum] discussion is not only does it give them a chance to write their ideas and write their feelings and thoughts about the character that they're studying, it also gives them a chance to respond and be responded too. So they're dialoguing with each other, and occasionally with me, about a character that they're going to write a paper about. And so they're attacking this idea of, "How am I going to compose a paper about Desdemona's superobjective?" They're attacking this problem with, "Well, in this act and this scene, she did this, this, and this, and this is who she is." . . . So I think that the discussion helps the most in that it forces them to write stuff down without them thinking about it as brainstorming. . . . When it comes time for them to write the paper, they're like, "Oh, wait. I've actually been thinking about this the entire time."

Jeremy saw the students, by reading and writing interchangeably in a dialogue similar to the pedagogy of dialogue journals, developing and testing their reading, thinking, and writing every step of the way. Barbara reflected:

It's kind of like stepping stones towards their paper. Because I noticed that posts began to get longer as they went on, and they also got deeper and they're having more thoughtful conversations between each other as we went on. And I think that they started to form their own ideas and solidify things that they were planning on writing about. And I think that a lot of that came from them bouncing off each other.

Barbara was defining Moffett's dialogue at work in this digital space and time: by playing both roles of reader and writer, students developed their understanding of their own ideas as well as how to convey those ideas in writing to different audiences. Sommers and Saltz (2004) explained this as writing into expertise:

We also observed that freshmen [in college] build authority not by writing *from* a position of expertise but by writing *into* expertise. Apprentices, they learn to write by first repeating the ideas they encounter in the sources they read and the teachers they admire, using the materials and methods of a course or discipline in demonstrated ways before making them their own (p. 134).

The students in this study had, in the asynchronous digital collaboration space, the time to develop this writing foundation (Elbow, 1998; Wagner, 1985) as well as the mode of doing it: writing. They interacted with their peers' ideas as well as their mentors' questions and expertise in the forum and practiced writing into their own expertise, a practice that paid off when they assumed the roles of experts in the forums and the mentors, as Barbara explained, could step away from their expert roles.

Heathcote (Wagner, 1985) built further on this idea of writing into expertise by scaffolding student experiences so they could make smaller choices as practice for the larger ones that come with writing the final product.

Writers who don't select among alternatives and then follow out the implications of each choice never achieve focus and coherence. At least since Aristotle, rhetoric has been defined in part in terms of the choices a speaker or writer makes. The empirical studies of such researchers as Flower and Hayes (1981) show how writers make a series of decisions, employing problem-solving strategies as they work (p. 168).

The students in this study talked a great deal about the actual practice they got as writers making these smaller choices in the character forums. Allison said, "I think that [the character forum] was really helpful because it forced you to think and it forced you to keep progress with your writing." Kathy said the character forum "really helped because when you would reply to a comment, you want to write

more than 'great comment!,' so you need to delve into a deeper . . . analysis to reply and to carry that conversation on to spark discussion." Jacob said:

> Having that . . . mentor to push me and then to make me write it down and put it in a thoughtful manner definitely helped with the paper. Allowed me to think my ideas through and not just go in kind of blindly.

The students were expressing an understanding of themselves as long-term composers, as they spoke of their ideas taking clearer and clearer shape with each new piece of writing, from the smallest early post to the final drafts of their papers. Jacob, as the student who had not done all of the smaller writing tasks along the way, saw this process most clearly in how he had not taken full advantage of the expanded space and time to write his ideas to completion: "It was a lot to process in the end if you hadn't made yourself pull it together earlier."

Evidence of Student Growth

Both the students and mentors spoke of these benefits of extended composing that resulted from the expanded time and space for reading/writing integration. By adding the final layer of data, the written transcripts of the character forums, to the prior layer of the final papers, I tracked Kathy's reading/writing integration through her whole writing process, seeking evidence of these perceived benefits, as she was the student who completed every step of the redesigned unit. Jacob showed he did not achieve the ease with writing he felt he would have achieved if he had done all of the steps. So the example of Kathy will triangulate this finding to see if completing the steps produced the writing ease Jacob felt he missed.

As I explained in her use of the peer feedback, Kathy was a student who did every single thing a teacher asked her to do. I even saw her planner where she wrote it all down (color-coded by subject) and checked off each accomplished task (I do wish I had taken a picture of a page of that planner to include here!). Did Kathy achieve the perceived benefits and ease of writing through her committed participation in the reading/writing integration of the asynchronous digital collaboration? Her experiences have already shown in the discussions in Chapters Three and Four that she became a deeper thinker and more reflective reader. She also talked about her understanding of herself as an extended composer. The next step of analysis was to seek evidence of whether she applied this learning to her writing: Did her writing process show she had learned through the practice of the reading/writing integration to make the choices expert writers make? Did her actual writing convey that she became the expert voice through extended composing?

From the very start of the character forum, Kathy pointed out Desdemona's strength. The first quote she posted in the forum (and the first quote posted by anyone in her forum, just as evidence of Kathy's work ethic) was:

> My noble father, / I do perceive here a divided duty. / To you I am bound for life and education. / My life and education both do learn me / How to respect you: you are the lord of duty; / I am hitherto your daughter. But here's my husband; / And so much duty as my mother showed / To you, preferring you before her father, / So much I challenge that I may profess / Due to the Moor, my lord (I.iii.23).

She analyzed this quote by writing:

> This quote really shows how she stands up to her father and isn't afraid to tell him what she wants. This shows us how strong she is and also really represents how much she loves Othello. They have only been married for hours but she was so impressed by his stories, battles, and survivals that even the Duke said would have wooed his daughter! . . . She knows it is her duty to love her father because he has always been there for her and is her father. However, it is her choice to love Othello and she explains it to her father so he can understand.

This analysis was singularly focused on Desdemona's confidence, confidence in her love for Othello and in herself for being able to stand up for that love to her father. Kathy then proceeded to write again and again in her forum posts about Desdemona's strength in her choices and her strength of character. Here, for example, she quickly dismissed a doubt about Desdemona's strength:

> To build upon Desdemona's strength, we see the situation in Act 2 Scene 1. We start out without Othello, yet Desdemona, Cassio, and Iago are there. That worried me that something would happen or Iago would build "proof" of Cassio and Desdemona against Othello. However, it fortunately didn't take too long for Othello to arrive.

Then later she explained that even when the audience did not see Desdemona's strength of character, it was there: "I think this quote is kind of saying that Desdemona and Othello together are invincible, yet because of Iago, we don't see it this way." Kathy, as a more novice thinker, was holding tight to an idea she had confidence in.

> Then Jeremy, the expert voice, offered a push:

> She [Desdemona] is a strong, independent woman who loves her husband and is willing to stand up to her father to hold true to herself. But remember that this is a Shakespeare tragedy, and that few characters remain unscathed by the end of the story.

On that same day, Lucy, one of Kathy's peers in the discussion forum, posted this analysis:

> In this scene [Act III, scene iii] Desdemona is asking Othello to reinstate Cassio as lieutenant. I chose this as an important part for Desdemona because I think this is the first time I have seen Desdemona slightly fall victim to one of Iago's plans. Up until now it seemed like she could see right through him, but now she is doing exactly as he wished. I don't blame her for this though, I probably would have done the same thing. Iago made it so that it seemed as if she came up with the plan all on her own, without the influence of Iago.

Lucy hinted at a struggle in Desdemona but then pulled back and justified it as Desdemona still thinking she was strong. Kathy however, in response to this post, started to dig further into her analysis. This post showed her trying to respond to Jeremy's push as well:

> This is the first time we have seen Desdemona as almost needy. Every other time she has asked Othello for something, he has provided it to her or worked with her on it because he does everything for their love. But here, it was different.

She was not trying to fit this quote into her sense of Desdemona's strength; instead she was willing to see her character develop. She was not yet able to articulate what was behind this development, simply acknowledging something "was different," but she saw a change. In this way, Kathy was developing her expert voice through the help of her mentor's role as boundary broker in the community of practice and her peers' roles as co-thinkers. Jeremy offered a differing opinion, and Lucy tried to think it through.

Through the reading/writing integration and expanded time and space of the forum, Kathy eventually expressed a completely different view of Desdemona:

> I know death has to be coming too. I just wanted Desdemona to yell at [Othello] back and tell him that if he can't trust her, then they can't be together. She is not that type of character though. She takes what he is saying and is hoping that everything will turn out okay.

Kathy saw that Desdemona was not always strong, and in her final post in the forum, she worked to articulate what was pushing against Desdemona's strength:

> I think Desdemona's superobjective was to be a good person. She wanted to be a good wife to Othello and a good friend to Cassio and Emilia. She even turned to Iago in the end to find out how he thought she could better herself with Othello. She desperately said, "Alas, Iago, / What Shall I do to win my lord again? / Good friend, go to him; for, by this light of heaven, / I know not how I lost him" (IV.ii.148-160). She called Iago a "good friend", which is anything but accurate. I would say she definitely fulfilled her superobjective goal because even towards the end, she never went against her word, always stood up for herself, and never acted out against anyone

else. She didn't betray Othello and stood up for Emilia. She was seeking help, but Iago was misguiding her while Emilia didn't really know what was happening.

This post was an example of the extended posts Barbara had talked about. Kathy laid out her complicated thinking—Desdemona was a good person and a strong person but had a fatal misjudgment of Iago—supported with integrated primary text. Kathy had become an expert through her extended composing during the reading/writing integration.

Next came making the writing choices that would enable her to present her expertise in her research paper. I am going to revisit her work with Jeremy that I presented above as evidence of Kathy's changed reading process; now, I examine this exchange for the choices Kathy made as a writer.

Kathy talked multiple times about how she understood how her argument had developed by rereading the character forum as she started writing her draft: "When I wrote my paper, I went back and read like the entire discussion." She felt she had done the hard thinking work in the expanded space and time of the digital forum, and "a lot of my paper I took directly from the [character forum], which was really helpful." For example, she incorporated into her paper her ideas from her final forum post (which I quoted above): both her sense of Desdemona's strength and her awareness that, even in this strength, Desdemona had a sense of insecurity amidst Iago's "web of lies." She wrote in her paper:

> Next, Cassio loses his job. Desdemona begs Othello repeatedly to restore his position. She is a dedicated believer that Cassio deserves and needs a second chance. At the time, Desdemona doesn't realize that she is tangled in Iago's web of lies, but she falls in the perfect position as she vies for Cassio. . . . She falters in the end when she experiences utmost isolation without anyone to turn to and goes to Iago for advice on how to deal with her husband. She truly doesn't understand what has gone wrong in her relationship with Othello.

She developed the phrase "web of lies" from both the primary text and the expert voice in the dialogue, Jeremy. He had posted early in the forum:

> Keep in mind the fact that Othello won Desdemona's heart with his story telling. And we know Iago's plots to "With as little a web as this will I ensnare as great a fly as Cassio" (II.i.168). The theme of stories are sure to play a big role in this play.

Kathy seemed to internalize this language when she made the choice as a writer weeks later to name Iago's actions a "web of lies."

When Kathy was done with her draft, she said: "My draft was pretty complete. . . . I had all my ideas there; it was more of just like constructing them and saying them in the right way." She had confidence that her work in the reading/writing integration had resulted in a strong paper. This

confidence was important to recognize because of what happened next. Jeremy, in his feedback on her draft, left this comment on her conclusion:

> While she may have been killed, is she not the only redeemable character? This truly builds the tension of tragedy, but it is almost better that she stayed true to herself, and now no longer has to deal with such wily characters.

In her original conclusion, Kathy had stopped short of reconciling Desdemona's death with her sense of Desdemona's superobjective:

> Desdemona doesn't falter from her kindness, dedication, loving manner, or protective nature once throughout the whole play. Her superobjective was just that, and she fully accomplished it. Iago recognized these qualities as her weakness, and he took her down by what she was best at. She took her superobjective so far that with the help of the surrounding characters, they killed her.

Jeremy's comment gave Kathy a real-world writing task: to continue thinking through every aspect of the evidence to be sure her argument was complete. Research (MacArthur, 2009; Hult, 2008) has shown true revision involves whole or comprehensive revisions such as meeting communication objectives and improving the conveyance of meaning Jeremy was suggesting for Kathy. Kathy accepted this challenging writing task, as her revised conclusion showed how she worked to fully develop her argument:

> Desdemona doesn't falter from her kindness, dedication, loving manner, or protective nature once throughout the whole play. Her superobjective is just that, and she fully accomplishes it. Iago recognizes these qualities as her weakness, and he takes her down by what she is best at. She takes her superobjective so far that with the help of the surrounding characters, they kill her. This may be the best of all possible outcomes. Desdemona is saved from a life of lying, scheming, and questioning that would interfere with her character's true lifelong commitments.

Kathy revised not just her writing but also her thinking, as she analyzed in this new conclusion what Desdemona's death, at the literal hands of Othello but the figurative ones of Iago, meant for her sense of Desdemona's strength.

The written record of Kathy developing as a thinker, reader, and writer showed the power of the reading/writing integration within the digitally expanded space and time. But I knew as her teacher that something even greater had happened for Kathy in this process: she had found all of this easy. Kathy said, "So it [the character forum] made it easier to like flow my paper. I feel like that helped because a lot of time my papers are kind of jumpy." Kathy had struggled all year with capturing her many ideas into a coherent structure and argument. I had worked with her on prior papers to help her find the main

thread of her argument so she could follow it more closely as a guide for where to place her smaller points. She had not yet successfully done this in a final paper, until this research paper. The final comment Jeremy gave her on her draft was a shortened version of what I had said to Kathy all year long about finding and using her main argument: "Flow that back through your paper." But this time, she was able to flow her main argument all the way through her paper. She was able to structure her argument clearly and concisely, something Jeremy agreed with in his comment on her final paper:

> Your intro is clear and you outline your opinion on Desdemona's superobjective concisely. You incorporate the Shakespeare text well to support your claims and make sure that your voice is heard throughout. You have a few simple mistakes, nothing significant in terms of style or structure, mostly just grammar. Other than that, your paper was very insightful and taught me more about the character of Desdemona.

In this one comment, Jeremy captured all Kathy had achieved: she had written a paper that her authentic audience understood and enjoyed, and she did this because of the reading/writing integration of her extended composing process. The asynchronous digital collaboration had helped Kathy master thinking, reading, and writing skills she had not yet been able to master despite her concerted efforts on prior papers. Yes, she had practice with these skills leading into the collaboration because she was Kathy and therefore had listened to the feedback I had given her on prior papers. But the process of the redesigned unit taught her how to finally use these skills as an expert writer who writes through her problems until she finds the clarity her readers and she are seeking.

Through Kathy, it was evident that the redesigned unit, particularly the asynchronous digital collaboration, did change her. She developed thinking, reading, and writing skills through her practice in the extended dialogue of the character forum that she brought into composing her research paper. This paper was evidence supporting the remaining hypothesis of the first research question:

> o Participation in the redesigned unit resulted in students articulating their ideas more effectively in their research papers.

The positive benefits in writing the research paper that Jacob felt he had missed out on by skipping a critical point in the reading/writing integration were achieved by Kathy through her dedicated efforts with the work of the redesigned unit.

Triangulating the Evidence

Allison now showed the other side: what happened when a student did not truly engage in the reading/writing integration? I want to start this analysis by establishing that Allison herself understood she had missed an opportunity. She said after reading all of the ideas in her character forum, "[I]n the

end I went my route because I'm stubborn." All I am about to explore with Allison's work in the asynchronous digital collaboration were things she herself ultimately recognized and worked hard to remedy. The story, therefore, had a happy ending!

Allison was following the character of Emilia and said multiple times in her interview that her mentor Gina tried to push her to think more deeply about Emilia so Allison would become a more expert voice. For example, Gina even jumped ahead in the play to try to change how she knew Allison would read Act IV:

> I am not sure if you have read up to Act IV yet. But ponder this quote that Emilia says, "But I do think it is their husbands' faults / If wives do fall . . . Let husbands know / Their wives have sense like them. They see, and smell, / And have their palates both for sweet and sour, / As husbands have" (IV.iii.89-99). Emilia is not so powerless and weak to Iago. She is very aware of his manipulation of her. It almost sounds as if Emilia has her own ideas to counter Iago's plans.

Gina knew Allison saw Emilia as a victim and tried to show evidence of her strength to guide Allison's reading. However, Allison's reply to this post showed she did not do the thinking Gina was asking of her. She wrote:

> I have read through Act IV now and I see what you mean. She is not powerless at all. I agree that Emilia has her own plans to spoil Iago's plan and to try to preserve the life that Desdemona and Othello have together. I would wish to see her pursue her cause even more because I do not want to see the lives of Desdemona and Othello ruined even more. I think that if she knew that her friend's life was in danger that she would be even more blatant in the spoiling of his plan and that she would do even more to make sure that her friend does not die. I think that Emilia knows what is right and wrong, but I am not sure if she will be willing to blatantly defy her husband because then she would face his wrath.

After starting out saying she agreed there was more to Emilia, Allison ended right back at Emilia being a victim. She was spending her intellectual energy on making all the pieces of the puzzle of Emilia fit into her initial viewpoint rather than engaging in developing her ideas. Allison said Gina's posts "made me think of her in a different light in certain situations because I can be very fixed minded at times." However, Allison admitted that, despite reading these pushes by Gina and spending some time thinking about the new ideas, she did not integrate the ideas into her reading and writing:

> As I was writing my paper, I actually looked back and wished I had done more with my [character forum]. More exploration of the character other than what was required because I

> found myself writing the same things about how she's a victim and stuff like that when I didn't really think any further.

Allison could see in hindsight how she had, for much of the extended time of this unit, held on to her first idea of Emilia as a victim, refusing to develop her view any further, unlike Kathy who, with similar pushes from her mentor, developed a more complex view of her character.

Not surprisingly, Allison wrote in her first draft of her paper about Emilia being a good person who was a victim. Gina explained that she saw this in Allison's first draft:

> She was focusing on Emilia as good, and that was a lot of what she was talking about throughout the thread [of the character forum] and I just . . . didn't think that was powerful enough because Shakespeare is a lot more than just good or bad.

I knew from reading Allison's final paper that she had at some point finally started thinking about other aspects of Emilia and tried to articulate these in her writing because her thesis was not just that Emilia was good and a victim. So I asked in her post-interview when this shift finally happened. Allison replied, "I think the shift happened when I was trying to write my thesis and I couldn't really write about how Emilia was a victim for six pages, so I had to think of other things." Allison talked about how she then went back and reread the entire character forum, "looking at the character of Emilia and really trying to understand her situation and trying to portray the situation to people who [were Allison's audience]." In other words, she was finally taking advantage of the expanded space and time in the asynchronous digital collaboration to integrate her reading and writing; she just had to do it in her writing of her first draft since she had not practiced her reading/writing integration in the prior weeks of the unit.

Trying to do in one or two nights before the draft was due the work her classmates had done over five weeks was clearly impossible. Allison's first draft was weak, as she was still articulating Emilia as just a good victim in her thesis: "Emilia is trying to simply be a good and honest person but at a time when society dictates that a good person is one who obeys their husband." Gina wrote in her feedback, which I quoted in full above: "As you revise this, I think it will be important for you to create a strong thesis. You seem to be arguing that Emilia is 'good' and that the oppressive society she lives in makes her act poorly." Allison's final thesis was:

> In essence Emilia is trying to be the kind of person that she wants [a good person] to be in a society that does not value that kind of person, but rather the woman who obeys and follows her husband no matter what they wish to be.

She had finally complicated her analysis by thinking about the other voices in her collaboration and trying to integrate them into her writing. An excerpt from the middle of her final paper showed how she

continued to discuss Emilia with nuance and shades of gray versus her prior insistence on black and white:

> She knows that if she is to give Iago the handkerchief that it will cause Desdemona some sort of distress and yet the first thing that comes to mind is to give it to Iago, rather than to protect the friend who has been protecting her for the entire play. I do not think that this shows a character flaw, but rather this just shows how much Emilia had to change in order to survive in this impossible and painful situation.

She overtly acknowledged Emilia was an evolving character who made her own choices versus being the hapless victim. Compare this to how Allison had written in the forum about this choice by Emilia to give Iago the handkerchief:

> I think that Emilia is just caught in a very bad situation in which she must make a decision as to who to be loyal to. In being loyal to Iago she is being dishonest and I don't think that that is who she is. I think that it would be better for Emilia if she distanced herself from Iago and found someone else who would allow her to be herself, but that is not an option. I think that the only reason why Emilia gave the handkerchief to Iago was because Desdemona had lost it. I don't think that Emilia would have stolen it from Desdemona because I think that she is a better person than that. She has just been corrupted by Iago and allowed him to cloud her judgement. I just wish that Iago never was involved in the life of Emilia because I think then she would be happier.

In the forum, Allison portrayed Emilia as the victim of Iago, but in her final paper, she dealt with the fact that Emilia was a person who made choices, both right and wrong.

Ultimately, Allison articulated eloquently the power of the reading/writing integration, as she looked back and saw what she had missed. In hindsight, she described the asynchronous digital collaboration in this way:

> Because it really forces you to think and it forces you to create these ideas before you are to write about them [in a paper]. . . . You basically write your paper before you write your paper. And you come up with your ideas for your paper beforehand, so it's not as hard when you get up to your paper and are like, "Okay, it's time to write a six page paper. Get to it."

As Allison clearly understood, actively engaging in the reading/writing integration within the expanded space and time of the asynchronous digital collaboration helped students become expert readers and thinkers who then were adept at making real-world choices as writers. They practiced it all one step at a time over the eight weeks of the unit. They read a little bit, thought a little bit, and then tried to

articulate those thoughts in small chunks of writing. Then they did it all over, again and again, with new layers of reading offering new ideas and writing challenges, until they realized they had a fully written paper.

OVERVIEW OF FINDINGS

The interplay between the expanded space and time and the reading/writing integration of the redesigned unit helped students produce stronger research papers, confirming the remaining hypothesis of the first research question:

- o Participation in the redesigned unit resulted in students articulating their ideas more effectively in their research papers.

The reading/writing integration within the expanded space and time changed the students by making them experts in both roles of discourse: reader and writer. While these two features brought about these important changes in the students, ultimately they were most critical in understanding the process of the unit, as examined in the second research question:

- How and in what specific ways did the process and features of the redesigned unit bring about such changes in the students as thinkers, readers, and writers?

If the students actively engaged in the process of the redesigned unit, they lived the dialogue of true discourse, constantly reversing reader and writer roles, until they discovered they had mastered the process like Kathy did. Or they realized they could have mastered the process but did not take full advantage of the chance, as in Jacob's and Allison's cases. The reading/writing integration within the actual and digital expanse of space and time directly developed the students' understanding of the text and of themselves as readers, writers, and thinkers. Kathy showed this full growth, Jacob showed where a stumble revealed the power of the process, and Allison showed that, when she ignored the process, she saw how much she missed.

In this way, all of the five key features of the asynchronous digital collaboration became a singular whole. The audience, collaboration, and layers of reading were brought together each time the students wrote in the expanded time of the redesigned unit and the expanded space and time of the asynchronous digital collaboration. Each piece of student writing, from the smallest early post in the forum to the final paper, was constructed through collaboration with an audience who had become thinking partners and boundary brokers. This collaboration happened within a constant written dialogue with reading layers multiplying each time a member chose the writer role in the dialogue. So, maybe unexpectedly but certainly inversely, as this integrated process became more complex with each passing

day of actual time, the students further distilled and clarified their thoughts by moving through digital space and time to read and reflect on the mass of input inherent in this complex interaction. In turn, through their continuous writing, they distilled their expert voices and ultimately their expert writing skills. The complexity therefore, in the end, cannot be unwoven, despite my presentation of different layers as I built this analysis through Chapter Four and this chapter, because complexity was at the heart of why the students understood they had more to learn and set out to learn more.

CHAPTER SIX

CONCLUSION: TOWARDS A NEW DIGITAL COMPOSITION PEDAGOGY

This study has made it clear that understanding the planned curriculum, the curriculum most research studies have focused on (Burroughs and Smagorinsky, 2009), is only a small step in understanding the enacted and received curricula. Reasserting Burroughs and Smagorinsky's call for more research into the enacted and received curricula, this study showed how much more was happening as the students participated in the redesigned senior research paper unit than I as the teacher had planned for or observed. As a small scale study of the actual writing instruction in one secondary classroom, this study suggests ways to address issues identified in the most recent study of enacted secondary writing instruction (Applebee and Langer, 2011): applying theory to pedagogical practice and integrating pedagogically-driven technology. This dissertation study found that traditional writing process pedagogy and the accepted concept of authentic audience in secondary school pedagogy can be integrated and reimagined as an expansive dialogue that promotes great gains in secondary students' thinking, reading, and writing, and that pedagogically thoughtful collaborative technology integration helps drive this deeper student learning.

However, this redesigned unit did much more than use an authentic audience in conjunction with effective technology integration in writing process instruction. By intertwining the traditional writing process, Moffett's three-way framing of discourse, and 21st-century composing with digital tools, this unit enacted a dialogic pedagogy of digital composition. I explore this pedagogy in the first section of this chapter, examining how it transformed traditional elements that have individually been used to some success in some classrooms—audience, dialogue, collaboration, and reading—but that became wholly different through their interaction. Dialogue with peers and boundary brokers within the expansive space and time of asynchronous digital collaboration created opportunities for the development of students' thinking and reflection skills, and in turn their reading and writing skills, far beyond what research has shown is happening in secondary classrooms (Uccelli, Dobbs, & Scott, 2013; Applebee & Langer, 2011; Brockman, Taylor, Kreth, & Crawford, 2011) and in support of habits of mind research on successful transition to college (Council of Writing Program Administrators, National Council of Teachers of English, & National Writing Project, 2011; Costa and Kallick, 2008; Tishman, Perkins, & Jay, 1995).

Still, there is more to be done before a new model of composition pedagogy that leverages digital communities of practice can be fully defined. In the next section of this chapter, I propose larger

scale studies of the benefits that emerged from this nascent pedagogy to contribute to developing new models of student learning and learning environments that support composition pedagogy in the digital age. I also discuss how the integration of the redesigned unit's key features points to new areas for composition research. The final model of a pedagogy of digital composition will fittingly be best defined within the complexity of multiple research experiments and pedagogical explorations, just as the students in this study were best served by the complexity of the redesigned unit.

ESSENTIAL FEATURES OF A DIGITAL COMPOSITION PEDAGOGY

As I explored in Chapters Four and Five, the redesigned unit was a complex intertwining of five core features: audience, collaboration, layers of reading, expanded space and time, and reading/writing integration. Through these features' interaction, traditional composition elements of authentic audience and collaboration (Gee, 1989; Kirby & Liner, 1988; Flower, 1979) were transformed, and a nascent pedagogy emerged. This pedagogy's key features are dialogue in a community of practice, layers of reading and writing, expanding space and time, and reading/writing integration.

In order to understand how the features of this pedagogy integrate and revise the traditional writing process and Moffett's pedagogical theory of discourse (1968), it is helpful to contrast visual representations of each. Figure 6 represents the traditional concept of the writing process.
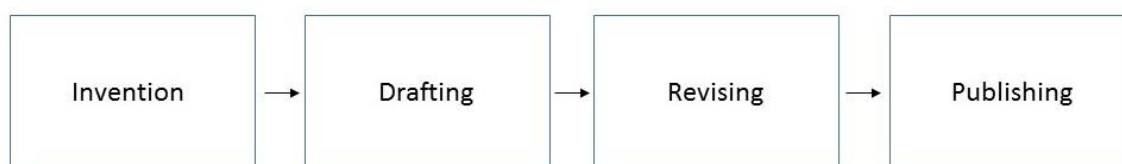

Figure 6. The writing process. The traditional concept of the writing process is an overall linear process with recursive movement between stages as needed.

The writing process is a linear movement from early ideas to the final product. Writers may cycle back to earlier stages as needed, particularly when drafting and revising if an authentic audience is included for feedback. Moffett's theory of discourse assumes the presence of such an audience, thus complicates the act of composition for the writer (the I) by placing the needs of the subject (the It) against the needs of

the audience (the You). Looking again at the visual representation of Moffett's theory in Figure 7, the movement is still linear but has a more complicated, double direction along both the X and Y axes.
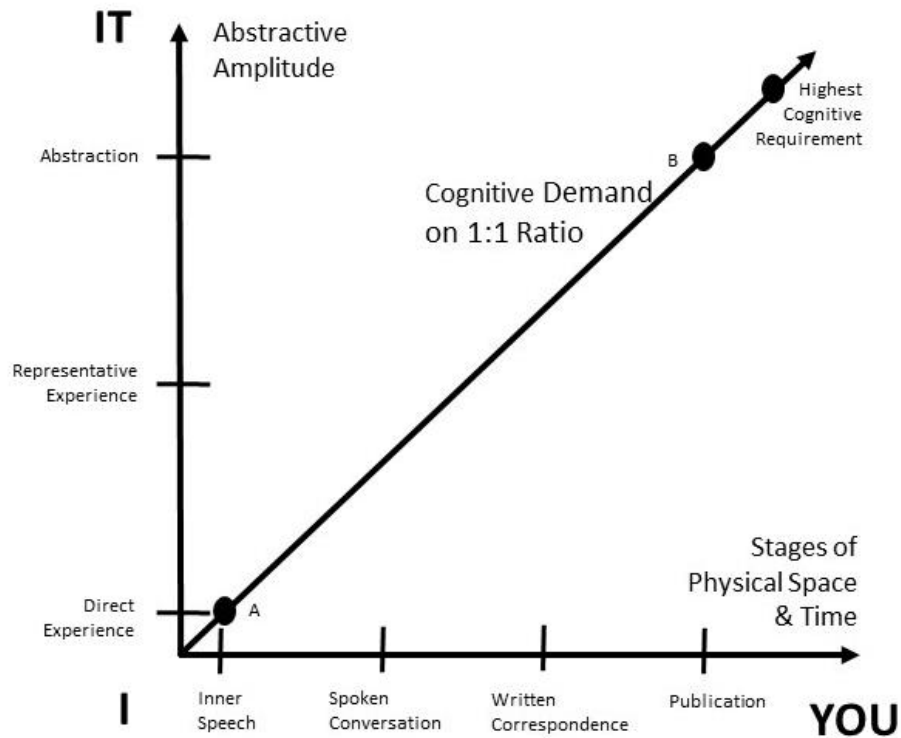

Figure 7. Moffett's discourse theory. The I—It longitudinal axis and the I—You latitudinal axis illustrate increasing discourse challenges with increased distance, both in abstractive amplitude and physical space and time.

Figure 8 presents a visual representation of the nascent pedagogy of digital composition afforded through digital communities of practice defined by the enacted curriculum of the redesigned unit. The features of this pedagogy are always working together, thus the representation as nested circles versus a linear progression. The outer circle of time and space grows as needed to ensure maximum student development and learning; in this indeterminate landscape, the other features also expand as needed. This representation seeks to visualize the complexity at the heart of this pedagogy by

showing that all of the students' work, even as it expands, circles around itself versus moving linearly, as in the writing process model (Figure 6), or outwardly and away from each other, as in the movement along the axes of Moffett's model (Figure 7). As I wrote in the conclusion of the prior chapter, the complexity of the redesigned unit cannot be unwoven because complexity was at the heart of the students coming to understand that they always had more to learn.
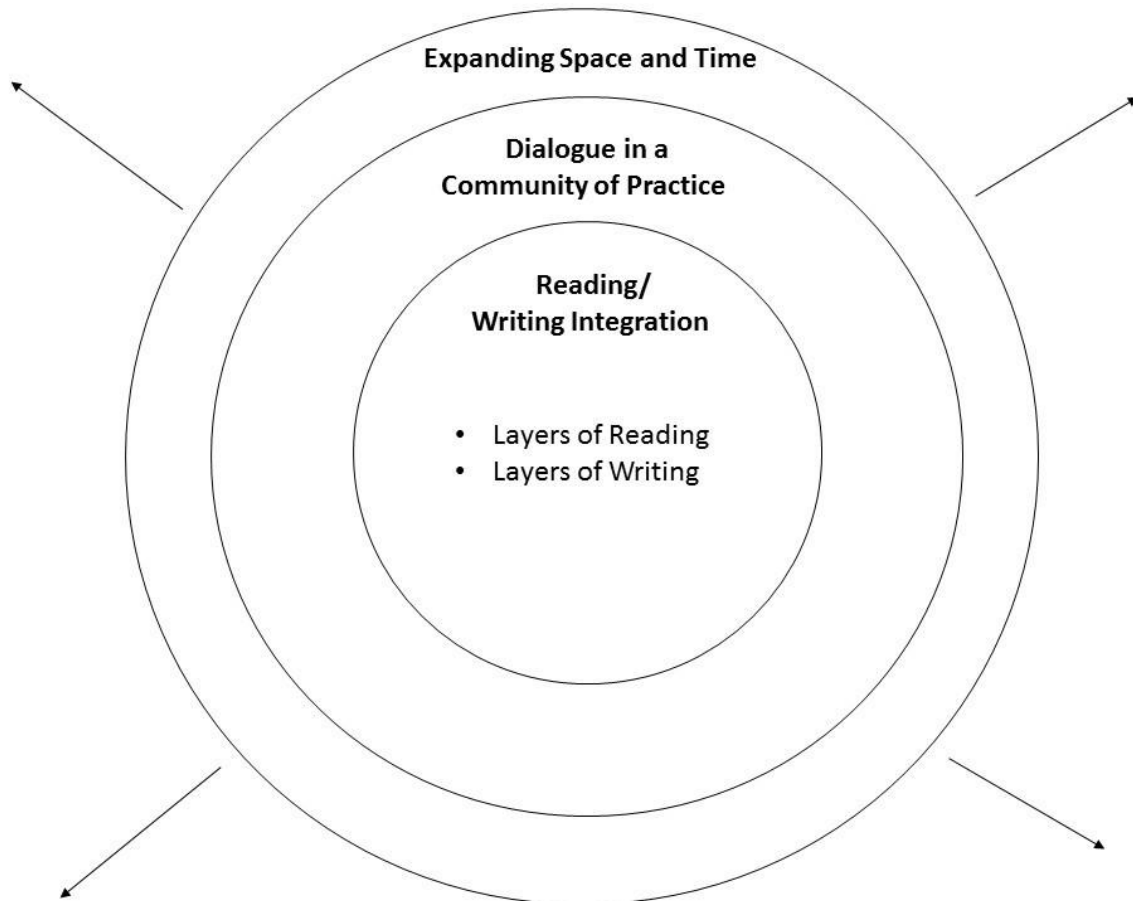
Expanding Space and Time

Dialogue in a Community of Practice

Reading/ Writing Integration

- Layers of Reading
- Layers of Writing

Figure 8. A nascent digital composition pedagogy. The nested circles represent the constant integration of the pedagogy's four key features.

In the redesigned unit, I created a specific learning environment that foregrounded complexity and resulted in evident deep growth in student learning. By abstracting the essential features of this concrete learning environment, I hope to provide the groundwork for other teachers and researchers to enact, explore, and experiment with the pedagogy in multiple environments. The five essential features

are: (1) extended actual time, (2) an asynchronous digital collaboration space, (3) a community of practice of mentors and peers engaged in discourse about (4) a rich central text, and (5) a final composition product.

First, the expanded space and time provided by the digital collaboration space in the redesigned unit was matched with extended actual time. This pairing of actual time with the affordances of digital time and space that come with a digital collaboration tool is essential because students need real time to take advantage of ever-expanding digital time and space. As Applebee and Langer (2011) found:

> Overall, in comparison to the 1978-80 study, students are writing more in all subjects, but that writing is short, not providing students with opportunities to use composing as a way to think through the issues, to show the depth or breadth of their knowledge, or to go beyond what they know in making connections and raising new issues (p. 16).

The pressure of high-stakes testing is often given as the reason for this lack of time for depth in secondary classrooms (p. 26), but this dissertation study shows that the benefits of providing students time to think and learn are too strong to ignore. This study provides concrete evidence of the benefits of extended actual time for students to develop as thinkers, readers, and writers, evidence teachers often need to push back against the pressures of teaching to the test and covering more material.

Because the students in this study had the first essential feature of actual time, they were able to take advantage of working within the ever-expanding space and time of the asynchronous digital collaboration space, the second essential feature. The digital space became a second classroom where students thought, read, wrote, and learned. Even more critically, the asynchronous nature of the digital collaboration allowed students to switch dialogue roles as many times as needed to achieve deep growth as learners. This affordance of control of time in an asynchronous digital space is critical for maximizing students' learning in the actual time devoted to the unit. By participating fully in the digital space and time, students engaged in the dialogue as both readers and writers for as long as they needed to develop their thinking, reading, and writing skills.

The third essential feature of the pedagogy is therefore establishing the constant dialogue by including a community of practice (Wenger, 2000) built from an expert authentic audience and peer collaboration. The community of practice that developed in the redesigned unit from the time and space for constant dialogue with an expert audience and peers was more powerful than authentic audience and collaboration as separate pedagogical elements. This created much more than the traditional concept of Moffett's three-way discourse; it created a digital zone of proximal development (Vygotsky,

1930). The students were engaged in true discourse with both peer thinkers and boundary brokers; thus they were always both supported and challenged, a critical balance for student growth.

The fourth essential feature is a unified reading experience centered on a rich text. As I have made plain throughout this dissertation, the text can be any text that is critical for the unit: a fiction work, such as in this redesigned unit; a nonfiction text; a lab report; a text in its original, target language; a series of essays; etc. What is important is that the text be rich enough to promote an extended dialogue and that secondary research exist about the text to fully develop the layers of reading essential to students' learning. With the inclusion of the central text, the ever-shifting dialogue becomes one of at least four voices—the text, the student, the mentor(s), and the peer(s)—within the expanse of digital space and time, and the dialogue becomes rooted in the third nested circle of the nascent pedagogy: reading/writing integration. By using the default discourse mode of writing in asynchronous digital collaboration, the students were reading and writing from nearly the first moment of the redesigned unit. This created the layers of reading and writing at the heart of the nascent pedagogy. The students not only read many layers, but they wrote many layers, always integrating the needs of their audience, prior interactions, and prior reading layers into their reading and writing. In this study, the students identified on their own the presence of layers of reading, and thus this became one of the study's core codes. Through the analysis in Chapters Four and Five, the layers of writing became evident as just as critical as the layers of reading. The layers of writing made the dialoguing that much more complex, as they constantly added reading layers for all participants while intertwining writing for an audience into the students' thinking development throughout the expanded space and time of the redesigned unit.

Finally, this pedagogy requires a composition product, as it is a composition pedagogy. The students can only understand composing as the extended process made clear in this pedagogy if they are tasked with creating a final composition. The mode of this composition, as with the in-common text, can change based on the course's composition goals. Science students might write a lab report, while Spanish students might write an analysis in the target language. The composition also might be multimedia with audio and visual components, as would befit a digital composition pedagogy.

These product options bring me back to my belief that this pedagogy can be applied to many different learning environments. While these features seem to me to be the essential ones for conceptualizing a new pedagogy of digital composition, I can imagine varied realizations of them that others can experiment with to see if they achieve equally productive learning environments with the same or other intended effects. For example, the central text might change to become an object of attention around which a service learning project is built, such as homelessness. The community of

practice in this case might dialogue in the asynchronous digital collaboration space about their work on the identified problem of homelessness. This project would have different or additional goals than the redesigned unit in this study, concrete community service action for example, and the layers of reading would shift as well, possibly including existing proposals to combat homelessness, proposals that, on their own, might not be rich enough to be the central text but that serve as additional reading layers for developing a deep understanding of the object of attention.

By building a preliminary model of how a pedagogy can ultimately emerge from experiments like the one I undertook in the redesigned unit, I am seeking to offer a starting point to be reimagined. The students, through the enacted curriculum of the redesigned unit, thought deeply as readers and writers, and more importantly, they reflected on their processes as readers and writers. They understood themselves as learners, and they understood the importance of reflection to learning. This understanding is what research (Council of Writing Program Administrators, National Council of Teachers of English, & National Writing Project, 2011; Costa and Kallick, 2008; Tishman, Perkins, & Jay, 1995) has identified as critical for transferring skills to new learning environments. As readers, the students read actively to make meaning, dialoguing between reading layers to test their ideas and form new concepts. Therefore they developed knowledge expertise and confidence in this expertise. As writers, they discovered and understood the power of extended composing, consequently developing a comprehensive writing expertise by dialoguing with other writing as well as continually writing for the extended actual time of the unit. These students became powerfully confident thinkers, readers, and writers who understood the skills that backed up their confidence.

This study proposes a pedagogy for creating a new learning environment that affords such deep student learning. I have sought to define the ways complexity changes student learning, and other ways will be discovered by other researchers. This pedagogy is different from traditional pedagogy developed for behavioral objectives, such as following the writing process. In the redesigned unit, I created a rich learning environment and waited to see what happened, and those results were unpredictable, just as they should be in a true learning environment (Lave & Wenger, 1991). In such complex learning environments, the teacher is no longer the center. In this digital composition learning environment, the layers of reading and writing, that is the tools and products of composition itself, were the center, and the students, along with their mentors and peers, directed the learning.

AREAS FOR FUTURE RESEARCH

As with all case studies, this study had a specific context, particularly a relatively homogeneous participant pool of experienced writers (Flower & Hayes, 1981). Future studies of different, and larger, participant pools can test whether the growth achieved by the students in this study can be replicated. This study indicates this can happen, as the two years of the case study were with different types of mentors at different universities. Continuing to experiment with applications of the essential features abstracted from this enacted curriculum will determine if these features are workable, accurate, and productively malleable. For example, using the pedagogy in a unit focused on a more controversial central text or topic, such as diversity or affirmative action which research has shown produced conflict in digital discussions (McKee, 2002; Romano, 1993), could test the building of a productive digital community of practice in particular, as the participants would likely have less commonality starting out than the students and mentors in this study did.

Also, it is important that future studies track students into new learning environments to see if the reflexivity they developed does help them transfer their thinking, reading, and writing skills, as well as to see if they continue to approach learning as a constant process. Research has shown transfer is tied to reflection (Council of Writing Program Administrators, National Council of Teachers of English, & National Writing Project, 2011; Costa and Kallick, 2008; Tishman, Perkins, & Jay, 1995) and understanding writing as something one never masters (Adler-Kassner & Wardle, 2015; Sommers & Saltz, 2004) is critical to continued learning. The findings of this study indicate the students are primed for successful transfer, but this study did not follow them to confirm transfer.

In addition to highlighting these needs for expanded studies of the proposed essential features, this study also points to the need to reopen research into pedagogical concepts the field has thought it understood. First are authentic audience and response theory. The traditional benefits of authentic audience in secondary school writing instruction held true in this study, but much more was occurring. I saw the mentors at the outset as a traditional authentic audience for a paper written about *Othello* because they too were reading the text, but they evolved as an audience through their work in the collaboration, changing my concept of their role to one that helped create a community of practice. Then in this new conception of audience, the mentors used the best practices of response theory, even when they had not been instructed specifically in these methods. Future research can explore this finding to more fully understand how to re-conceptualize authentic audience in ways that seek to understand and promote the concept's link to ensuring the use of best practices in response theory.

This further study into authentic audience and response theory will also reopen study into revision practices. College professors and secondary teachers have long expressed that, despite the type of response given, students do not revise in the way they want them to (Witte, 2013; Hult, 2008; Bisaillon, 2007; Sadler, 2003). "Frequently, students do not know how to or do not want to take the time needed to consider the many possible ways of improving a piece of writing or assume that revision is completed when surface errors, such as spelling and grammar, are corrected" (Witte, 2013, p. 34). Yet the students in this redesigned unit spent week after week revising their ideas. Then when they were writing their research papers, they were willing to rethink and revise their theses and arguments from their first to final drafts. By learning within this complex environment, students approached revision as rethinking, as they were developing ideas all along the way through the constant and constantly shifting dialogue. The students read their own and others' ideas as readers, revisited their own ideas as writers, and repeated this process for as long as they needed. Interestingly, the students themselves rarely used the term "revision" in their interviews and reflections, thus it did not become a major code of this study. But the findings indicated revision was what they were doing, and from this, they learned revision is a process that should happen all along the way, as one's ideas and writing are always evolving through dialogue, rather than a singular step towards the end of the traditional concept of the writing process. Further research into this approach to teaching revision can help confirm and refine an understanding of these findings. How do long-term composing and all of the social interactions it involves redefine accepted notions of revision and teaching for revision?

This study also only began to explore the use of digital collaboration tools to create expanding space and time for student learning. The students and mentors in this study, while acknowledging a face-to-face component could have been beneficial, expressed no concerns with interacting across digital space and time, and the evidence showed these interactions were deeply engaging and produced powerful learning. However, other studies (Chen, Liao, Chen, & Lee, 2011; Boon & Sinclair, 2009; Cummings, 2004) on integrating technology into classrooms have had mixed findings, leaving the need for further research on successful pedagogical applications of digital collaboration tools. Studies replicating this pedagogical integration of a digital collaboration space can confirm if it truly maximizes the affordances of digital space and time. Other studies can experiment with new ways to take advantage of the deep learning possibilities this study found in the pedagogical use of digital collaboration tools. For example, studying digital collaboration tools in a fully asynchronous, distance course would contrast the hybrid nature of this study's redesigned unit.

This leads me to emphasizing one last time that I believe strongly that the pedagogy defined by this redesigned unit can be used with different texts and ages of students. Some evidence for this was built into this two-part case study. In the two phases, the mentors were different ages and at different colleges, and the findings were consistent across the two years. Also, while this unit was focused on a literary research paper, I have evidence in the form of perceptions from students and mentors that this unit can be used in different subjects and with different types of writing. I asked Sebastian, one of the students, if he could see the process of the redesigned unit working for a history class. He responded:

> Yea, I could definitely see that happening . . . [If] I did a specific topic, like the Battle of the Hill/16th Belgium, and I heavily researched it, had I had that interaction with other students, I would also see … their perspectives on it … I think a collaboration would be very interesting for history, even though it's more factual. But I definitely think . . . in the beginning of the process, a collaboration would help you really choose what you're gonna do for your paper.

Sebastian saw the pedagogy working for a history paper in the same way it did for the literary research paper: helping students think deeply through their topics and develop their arguments prior to officially writing a draft. Barbara, the mentor, even tried a different use of the redesigned unit's asynchronous collaboration in her student teaching, which she was doing the same semester as working with the redesigned unit:

> We did something called a silent discussion, and so it's almost like the forum but with pen and paper in the classroom. So I prompted them with a question, and they had x number of minutes to write, basically until I saw pencils really starting to slow down. And then I turned on some music, and they had to get up and move and only take their pen. And then when the music stopped, they had to sit down where they were and respond to whatever someone else wrote … So we went through and they switched seats like around five times … [Afterward] as I was reading through them, I am looking at tracking by handwriting each student, I'm seeing how their ideas changed as they went through and heard from others.

Barbara already was adapting the pedagogy to a new situation, although still an English classroom. I believe the essential features abstracted from this enacted curriculum can be used across many subjects and ages of students, and I will continue to put these features into action in the schools I work in as well as hope other teachers and researchers use the features in their own ways, be that with different topics, less homogeneous participant pools, or different course designs, to test and refine their applicability across many educational settings.

Finally, the data collected in this study provides the opportunity for further research into training teachers on how to use technology in the classroom thoughtfully, a need Applebee and Langer (2011) found in their study of actual classroom practice and a need defined by the mixed results of research on using technology in the classroom (Chen, Liao, Chen, & Lee, 2011; Boon & Sinclair, 2009; Cummings, 2004). As I wrote in the introduction, I plan to revisit the data from this study with the new lens of the perspective of the mentors as teachers-in-training to understand if and how this collaboration prepared them to take advantage of the learning power of technology in their own classrooms. As I mentioned briefly in Chapter Five, the mentors came into the collaboration with little to no educational technology experience or training, so the data can reveal evidence of the effects of this collaboration on their understanding as prospective teachers of effective, pedagogically-driven technology integration. Other studies can work to replicate these findings or to explore different ways of effectively training teachers to use technology in the classroom.

FINAL THOUGHTS

Learning is a complex process. Studies have confirmed this again and again, as researchers have sought to understand the intricacies of learning to help direct education towards true learning (Moffett, 1968; Vygotsky, 1930; Dewey, 1910). Therefore it ultimately should not be a surprise that the complex, rich, and ultimately unpredictable learning environment of this study's redesigned research paper unit was so critical to the students' growth as thinkers, readers, writers, and, most importantly, learners. The nascent pedagogy that emerged from this study is founded on creating a supportive learning environment for ever-increasing complexity in students' reading and writing so they can deeply develop their thinking, reading, and writing skills, as well as come to understand the skills critical to their continued learning. Yet the pressures on and within education in our nation are pushing the enacted and received curricula of our English classrooms further and further away from complexity and intentional unpredictability (Applebee & Langer, 2011). Research such as this study into how to allow learning to thrive within complex curricular experiences can provide teachers the foundation they need to change their curricula in ways they know will provide true learning as well as provide administrators and policy-makers reasons to redirect the current course of much of the nation's literacy education. Understanding the powerful learning that can come from connecting thoughtful pedagogical use of collaborative technology to proven methods of composition pedagogy is critical for moving the learning of our students forward at a time when the measures of future success include flexible, creative thinking and literacy skills combined with a growth mindset (Partnership for 21st Century Learning).

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APPENDIX A:

STUDENT NOTIFICATION FORMS

NOTIFICATION STATEMENT FOR HIGH SCHOOL SENIORS

Researchers
- Dr. Louise Phelps, Responsible Project Investigator, Adjunct Professor of Rhetoric and Writing, Department of English, Old Dominion University
- Susanne Nobles, PhD Student, Old Dominion University

Purpose of the Research Study
The purpose of this study is to examine a two-sided digital collaboration between high school seniors and preservice teachers to understand the effects of this collaboration in two ways:
- How the collaboration affects the high school seniors' composing process during the preparation for and writing of a traditional research paper
- How the collaboration affects the preservice teachers' understanding of composition pedagogy

What You Will Do in the Study and Time Required
The high school seniors and preservice teachers will work together in a digital community built in a ning. You will also write a reflection at the end of the unit on what you experienced and learned (this is an open-ended prompt – there are no specific questions). All of you will participate in this collaboration and reflection, as these are the normal assignments for the unit in the course. There is no extra work associated with this study. All results from these written records will be reported anonymously with a pseudonym given to each of you.

If you are 18, you will be asked if you are willing to be interviewed to collect anecdotal evidence to further understand the trends identified in your written collaboration and reflections. The interviews are completely optional and will happen prior to and after the unit and outside of class time, so you can decline without any risk to your performance in the unit or course. The interview data will be recorded anonymously using the same pseudonyms given for reporting findings from the written collaboration.

NOTIFICATION STATEMENT FOR COLLEGE STUDENTS

Researchers
- Dr. Louise Phelps, Responsible Project Investigator, Adjunct Professor of Rhetoric and Writing, Department of English, Old Dominion University
- Susanne Nobles, PhD Student, Old Dominion University

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What You Will Do in the Study and Time Required
The high school seniors and preservice teachers will work together in a digital community built in a ning. You will also write a reflection at the end of the unit on what you experienced and learned (this is an open-ended prompt – there are no specific questions). All of you will participate in this collaboration and reflection, as these are the normal assignments for the unit in the course. There is no extra work associated with this study. All results from these written records will be reported anonymously with a pseudonym given to each of you.

You will also be asked if you are willing to be interviewed to collect anecdotal evidence to further understand the trends identified in your written collaboration and reflections. The interviews are completely optional and will happen prior to and after the unit and outside of class time, so you can decline without any risk to your performance in the unit or course. The interview data will be recorded anonymously using the same pseudonyms given for reporting findings from the written collaboration.

APPENDIX B:

INTERVIEW QUESTIONS

INTERVIEW QUESTIONS 2014

Pre-Interview: High School Seniors/"Students"

1. Tell me about your experiences with writing research papers prior to this class.
    a. How would you describe your attitude towards writing?
    b. How would you describe your attitude towards researching?
2. What, if anything, do you feel about technology as a writing tool?
3. Could you describe your thoughts on the upcoming digital collaboration for studying *Othello* and writing a research paper?
    a. How would you describe the relationship between collaboration and writing? Collaboration and research?
    b. What is your sense of how collaboration affects writing? Affects research?
4. What do you remember about the Canadian collaboration with Ms. Carter Morgan? (all except Abby)
5. Do you have any questions for me?

Post-Interview: High School Seniors/"Students"

** Have them bring their junior research paper and link to looking at this year's paper.

1. Tell me about your experience collaborating on reading *Othello* and writing your research paper.
2. When you think about the thought, time, and effort you put into this reading and writing, how would it compare to the Hemingway study and research paper you wrote last year?
3. Describe any concerns you had during this collaboration, with the reading and/or writing.
    a. Would a personal component add to, not affect, or hurt the collaboration?
4. Did the collaboration impact your writing?
5. I'd like to look at your collaborative character study group and have you talk about your work during this part of the collaboration. Feel free to stop me at any time to talk about a section of the discussion.
    a. Are there places where your thoughts were changed by others' posts?
    b. Are there places that you relied on for writing the research paper?
    c. Did you enjoy the discussion?
    d. On a 1 to 10 scale, with 10 being the highest, how much effort did you put into the discussion?
6. Now I'd like to look at your research paper and have you describe your response to your final paper. Feel free to stop me at any part of the paper to talk about something.
    a. How do you think it turned out? Are you proud?
    b. Are there places where the collaboration was pivotal to what you wrote?
    c. Are there revisions you made due to the collaboration?
7. What is your perception of how digital collaboration and writing were related during your study of *Othello*?

8. Any final comments or questions for me?

Pre-Interview: Preservice Teachers/"Mentors"

1. Tell me about your beliefs about and experiences with composition pedagogy.
2. Tell me about your study of and/or experiences with teaching how to write research papers prior to this class.
   a. How would you describe your attitude towards teaching writing?
   b. How would you describe your attitude towards teaching research?
3. What, if anything, did you know about technology as a teaching tool prior to this class?
   a. How would you describe your attitude towards technology as a teaching tool?
4. Could you describe your thoughts on the upcoming digital collaboration with high school seniors to study *Othello* and write a research paper?
   a. How would you describe the relationship between collaboration and writing? Collaboration and research?
   b. How does talking to me affect your approach to the collaboration?
   c. What is your sense of how collaboration affects writing? Affects research?
5. Do you have any questions for me? Ask them to keep in mind the next set of questions as they do their work.

Post-Interview: Preservice Teachers/"Mentors"

1. Tell me about your experience collaborating with the high school students on reading *Othello* and writing a research paper.
2. Describe any concerns you had during this collaboration, with working with the students on their reading and/or writing.
   a. Would a personal component add to, not affect, or hurt this collaboration?
3. I'd like to look at your collaborative character study group and have you talk about your work during this part of the collaboration. Feel free to stop me at any time to talk about a section of the discussion.
   a. Are there places where you felt particularly effective in your work with the students? Particularly challenged?
   b. How much effort did you put into the discussion? (scale of 1-10)
   c. How do you see this discussion linking to composition pedagogy?
4. Did you see any effects of the digital collaboration in the research papers you read?
5. Did the collaboration impact your views on the teaching of writing and composition pedagogy?
   a. What is your perception of how digital collaboration and composition pedagogy were related during this study of *Othello*?
   b. How does this experience with composition pedagogy compare to or contrast with your prior study of/experiences with composition pedagogy?
6. Do you have any final questions or comments for me?

INTERVIEW QUESTIONS 2015

Pre-Interview: High School Seniors/"Students"

Revisions to Questions

- *Removed Canadian collaboration b/c no longer applies*
- *Reordered research and writing since research comes first*

1. Tell me about your experiences with writing research papers prior to this class.
   a. How would you describe your attitude towards researching?
   b. How would you describe your attitude towards writing?
2. What, if anything, do you feel about technology as a writing tool?
3. Could you describe your thoughts on the upcoming digital collaboration for studying *Othello* and writing a research paper?
   a. How would you describe the relationship between collaboration and research? Collaboration and writing?
   b. What is your sense of how collaboration affects writing? Affects research?
4. Do you have any questions for me?

Post-Interview: High School Seniors/Students

Revisions to Questions

- *Split first and third questions to get more of a focus on the reading aspect*
- *Reworked fourth question to add a specific focus on reading (made it a mirror of prior fourth question about impact of collaboration on writing)*
- *Ditto to above bullet with seventh question*
- *Added 7c to get direct thoughts on this intertwining*

** Have them bring their junior research paper and link to looking at this year's paper.

1. Tell me about your experience collaborating …
   a. On reading *Othello*.
   b. On writing your research paper.
2. When you think about the thought, time, and effort you put into this reading and writing, how would it compare to the Hemingway study and research paper you wrote last year?
3. Describe any concerns you had during this collaboration …
   a. With the reading.
   b. With the writing.
   c. Would a personal component add to, not affect, or hurt the collaboration?
4. Did the collaboration impact …
   a. Your reading?
   b. Your writing?
5. I'd like to look at your collaborative character study group and have you talk about your work during this part of the collaboration. Feel free to stop me at any time to talk about a section of the discussion.
   a. Are there places where your thoughts were changed by others' posts?

        b. Are there places that you relied on for writing the research paper?

        c. Did you enjoy the discussion?

        d. On a 1 to 10 scale, with 10 being the highest, how much effort did you put into the discussion?

6. Now I'd like to look at your research paper and have you describe your response to your final paper. Feel free to stop me at any part of the paper to talk about something.

        a. How do you think it turned out? Are you proud?

        b. Are there places where the collaboration was pivotal to what you wrote?

        c. Are there revisions you made due to the collaboration?

7. What is your perception of …

        a. How digital collaboration and reading were related during your study of *Othello*?

        b. How digital collaboration and writing were related during your study of *Othello*?

        c. How reading and writing were related during your study of *Othello*?

8. Any final comments or questions for me?

Pre-Interview: College Students/"Mentors"

Revisions to Questions

- *Revised to acknowledge what I learned last year – they have had no teacher training or experience with composition except as writers themselves. So last year, these answers became digging into their own experiences, and I am wording the questions specifically this way this year because the wording made them worry last year and I ended up rewording for later interviews.*
- *Revised fourth question to say "read" instead of "study" and split reading and writing into 2 specific questions to focus on reading*
- *Revised fifth question by adding prompt about reading and splitting them all out into separate prompts*
- *Also revised fifth question by combing the relationship and affects questions into one*

1. Tell me about your beliefs about composition pedagogy.
2. Tell me about your experiences with writing research papers prior to this class.

        a. How would you describe your attitude towards teaching research?

        b. How would you describe your attitude towards teaching writing?

3. What, if anything, do you know about technology as a teaching tool?

        a. How would you describe your attitude towards technology as a teaching tool?

4. Could you describe your thoughts on the upcoming digital collaboration with high school seniors …

        a. To read *Othello*?

        b. To write a research paper?

5. How would you describe the relationship between collaboration and the following as well as how you see collaboration affecting the follow …

        a. Reading?

        b. Research?

        c. Writing?

6. How does talking to me affect your approach to the collaboration?
7. Do you have any questions for me? Ask them to keep in mind the next set of questions as they do their work.

Post-Interview: College Students/"Mentors"

Revisions to Questions

- *Split first and second questions to get more of a focus on the reading aspect*
- *Reworded question about personal component (now third question) to recognize that we had one this time*
- *Added 4c for a reading focus*
- *Added reading focus in sixth and seventh questions*
- *Dropped question about comparing to prior pedagogy experiences because they have had little to none*

1. Tell me about your experience collaborating with the high school students …
   a. On reading *Othello.*
   b. On writing a research paper.
2. Describe any concerns you had during this collaboration, with working with the students on …
   a. Their reading.
   b. Their writing.
3. How did the Google Hangout personal component add to, not affect, or hurt this collaboration?
4. I'd like to look at your collaborative character study group and have you talk about your work during this part of the collaboration. Feel free to stop me at any time to talk about a section of the discussion.
   a. Are there places where you felt particularly effective in your work with the students? Particularly challenged?
   b. How much effort did you put into the discussion? (scale of 1-10)
   c. How do you see this discussion linking to reading comprehension pedagogy?
   d. How do you see this discussion linking to composition pedagogy?
5. Did you see any effects of the digital collaboration in the research papers you read?
6. Did the collaboration impact your views on the teaching of …
   a. Reading?
   b. Writing?
7. What is your perception of how digital collaboration and …
   a. Reading pedagogy were related during this study of *Othello*?
   b. Composition pedagogy were related during this study of *Othello*?
8. 6. Do you have any final questions or comments for me?

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