Excavating ePortfolios: What Student-Driven Data Reveals about Multimodal Composition and Instruction

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BY

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This manuscript has been read and accepted for the Graduate Faculty in English in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT
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The pedagogical practice of asking students to compose in open, online spaces has grown rapidly in recent years along with an increase in institutional and financial support. In fact, in July 2013, the Association for Authentic, Experiential and Evidence-Based Learning (AAEEBL) announced the “coming of age” of ePortfolios as the percentage of higher education students using ePortfolios rose above the 50% mark in the U.S. (“About”). There are a host of constituent assertions that support the use of open online writing platforms in college-level courses. These claims include that writing publically cultivates digital literacy through broader audience awareness, facilitates interactivity and collaboration between peers, and supports the incorporation and creation of multimedia in the writing process. This dissertation project challenges the assertions about both the benefits and drawbacks of digital writing pedagogy through a mixed methods approach including a survey of first-year students at Macaulay, a distant reading of the student writing contained in the Macaulay ePortfolio archive, a close reading of three student-run ePortfolio sites, and interviews with three students who participated in a self-nominated ePortfolio competition. The results suggest that students need digital literacy training, as well as specific prompt language, in order to utilize the affordances of digital writing platforms.
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Chapter 1

Introduction

The pedagogical application of digital writing — specifically, requiring students to compose in open, online spaces — has grown rapidly and steadily in recent years along with a rise in institutional and financial support (Sherman 3). ePortfolio platforms designed for multi-user collaboration and consideration are among such online spaces that are increasingly used for educational purposes. In 2006, Helen C. Barrett defined the ePortfolio, or “ePortfolio 2.0” as a program that is “networked, emergent, learner-driven, focuses on individuality, [that] is composed of small pieces loosely joined, uses blogs and/wikis as its architectural base, tends to follow open standards and is stored in a distributable fashion across the network.” In July 2013, the Association for Authentic, Experiential and Evidence-Based Learning (AAEEBL) announced the “coming of age” of ePortfolios after the percentage of college students using ePortfolios rose above the 50% mark in the U.S. (“AAEEBL”). There are a host of constituent assertions that support the use of open online writing platforms, such as ePortfolios, in college-level courses. For example, practitioners argue that writing in a public venue cultivates digital literacy through broader audience awareness, facilitates interactivity and collaboration between peers, and supports the creation and integration of multimedia artifacts into the writing process (Stevenson 115).

Although such claims might at first glance seem both exciting and reasonable, there has been too little study of student writing composed on ePortfolio platforms to justify them. Longitudinal studies of student cohorts or studies of particular institutional writing programs are especially lacking. Indeed, after over a decade of integrating digital writing platforms into the
post-secondary classroom, where do rhetoric and composition teachers stand in terms of understanding the results of this pedagogical practice? This dissertation study recognizes that the rhetoric and composition field lacks specific evidence of ePortfolio qualities in terms of efficacy of multimodal student writing. As such, it seeks to address both the growth of public writing in the college classroom and the lack of systematic study of students’ preparedness to write in online spaces by examining the multimodal aspects of digital composition at one institution, the Macaulay Honors College, a part of the City University of New York (CUNY) system. This dissertation project challenges assertions about both the benefits and drawbacks of digital writing pedagogy through a mixed methods approach including a survey of first-year students at Macaulay, a distant reading of the student writing contained in the Macaulay ePortfolio archive, a close reading of three student-run ePortfolio sites, and interviews with three students who participated in a self-nominated ePortfolio competition.

Portfolio Pedagogy

For more than two decades, scholars have been studying paper-based portfolio use in writing-intensive courses. Their focal points have included research on theory, implementation, and assessment. Kathleen B. Yancey and Irwin Weiser, editors of *Situating Portfolios: Four Perspectives*, wrote in 1997, “[w]hen teachers began developing portfolios over a decade ago, we knew what we were about—with process writing and collaborative pedagogies and, not least, portfolios—was pretty ambitious: it was, in fact, nothing short of changing the face of American education” (1). As Yancey suggests, in the field of composition, portfolio pedagogy evolves from process theory, or the belief that writing is a recursive and continuous practice that cannot be accurately measured in a single “product.” Progenitors of process theory include such writing scholarship pioneers as Janet Emig (*The Composing Processes of Twelfth Graders, 1971*),

Portfolios entered the writing classroom in the 1980s after process theory and collaborative pedagogy gained momentum in the 1970s. Simultaneously, in literary studies, theorists such as Stephen Greenblatt and David Reynolds contended that textual analysis requires context. Robert Leigh Davis describes this shift in “The Lunar Light of Student Writing Portfolios and Literary Theory,” by claiming that “[t]his, arguably, is the most important single change in liberal studies in the past thirty years. Rejecting the notion of an autonomous text-language as a freestanding artifact, a verbal icon — philosophers, social scientists, historians, and literary critics insist on reading and writing in context;” Davis continues by stating that “[u]nderstanding the circumstances out of which writing emerges becomes as important as knowing what's on the page itself” (35). Considering that writing programs were historically and largely remain a part of English departments, the collision of these movements in writing and literary studies produced a synergy that resulted in a shift in assessment practice (for data on writing programs, see Gladstein and Fralix, 2015). The trend in writing assessment continues to place importance on the context in which the writing was composed: namely, the assignment prompt as well as the medium in which the writing occurs, as well as the social, economic, gender, and geographical situation of the students who produced the writing.

In “Toward a New Theory of Writing Assessment,” Brian Huot calls the early work in portfolios “show-and-tell,” suggesting that having now defined and described the practice,
writing studies scholars should move ahead to the next stage, which is research and/or theory (561). Process theory, and consequently this study, is deeply informed by scholarship in cognitive science and educational psychology, such as works by Jean Piaget, John Dewey, and Lev Vygotsky.¹ Piaget is known for establishing the constructivist theory of education, claiming that students build new knowledge from their prior experience. Piaget established his theory of cognition through the close observation of children in an attempt to understand their thought processes, a method used by composition researchers such as Janet Emig and Sondra Perl. When applied to education, Piaget’s theories translate into a student-centered pedagogy based on experiential learning. The Macaulay program is committed to an experiential model of learning: students attend cultural events, collect scientific data through on-site fieldwork, and participate in a mock city council with city politicians present. Therefore, grounding this dissertation study of the Macaulay program in the theory of experiential learning is essential to evaluating the impact these practices have on student work.

Dewey takes up this line of reasoning in an attempt to define and refine “progressive” education: “every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after” (309). The role of education is therefore to distinguish between experiences, teaching students to build on those that are productive and challenge those that are problematic. In this way, Dewey does not reject the “traditional” model of education based on passing down established facts from a body of knowledge entrusted to the teacher, but rather suggests educators use that knowledge to challenge the assumptions that come with experience. Significant to the study of writing and

¹ Specifically, by John Dewey, *The Child and the Curriculum* [1902], *Democracy and Education* [1916], and *Experience and Education* [1938]; by Jean Piaget *The Language and Thought of the Child* [1926]; and by Lev Vygotsky *Mind and Society* [1934].

² These partnerships between faculty and ITFs are the ideal, but many faculty members resist this collaboration. Even in those cases, ITFs can work directly with students in their weekly office.
technology, Dewey also heralds the experimental method, in which students acquire new knowledge by experimenting with new processes rather than through memorization. Again, this model is apparent in the implementation of the ePortfolio platform at Macaulay, which privileges experience and reflection over memorization and testing.

Vygotsky challenges Piaget’s model, suggesting that a learner’s social and cultural world also plays a critical role in his or her learning process, and incorporates Dewey’s experimental method by theorizing that children learn through play. This emphasis on social, collaborative learning is clearly at work in the student projects investigated as a part of this study: many of the low stakes projects are written in a public space with the intention of sharing and learning for one another’s experiences, and many of the high stakes projects are created collaboratively by groups of students. Furthermore, Vygotsky is known for his “zone of proximal development,” based his theory on the observation that children practice advanced skills by acting them out imaginatively before they are developmentally able to perform these tasks: for example, when children pretend to play the roles of teacher or student before they enter school (108). Vygotsky’s theories influence my belief that students bring their previous experience with reading and writing in online spaces to their use of the ePortfolio system at Macaulay, and that students need time to experiment with new reading and writing technologies in low-stakes spaces before performing these tasks for evaluation. Taken together, process theory and its groundings in cognitive theory and educational psychology heavily influence my study of student ePortfolio use at Macaulay.

In contrast to portfolios, often handed in to teachers in hard-copy forms or posted to work as digital files, ePortfolios, as defined in this dissertation, are websites used for the purpose of creating, curating, and archiving student work. ePortfolios come in a wide range of formulations,
from corporate-run learning management systems that limit access to members of the institution or course to open platforms that students build and maintain themselves. Some institutions implement ePortfolios as course sites, where all of the students contribute to one space through structured assignments, while others ask students to collect their work in a digital space over the span of a course, term, or their educational career. In this way, the term “ePortfolio” is misleading. The elements of “collect, select, and reflect” (Devanney and Walsh 593) may not apply to ePortfolios that archive all of the work students produce, without any process of selection, and may never include finished products since the text can be altered for as long as the platform is maintained. Furthermore, drafts and evidence of revision are hidden in the digital space, viewable only to those with access to the backend of the site. For the purpose of this study, I am only interested in open, public platforms because I am specifically investigating the impact of audience on student writing. Students contribute to the Macaulay ePortfolios using WordPress, which enables them to share their work with an audience outside of the university. I am interested in how this openness changes the writing process, both in terms of the rhetorical modes represented in a digital space, as well as the reflection process students undertake when contributing to the ePortfolio system. I will be looking at both ePortfolios used in teacher-driven course sites as well as student-driven individual sites.

Models for this Study

There are two important studies of ePortfolio systems that serve as models for this dissertation. The first, “Mapping, Re-Mediating, and Reflecting on Writing Process Realities: Transitioning from Print to Electronic Portfolios in First-Year Composition,” by Steven J. Corbett, Michelle LaFrance, Cara Giacomini, and Janice Fournier, summarizes a number of challenges to implementing ePortfolio work. The team behind this article conducted a case-study
of a first-year writing ePortfolio system at the University of Washington to demonstrate the potential of the platform, the expectations of the program, and the results after analyzing data collected from the teaching assistants who used the program in their classes. The authors claim that while they found that ePortfolios provide students with the opportunity “to reflect on their work from various angles, for multiple readers, and in multiple contexts” (184-85), both teachers and students struggled to learn new technologies, compose in a non-linear space, and negotiate multiple audiences for their work. The findings show that “the quality of students’ ePortfolios equaled, and at times surpassed, the quality of paper portfolios” and that “students who completed ePortfolios were better able to connect their writing with the course outcomes than students who completed paper portfolios” (Corbett, LaFrance, Giacomini, and Fournier 192). However, this success depended on increased instructional technology assistance from a new partnership formed at the university. Both the instructors and research team expressed that:

- ePortfolios had a long-term potential to become vehicles for teaching students how to integrate text and images and for introducing multimedia elements into the course. In our review of students’ work we encountered a handful of visually sophisticated portfolios and a couple that experimented with multimedia, but these skills were not widely evident. (Corbett, LaFrance, Giacomini, and Fournier 194)

Consequently, the researchers conclude that if ePortfolios are to reach their potential in terms of student composition, ePortfolios should be introduced early in the semester, assignments should be designed to match the medium, access to computers for all students in the class should be provided, and instructors’ attention to openness and audience awareness is essential for maximizing the benefits of the platform. Instructors in the program also note that the ePortfolio
system transformed traditional “papers” into interdisciplinary projects, and the administrators remarked that success increased each semester the instructors used the platform (Corbett, LaFrance, Giacomini, and Fournier 196-199). Like many studies of this nature, the research reflects the perspectives of the instructors and administrators, but not those of the students who used the ePortfolio platform. Therefore, my dissertation project explicitly includes students’ voices through surveys of students who were required to use the ePortfolio sites and through interviews of students who continued to use the ePortfolio platform voluntarily after their required coursework.

Another study that serves as a model for my research is the Visible Knowledge Project (VKP), a study of ePortfolio use at twenty-two institutions nationwide, including LaGuardia Community College, which is part of the CUNY system. The VKP was a collaborative teaching and learning project that explored the impact of technology on learning, primarily in the humanities. In all, about seventy faculty members participated in VKP, and they published a series of eighteen case studies as a result. Based on their work on the VKP, Randy Bass, Assistant Provost for Teaching and Learning Initiatives at Georgetown University, and Bret Eynon, Assistant Dean for Teaching and Learning at LaGuardia Community College, argued in 2008 that “[i]f we truly want to advance from a focus on teaching to a focus on student learning, then a strategy involving something like electronic student portfolios, or ePortfolios, is essential” (“Themes & Findings”). Bass and Eynon, editors of the resulting web publication, argue that through this study they found that “many new media pedagogies are socially-defined and communication-intensive, taking students outside of artificial classroom situations into conditions for authentic and high impact learning. New media technologies can be powerful in fostering engagement with others through dialogue, collaboration and exchange” (“Themes &
Many of these results were made possible through the flexibility of the platforms used, which were not static, closed sites, but open, multimodal networks. In their findings the authors state that:

students working in media-rich primary source archives found themselves particularly moved by photographs and film of the civil rights movement;
students engaged in online discussion boards about works of literature, suddenly found themselves embroiled in heated exchanges about the legitimacy of their experiences to give them authority in taking a stance on character and plot;
students creating multimedia narratives found themselves suddenly empowered by the multi-sensory, multi-track tools at their disposal—music, images, timing, graphics—to convey their own complex combination of emotional and intellectual responses to some moving historical incident they were trying to portray for a public audience. (Bass and Eynon)

The wide range of experiences conveyed in the VKP directly relates to the Macaulay ePortfolio system, which is also implemented in courses across the disciplines, that students take over their first two years of coursework. The VKP is one of the few studies to investigate student work across the curriculum, and therefore, is an excellent model for this dissertation. Also, the results of the VKP are conveyed through the multi-authored publication including the voices of faculty across the institutions, fellows who worked with the program, and students who took the courses. Joseph Ugoretz was one of the faculty members who participated in this program; he co-authored the introduction to the collaborative publication, and is now the Associate Dean of Teaching, Learning, and Technology at Macaulay Honors College. His experience with the VKP inspired
and informed his administration of the Macaulay ePortfolio system, and the lessons learned through the VKP are clearly evident in the execution of this program under his guidance.

In 2004, Stuart Selber wrote in *Multiliteracies for a Digital Age* that “[n]ot only are teachers obligated to prepare students responsibly for a digital age,” but also “the most rewarding jobs require multiple literacies […] students will be citizens and parents as well as employees, and in these roles they will also need to think in expanded ways about compute use” (124).

Selecting an ePortfolio system that limits the level of public engagement students have is a missed opportunity to develop digital literacy skills that translate outside of the academy. An example of an ePortfolio system that enables students to practice such a level of digital literacy is one that is run on WordPress, an open source blog publishing and content management system. WordPress gained popularity as a blogging platform because it is considered to be—and in my experience is—easy to learn. In fact, as of November 2015, WordPress is used by 58.6% of all the websites whose content management system are known, which is 24.9% of all websites (W3Techs). This statistic is evidence that developing an understanding of WordPress as a web-publishing platform in an educational setting can directly translate to usable skills for personal or professional use. This dissertation investigates WordPress as an ePortfolio platform, considering the benefits and drawbacks of its use in formal course work and for student invention. It builds on the conclusions of previous ePortfolio research, and extends it to include an analysis of the development and implementation of digital literacy skills that move beyond written composition to the creation of multimodal texts and interface design and seeks to determine if these literacies transfer to work produced outside of formal coursework.

**Research Questions**
Since at least 1979, rhetoric and composition teachers have been researching the relationship between digital literacy and writing pedagogy (Computers and the Teaching of Writing in American Higher Education, 1979-1994: A History by Gail Hawisher, Paul LeBlanc, Charles Moran, and Cynthia Selfe). The ongoing integration of digital tools into writing intensive courses is guided by documents such as the Common Core State Standards, Writing Program Administration (WPA) Outcomes Statement, and the Conference on College Composition and Communication (CCCC) Statement on Digital Literacy and Assessment, all of which establish learning objectives used by faculty and administration and suggest how the implementation of online writing spaces can facilitate mastery of rhetorical and communication skills. For example, the 2014 WPA “Outcomes Statement” calls for students to be able to “[u]nderstand and use a variety of technologies to address a range of audiences” and the CCCC Statement on Best Practices in Electronic Portfolios (revised in March 2015) recommends that students should be “able to adapt their e-portfolios to various purposes/uses beyond their academic careers, enabling their various readers, in turn, to track their learning longitudinally.” However, in order to properly implement these recommendations, studies on the impact of digital writing pedagogy at the college level are needed to develop best practices. This dissertation is intended to be a resource for instructors and administrators who are building and revising digital writing programs by providing a comprehensive report on the results of one particularly well structured and supported program.

This dissertation study asks the following major questions with embedded sub-questions:

1. How prepared are college students to compose in online, open spaces for educational purposes? How does their previous personal experience impact their ability to develop digital literacy skills in higher education?
2. What are the characteristics of student writing in the online, open space of the digitally enhanced ePortfolio? How does the interface/platform influence and shape the writing students compose in that space?

3. How are these characteristics similar and different in writing across the disciplines? Specifically, how do they compare when the subject or content of the writing emanates from humanities/art courses and from science/technology courses?

4. How is this writing similar and different in teacher-directed work versus student-directed work? What evidence—if any at all—of digital literacy in students’ personal and professional ePortfolio sites transfers from the skills developed in formal coursework?

   The first question considers the myth of the digital native (Prensky) by gathering data on students’ digital writing practices before entering college. Guided by the theoretical work of danah boyd and the practical methods proposed by DeVoss and McKee, I conducted a survey of incoming students that collected data on the platforms, methods, and frequency of digital writing that Macaulay students engaged in prior to entering the program. This data allows me to understand how prepared these students were to engage in the kinds of multimodal composing required by the honors program.

   The second question addresses the modes of writing engaged in by the Macaulay students on the ePortfolio site. The modes defined by Janet Emig and extended through recent scholarship on multimodal composition by scholars such as Cheryl Ball, Carl Whithaus, Anne Wysocki, and Geoffrey Sirc help shape my understanding of students’ digital composition practices. Answering this question requires a discussion of the impact of technology on the writing process informed and is informed by media historians including Richard Lanham and Walter Ong.
The third and fourth questions take a deeper look at the context and content of student writing through both textual analysis and close reading. To accomplish this, I developed a coding schema based on the long history of manually coding data for empirical studies in composition scholarship (Emig; Perl; Hewett), and enhanced the approach through the application of digital humanities methods (Moretti; Jockers). These practices are also informed by the scholarship on writing across the curriculum (WAC) and knowledge transfer. This combination of writing studies, digital humanities scholarship, and methodology results in a quantitative and qualitative analysis of student writing as gleaned from a triangulation method that is replicable and verifiable.

By concentrating on the student experience, rather than teacher testimonials or assessment data, this study of multimodal writing in a digital space advances current scholarship in both the fields of composition and digital humanities in several ways. Student compositions collected from teacher-directed course sites and student-directed sites make up the core of the data for this investigation, with surveys and interviews with students to supplement and support the findings. The data is coded by adopting traditional methods widely accepted and tested in writing studies research, namely by creating a system to identify modes of writing and markers for multimodality that can be reproduced for any set of texts by any researcher. However, this coding system is implemented through a database and studied using text analysis, which bring the techniques of the digital humanities to bear on this study of composition. In this way, this dissertation is adding a new thread to the discussion on how these two fields can benefit from each other (Ridolfo and Hart-Davidson).

The Role of the Researcher
I began searching for a PhD program in 2009 after completing a master’s program in English Literature and teaching as an adjunct for two years. These experiences gave me a clear sense of what I wanted to accomplish through doctoral study. As a “freeway flyer” I had come to rely on educational technology in order to facilitate teaching six courses a semester across three different campuses. Each institution supported different course management systems, and as I learned to navigate these systems, I began to weigh the benefits and drawbacks of each tool, prompting my desire to research issues of digital literacy further. However, during my search for a doctoral program, I found that very few institutions had invested in the digital humanities (DH), and, as many critics have noted, digital humanities programs were not particularly interested in pedagogy. For example, Brett Hirsch notes in the introduction to Digital Humanities Pedagogy: Practices, Principles and Politics, the word pedagogy is only present eight times in both of the most referenced digital humanities anthologies (4). Since that book was published in 2009, articles on classroom praxis have been few and far between; however, a lot of ad hoc sharing and collaborating is happening in self-published spaces, social networks, and in online scholarly forums. The topic of pedagogy is just starting to become more central to the ethos of DH practitioners with two new full length, open access texts on the subjects, the aforementioned Digital Humanities Pedagogy: Practices, Principles and Politics and Digital Pedagogy in the Humanities: Concepts, Models, and Experiments. Therefore, in 2009 it was difficult to find a graduate program that would support my intentions of studying student composition using digital humanities methods.

I came to the Graduate Center because of the innovative work of individuals working within CUNY—projects that were being supported and given recognition. For example, Matthew K. Gold presented “Looking for Whitman,” his collaborative, cross-campus teaching experiment
run on WordPress, at the 2009 Modern Language Association conference, and at the same time an alumnus I was working with pointed me toward the Interactive Technology and Pedagogy Certificate program. What I did not know yet was that there were groundbreaking projects formulating throughout the 24-campus CUNY system, and that these projects would lay the foundation for my future. In my four years at the Graduate Center, my coursework and oral exams exposed me to the new media and composition theory I needed to argue for the relevance of a dissertation project focused on digital pedagogy. This combination of theory and practice not only gave me the tools to formulate my dissertation project, it also helped me secure an Instructional Technology Fellowship (ITF) at Macaulay Honors College, which was a key turning point in my academic career. Macaulay is a unique program that accepts students from eight of CUNYs 24 campus system to enroll in honors level seminars across the disciplines. These seminars include cultural immersion experiences utilizing the resources of New York City, and all require the use of the Macaulay ePortfolio platform. As an Instructional Technology Fellow, I worked with professors across the disciplines to integrate technology into their courses in pedagogically sound ways.

As a participant-observer in this dissertation project at Macaulay, I witnessed the limited familiarity first-year students had with web-enabled technology. As an Instructional Technology Fellow (ITF) in the Macaulay Program, it was my job to introduce students to their new Mac laptops and to train them in the use of the ePortfolio and email systems required by the University. ITFs lead the initial “Tech Day” event where new students receive general technology instruction (Mac use, blog set up, email etiquette, etc.), and the “Tech Fair” event in which ITFs discuss Open Educational Resources, fair use, and multimedia creation. Ideally Macaulay instructors work with ITFs in all four seminars, learning, designing, and implementing...
assignments together. Often instructors also invite ITFs to lead in-class workshops on specific digital literacy skills as needed, including workshops on information architecture and interface design, or on content creation such as hands-on guidance using timeline, presentation, music, image and video creation software. My analysis of the interviews presented in Chapter 6 shows that when these partnerships are successful, the students benefit greatly and graduate with both an extensive set of technical skills and a deeper understanding of the complexity of online communication. However, through informal questioning during these ITF led student training sessions at Macaulay, I noticed a large portion of the incoming students did not have dedicated personal home computers prior to entering college, had never used Macintosh computers, and did not understand the basic elements of blogging and email technology. This experience prompted me to design a formal survey to investigate these issues. The survey serves as a foundation for this research project (reported in Chapter 4), and helped me to identify the exposure students had to writing in online spaces prior to entering college. The results led me to research the origins of the “digital native” myth (discussed in Chapter 2), and to ultimately debunk this notion.

Since students must use the Macaulay ePortfolio platform in all four required Honors seminars, it was important to know how familiar students were with writing in digital spaces. Macaulay’s system has been in place for over a decade, with ample support, and a flexible platform that addresses the challenges presented in past studies. The Macaulay ePortfolio system is introduced to students and instructors before the semester begins; Macaulay provides laptops and instructional technologists to support ePortfolio work; and the sites are used across the

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2 These partnerships between faculty and ITFs are the ideal, but many faculty members resist this collaboration. Even in those cases, ITFs can work directly with students in their weekly office hours or in virtual meetings.
curriculum. The Macaulay program has maintained a multiuser WordPress install to support the creation of course sites and student-run blogs. I use the archive of over 3000 Macaulay ePortfolio sites as my data for my dissertation in order to investigate how students compose in online open spaces. Specifically, Chapter 4 breaks down a sub-set of student writing by course and identifies the mode of writing, the use of multimedia, and the inclusion of folksonomic elements in each post. This stage of data collection and analysis provides a comprehensive view of student writing across the disciplines and the assignment prompts that guide those compositions.

My role as an ITF also helped me seek out participants to interview for the final stage of research for this dissertation (Chapter 6). Every year Macaulay holds an ePortfolio Expo in which students self-nominate their personal sites to compete for a prize. Out of nine applicants, I selected three of the sites submitted to the Expo in 2014 to read closely and the interviewed the creators of these sites. The interviews focused on what the students learned in their required coursework at Macaulay, and how they transferred those skills into the creation of the site submitted for the Expo. This final chapter considers evidence of student engagement to demonstrate that the practice of teaching students to write in open online settings will foster the development of what Cathy Davidson calls “life long” digital literacy skills, or skills acquired through formal education that transfer into the personal and professional lives of students.

**Organization of the Dissertation**

This dissertation is organized into seven chapters, including this introduction to the project. Chapter 2 provides review of literature relevant to this research project, and frames the conversation concerning the myth of the digital native, portfolio use in higher education, and digital writing pedagogy more broadly. The chapter addresses previous research on process
theory, constructivist pedagogy, and multimodal writing. After reviewing the literature, this chapter argues for the need to study the digital literacy practices students employ when composing in online open spaces like the one at Macaulay.

Chapter 3 presents and describes the methodology employed in this study. It describes the triangulation method developed to provide a comprehensive investigation of the Macaulay ePortfolio system from the student perspective, including a survey of first-year students, text analysis of student compositions, and interviews with upper classmen. It outlines the planning, preparation, and data collection methods of the survey of first-year students. Further, it details the coding schema employed in the text analysis of student writing collected from course sites associated with the required honors seminars at Macaulay. Finally, it describes the interview process and the close readings of the interviewees’ sites, paying special attention to the patterns that emerged from comparing these sites and interview transcripts.

Chapter 4 presents the results of the survey. Using a quantitative approach strengthened by frequency tables, the survey results are discussed in order to provide evidence of the scant prior experience students have in online composition and the incorporation of multimodal elements when they reach college. The survey results are then compared to a CUNY-wide survey of students as well as nation-wide surveys of writing instructors and college age students. Finally, the chapter discusses the larger implications for online digital literacy instruction at Macaulay.

Chapter 5 utilizes the coding schema presented in Chapter 3 to analyze student compositions created on ePortfolio sites in the required honors seminars. The chapter asks cross-disciplinary questions of the data and considers the roll that the assignments play in student composition. Data presented illustrates the need for instruction that clearly defines and delineates
the way online compositions relate to student grades and prompts the discussion of multimodality that is further explored in Chapter 6.

Chapter 6 uses three in-depth interviews, in conjunction with a close reading of the interviewees’ ePortfolio sites, to present evidence of knowledge transfer from coursework to independent work. In addition, the interviews demonstrate the ways that instruction in the use of WordPress site functions and previous work in digital composition for the ePortfolio sites created during the four required seminars can result in the formation of transferable digital literacy skills.

Finally, Chapter 7 presents the implications of this research in terms of digital writing pedagogy. The conclusions also suggest the need for further research into the implementation of ePortfolio programs and for additional large-scale studies of multimodal writing.
Chapter 2

The Evolution of Process and Product: A Literature Review

This chapter traces the history of digital writing practices through the rise of process theory and constructivist pedagogy, which led to portfolio-based assessment and the adoption of digital “ePortfolios” in higher education. Defining and historicizing the term ePortfolios is necessary to distinguish the traditional integration of portfolio-based assessment from the Macaulay system. The Macaulay ePortfolio system is a multi-purpose, open platform that is used in ways that are not discussed in the extant literature available on ePortfolios, but rather connects this research into a larger discussion of digital literacies and multimodal writing. This dissertation necessarily links scholarship on ePortfolio integration to the digital literacies students develop through the use of WordPress-based blogging platforms. As an intervention in the current scholarship, this study focuses on the student’s experience composing digital texts through surveys on incoming students, text analysis of student writing composed for the ePortfolio platform, and interviews with upper level students concerning their creation of personal ePortfolio sites.

This chapter outlines the academic significance of using open, online learning environments in higher education, particularly in writing intensive courses. Arising from traditional paper-based portfolio assessment and multimodal writing instruction, ePortfolios are increasingly prevalent across all levels of higher education. The following chapter examines the history of ePortfolios and the use of blogging platforms in higher education, as well as the process theory and constructivist pedagogy that informs these practices. This discussion serves to delineate the modes of academic writing, as defined by Janet Emig, that students engage in when composing both low stakes (informal) and high stakes (formal) assignments, and extends these
definitions to adapt to public, digital modes of creation and delivery (The Composing Processes of Twelfth Graders 4). To address the transition, this chapter first dissects the myth of the digital native in order to understand how and why students compose in digital spaces; then, it discusses the impact that assuming students are prepared to create digital texts has on composition pedagogy. Additionally, to emphasize what Jason Palmeri terms the “multimodal turn” in rhetoric, this chapter considers the cultivation of technological fluency through the use of WordPress in a general education curriculum and the transference of digital literacy skills from teacher-directed to self-directed work (132). Finally, this chapter summarizes and draws together the literature that points to a need for the study recounted in this dissertation. It argues for the importance of a triangulation method using qualitative and quantitative analysis such as the surveys, text analysis, and interviews described in Chapter 3 and analyzed in Chapters 4, 5, and 6. Gathering and analyzing student writing that is digital and public in this way is an intervention in current ePortfolio scholarship that combines composition theory with digital humanities methods.

The Myth of the Digital Native

In order to understand the student experience composing on ePortfolios platforms such as the WordPress blogs used at Macaulay Honors College, it is necessary to consider how—through what mediums, using what tools, in what contexts—students generally write in online, public spaces before entering college. This inquiry speaks to a larger debate concerning the perception of the “digital native” perpetuated by both popular and academic sources (including but not limited to Tapscott, 1998; Prensky, 2001; Oblinger and Oblinger, 2005). The digital native argument assumes that students in the 21st century enter college as expert users of technology based on the widespread availability and use of digital devices in the social life of young adults.
Marc Prensky coins this term in “Digital Natives, Digital Immigrants,” in which he makes a generational distinction based on those who grew up with technology, “native speakers,” and those who “were not born into the digital world but have, at some later point in our lives, become fascinated by and adopted many or most aspects of the new technology” (2). The controversial article was published in 2001 before the dawn of social media, and therefore pointed to “ubiquitous environment and the sheer volume of their interaction” with video games, instant messaging services, and cell phones as the conduit for digital fluency of K-12 students (1). These claims are echoed and expanded in the widely cited EDUCASE text Educating the Net Generation edited by Diana G. and James L. Oblinger in 2005. In Chapter Three of Educating the Net Generation, “Technology and Learning Expectations of the Net Generation,” Gregory R. Roberts defines “Net Generation” as students who “have never known a world without computers, the World Wide Web, highly interactive video games, and cellular phones.” Based on the results of interviews and focus groups conducted with college students across America, Roberts claims that the “Net Generation” defines technology by “what’s new,” dismissing the impact of tools they use every day (3.1). Proponents of the “digital native” theory claim that the current education system is not equipped to accommodate the changing needs of this new generation of learners.

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3 Social media is defined as tools used for peer-to-peer communication such as text messaging, instant messaging, microblogging, image-sharing, social network sites, and various mobile applications.
4 Instant messaging is a type of online communication between two people or more. The most common messaging systems allow for users to send text to an individual or a group directly creating what is known as a “chat” or “chat group”. This form of virtual, asynchronous communication was popularized in the 1990’s through program such as America Online (AOL) instant messenger (known as AIM) and has been adapted by popular platforms such as gmail (Google’s email service), Apple’s iPhone, and Facebook.
Advocates of the digital native theory believe that members of the Net Generation “have sophisticated skills in using digital technologies, but also that, through their exposure to these technologies, they have developed radically new cognitive capacities and learning styles” (Mararyan, Littlejohn, and Voit 1). According to “Planning for neomillennial learning styles: implications for investments in technology and faculty” by Chris Dede, these new learning styles include “fluency in multiple media, valuing each for the types of communication, activities, experiences, and expressions it empowers” as well as “learning based on collectively seeking, sieving, and synthesizing experiences rather than individually locating and absorbing information from a single best source,” which suggests that “net generation” college students can expertly find, evaluate, and communicate information (10). These skills make up the core of composition courses across the U.S., and there is no evidence to suggest that digital natives enter college already prepared to accomplish these tasks. In fact, in *Reading to Learn and Writing to Teach: Literacy Skills for Online Writing Instruction*, Beth Hewett maintains that students may be accustomed to using digital tools for recreational and personal networking uses, but they are not very familiar with using such tools for educational purposes and work-based communicative purposes. Furthermore, Dede suggests meeting the needs of net generation learners with “active learning based on experience that includes frequent opportunities for reflection,” opportunities for “expression through non-linear associational webs of representations rather than linear stories” and “co-design of learning experiences personalized to individual needs and preferences,” all of which are learning techniques that have been used in the writing classrooms for decades and are not uniquely applicable to “digital natives” (Dede 10). Jason Palmeri is just one of the most recent scholars (building on Yancey, Dunn, Lunsford, Berthoff, and Selfe) to chronicle the history of composition and rhetoric pedagogy with great detail in *Remixing*
Composition: A History of Multimodal Writing Pedagogy, and the College Conference on Composition has explicit rationale in the Position Statement of Principles and Example Effective Practices for Online Writing Instruction (OWI) that addresses how to construct assignments that meet the needs of a wide range of learners, which have been in place since 2006.

The claims perpetuated by the digital native myth, specifically the assumption that students enter college with digital literacy skills, continue to be met with counterarguments from across the disciplines with large-scale studies providing evidence that exposure to and understanding of new media technologies is not universal. In “Net Generation or Digital Natives: Is There a Distinct New Generation Entering University?,” Jones et al. argue that while it is tempting for scholars to conflate the widespread use of digital tools with the ability of young people to understand and use web-based platforms effectively, we need more evidence:

Recently, counter-positions emerged, emphasizing the need for robust evidence to substantiate the debate and to provide an accurate portrayal of technology adoption among students (Bennett et al., 2008, Schulmeister, 2008 and Selwyn, 2009). Therefore, empirical research is needed to improve our understanding of the nature and extent of technology uptake by students. In parallel to understanding what tools students use and how they use them, it is also important to elucidate the role of digital technologies in students’ learning. (2-3)

In their two-year study of five universities in England5, which took place in the spring of 2008, Jones et al. report that “over 80% of students reported [only] slight confidence and basic skills or better in using presentation software (87.5%), online library resources (86.5%) spreadsheets

5 In this study the five universities were selected to represent the main “types” of university found in the English system and access was gained to 14 courses across a range of pure and applied subject and disciplinary areas found (724).
(84.9%), and in computer maintenance (82.3%),” which contradicts Dede’s argument that students have the ability to find and present information in an academic context. The researchers also discovered that “over a third [of students surveyed] reported not confident/minimal skills (not known or not confident) using VLEs\(^6\) (37.7%), writing and commenting on blogs and wikis (40.6%), and graphics software (36.4%); with almost two thirds (60.3%) reporting not confident/minimal skills in video/audio editing software” (730). These findings indicate the need to assess the competency of students in any given population before assuming they possess the technological fluency needed to use a virtual learning environment such as an ePortfolio, but especially one that involves students creating and uploading multimedia. The Macaulay ePortfolio platform, and the curriculum that supports its use, is designed to encourage students to compose multimodal texts in a public space. If students do not enter with confidence in these digital literacies, it is necessary to provide ample instruction in these skills before evaluating or assessing the results. In order to answer the call for empirical research put forth by Jones et al., this study of the Macaulay ePortfolio program includes surveys of the first-year students asking questions about their use of web publishing platforms before entering college and interviews of students after they had completed all four computer mediated seminars.

The empirical data Jones et al. collected across several universities indicated that technological fluency does not correlate with age (722-723); more specifically, their study revealed that age is only one factor—including race, gender, and economic status—in determining which students are more adept at certain technologies (730-732). As danah boyd, Adam Banks, and Angela Haas, June Ahn, and others have argued, cultural, geographical, and economic disparities negate the myth of the digital native on a broad scale, and in response to

\(^6\) VLEs refers to “Virtual Learning Environments,” which is another name for a learning management system.
these critiques Prensky has since retracted and amended the term. As boyd states in *It’s Complicated*: “[h]aving access to the information available through the internet is not enough to address existing structural inequities and social divisions. The internet will not inherently make the world more equal, nor will it automatically usher today’s youth into a tolerant world. Instead, it lays bare existing and entrenched social divisions” (176). The claim that technology exacerbates rather than diminishes inequality is also reflected in the quantitative results of empirical studies conducted world-wide. For example, Jones et al. compare age, gender, race, and socioeconomic status in their investigation of student’s self-reported “confidence” using various technologies and conclude that age played a negligible and inconsistent factor in the confidence of students; however, while gender was a minimal factor in overall confidence, specific technological skills broke down in gendered ways: male students were more confident than female students in their use of spreadsheets, graphics, audio/video, computer maintenance and security, for example. Furthermore, student status as a racial minority did impact access to and confidence in using technology (730-31). These results reflect the students’ *self-reporting* on how comfortable they are using technology, thereby showing that gender and race impacts how prepared students feel when asked to use technology for academic purposes. In a 2010 study, “Digital Na(t)ives? Variation in internet skills and uses among members of the ‘Net Generation’,” Eszter Hargittai found that “even when controlling for basic Internet access,

7 As one of the strongest voices deconstructing the digital native myth, boyd points to the rhetoric of natives and immigrants as fundamental to the problem. In chapter seven of boyd’s book *It’s Complicated*, “literacy: are today’s youths digital natives?,” boyd traces the history of this binary to political fear mongering incited by John Perry Barlow in 1996; boyd’s analysis argues that this rhetoric intended to position the generation gap between digital natives and immigrants as an insurmountable divide (177-178). Complicating this critique, boyd also addresses the problematic ethnic connotations of native versus immigrant: “throughout history, powerful immigrants have betrayed native populations while destroying their spiritual spaces and asserting power over them,” indicating that whether used to convey a positive or negative shift, this language connotes a power dynamic that influences societal behavior (178).
among a group of young adults, socioeconomic status is an important predictor of how people are incorporating the Web into their everyday lives with those from more privileged backgrounds using it in more informed ways for a larger number of activities” (92). Hargittai’s findings echo the complicated reality of how young adults integrate technology into both their academic and personal lives.

Similarly, in “Are Digital Natives a Myth or Reality?: Students’ Use of Technologies for Learning,” Marayan, Littlejohn, and Voit review international studies of technology adoption and curricular reform due to the digital native myth and use this knowledge to conduct their own mixed methods study of students at Glasgow Caledonian University in the UK in 2007. In this study, they explore “age variations in the nature and extent of technology use and analyzed disciplinary variation in technology adoption comparing use in a technical (Engineering) and a non-technical (Social Work) discipline” (429). They find that “a nuanced understanding of the extent and nature of technology use by university students requires insight into the contexts in which the technologies are being used, for instance the pedagogic design of courses” and that “students’ socioeconomic background and their life circumstances such as affluence, geographic proximity to friends and family, and personal psychological characteristics such as sociability and openness to new experiences” impacted their ability to use new technologies in an educational context (430). These studies demonstrate that race, ethnicity, class, and geographic location are only a few of the complicating factors that impact an individual’s ability to access, learn, and use technology effectively. Disability scholars such as Jay Dolmage, Rebecca Cory and Sheryl Burgstahler, and Sushil Oswal also advocate that technology integrated into the classroom should be universally accessible and designed to accommodate those with physical and learning disabilities. In fact, the CCCC statement on Online Writing Instruction (OWI) has
included a rationale on universal inclusion and accessibility since 2006. In the rationale for these principles it states, “the Committee believes that the needs of learners with physical disabilities, learning disabilities, multilingual backgrounds, and learning challenges related to socioeconomic issues (i.e., often called the digital divide where access is the primary issue) must be addressed in an OWI environment to the maximum degree possible for the given institutional setting” (“OWI Principle 1”). This statement clearly cautions the thoughtful pedagogue against believing the digital native myth by debunking the assumption that all students have the same access to technology. While the Macaulay ePortfolio system does not constitute an OWI because all of the courses are taught face-to-face, it is certainly an online writing space used for instructional purposes. Therefore, all potential obstacles to access must be considered when implementing and assessing student performance on this platform.

The assumption that students born into a web-enabled society are expert technology users can be problematic for pedagogues and administrators who wish to implement digital tools in the context of higher education without considering the preparation needed for students who do not fit the digital native stereotype. Yet, debunking this myth may not be as simple as providing evidence based on unequal access: when the majority of students identify as avid users of technology they may not be referring to the digital literacy skills necessary for academic work. Even for those with ample exposure to digital media throughout their lives, like the majority of students at Macaulay Honors College, research suggest that students’ general understanding of how these technologies function is superficial. As Alice Daer and Liza Potts argue in 2014:

while it is true that young people are producing, distributing, sharing, and remixing digital content more now than they ever have, it is not safe to assume that all or even most students are experts or even intermediate users of digital
tools. It may indeed seem like our classes are filled with students checking Facebook or using their smart phones to assess their fantasy sports standings, but we cannot say that students are critical experts of either the tools or the cultures that emerge from them. (24)

Daer and Potts propose that researchers, administrators, and instructors view students’ constantly evolving relationship to technology as a digital literacy practice rather than a set of skills. This assertion is grounded in the work of literacy studies from scholars such as Mina Shaughnessy, Mike Rose, and Gerald Graff who redefined writing as the practice of using language to learn. In investigating the digital native myth, boyd came to the same conclusion, arguing that “whether in school or in informal settings, youth need opportunities to develop the skills and knowledge to engage with contemporary technology effectively and meaningfully. Becoming literate in a networked age requires hard work, regardless of age” (177). To conclude that the constant checking of social media accounts creates an applicable aptitude for technology or a proficiency in any educational digital endeavor, including web publishing, leads to the inaccurate conclusion that students will not need instruction in these areas through formal education.

In fact, at this time there is a dearth of academic studies delving into the way students use social media sites as locations of writing. One example is Amber Buck’s dissertation, defended in 2012 at the University of Illinois at Urbana-Champaign; in this dissertation, Buck argues, “activity on social network sites is ubiquitous, purposeful, and integral to students’ literate lives” (ii). Elements of this dissertation are published in part as an article in Research in the Teaching of English titled “Examining Digital Literacy Practices on Social Network Sites,” which asserts that “examining the social, technological, and structural factors that influence digital literacy practices in online environments is crucial to understanding the impact of these sites on writing.
practices” (Buck 9). This kind of in-depth study of how teenage users of social networking sites (SNS) to navigate and understand the platforms through which they produce and consume content is not in the purview of this research project; however, there are large-scales studies that can provide substantial insight from a comparable population of students. A 2013 Pew Survey, “Teens, Social Media, and Privacy,” found that “teens share a wide range of information about themselves on social networking sites; indeed the sites themselves are designed to encourage the sharing of information and the expansion of networks;” the personal information teens shared included their real names, birth dates, photos of themselves, and their real-time location (Madden et al.). Similarly, in *Hanging out, messing around, and geeking out: Kids living and learning with new media*, published in 2010, Ito et al. report that teenagers use technology to keep in touch with friends, mediate romantic relationships, organize into social groups, support each other, and develop their own identities. Despite studies that show students are avid users of the Internet and social media sites, the level of student engagement and ability in those spaces varies greatly. Even in the students who report high levels of access and confidence using the web-based technologies, the students’ perceived digital literacies may not translate to a significant impact on learning, a possibility which is the basis of this dissertation study. As June Ahn finds in the “[p]erhaps SNS, which are ideal identity building tools, can be used to aid students in exploring different characters, voices, and perspectives during the learning process. […] SNS are environments that integrate numerous media tools, and could theoretically be applied to help students collect, synthesize, and remix content” (Ahn 1442). Ahn cites media scholar Henry Jenkins as having useful insight in the potential of social media engagement for learning academic skills. Jenkins argues that instructors need to guide students through the process of developing the kinds of digital literacies academia values:
Participatory culture is emerging as the culture absorbs and responds to the explosion of new media technologies that make it possible for average consumers to archive, annotate, appropriate, and recirculate media content in powerful new ways. A focus on expanding access to new technologies carries us only so far if we do not also foster the skills and cultural knowledge necessary to deploy those tools toward our own ends. (Jenkins 8)

Therefore, this dissertation seeks to identify what digital literacies are being developed in a program where the students have access to digital technology, have experience participating in social media networks, and have instructors focused on developing a participatory culture in the classroom through the use of interactive technology. This discussion looks at how the ePortfolio platform is being implemented to foster the kind of engagement Jenkins describes. To combat the illusion that any student has an inherent set of digital literacy skills that can be assessed, Daer and Potts advocate for “policies, curricula, and learning experiences that reflect the distinction between learning outcomes (whereby absolute mastery is implied) from literacy practices that are embedded in contexts of use” (24). Therefore, this dissertation considers the context of Macaulay Honors College, the ePortfolio platform, and the assignment prompts for each text analyzed in order to best reflect the ongoing literacy practice of the students involved. The design of this study of Macaulay students was influenced by the investigations conducted by Chris Jones, Ruslan Ramanau, Simon Cross, and Graham Healing and by Marayan, Littlejohn, and Voit, which focus on how students use digital tools in the an academic context. The conclusions found by these studies, as well as the arguments of boyd and other accessibility scholars, supports the need for a study of the Macaulay program and others where ePortfolios are integrated into the curriculum. In their conclusion Marayan et al. report that “disciplinary
difference is one key contextual variable” (431) and that another significant factor was the pedagogical approach of the instructors. If the instructor used technology in their teaching methods, students were more likely to report higher use of those tools. These findings suggest a need for other researchers to consider not only the content produced by students, but also the language and media used in the assignments provided by instructors and/or information technology support staff within the disciplinary context.

The Evolution of Process and Product

In order to explicitly understand the context in which the Macaulay students under study compose in the digital space, this dissertation investigates several elements of digital literacy exhibited in student writing on the ePortfolio platform. The history of portfolio pedagogy and multimodal composition as a literacy practice can be traced through composition theory. Many of these ideas stem from what is known in composition studies as process theory, which grew out of the scholarship of Peter Elbow, Donald Murray, Janet Emig, and Linda Flower and John Hayes in the 1970’s. As editor Victor Villanueva recounts in his introduction to the second edition of Cross-Talk in Comp Theory, the origins of process theory lie in two historically important conferences: the first at Woods Hole in 1959, where Jerome Bruner introduced the concept of process theory through the lens of cognitive psychology; and the second at the Dartmouth Conference in 1966, where American teachers were exposed to the British approach to teaching writing “as a process of individual development, a matter of self-discovery” (1). These two events mark the merger of developmental psychology and composition theory, leading to publications by researchers who applied scientific methods to the acts of writing. Understanding the roots of process-oriented pedagogy within the field of writing studies is important to identifying the goal of this dissertation, which is to examine the digital instantiation
Donald Murray provides the best overview of process theory in “Writing as a Process Not Product,” written in 1972, which reads as a manifesto and a call to action to composition instructors. In this article, Murray chastises writing instructors for too harshly attacking student writing as if they were pieces of literature or critical texts in which to find fault. At the time, Murray’s audience would have been literary scholars who found themselves teaching composition classes to underprepared students entering American colleges, particularly after the GI Bill and open admissions policies changed the profile of the typical college student across the country. Murray argues that “we,” referring to those same literary-trained writing instructors, should not assess student writing by aiming to decide what elements are “correct or incorrect,” but instead to “teach unfinished writing and glory in its unfinishedness” (4). Murray lays out this theory in powerful, poetic prose:

> What is the process we should teach? It is the process of discovery through language. It is the process of exploration of what we know and what we feel about what we know through language. It is the process of using language to learn about our world, to evaluate what we learn about our world, to communicate what we learn about our world. (4)

This approach, which may seem obvious to compositionists today, had a dramatic impact on the teaching of writing. Combined with the evidence provided by Janet Emig’s pivotal case-study of secondary-school students, *The Composing Processes of Twelfth Graders*, published in 1971, which was published the year before, educators had the momentum they needed to systemically change the approach to writing instruction.

It is from these two papers that writing studies has drawn foundational concepts that are
now ubiquitous in both the theory and practice of the field. From Murray emerges the concept of writing as a three-stage process—prewriting, writing, and rewriting. While these stages come under scrutiny every few years for a variety of reasons, they are still the core of work in the classroom and in the field of study. Emig tested these proposed stages with one of the first data-driven studies of student writers. Emig’s work attempted to address the dearth of research on student writing, claiming that proof of a writing process was previously gleaned from anecdotal conversation with professional writers and was idiosyncratic at best. Therefore, Emig systematically observed eight twelfth grade student writers, collecting data on their composition techniques while they described their writing process out loud, and then she analyzed the autobiographical essays they produced. From Emig’s work emerges two dominant modes of writing, which she calls the reflexive, which “focuses upon the writer’s thoughts and feelings concerning his experiences; the chief audience is the writer himself; the domain explored is often the affective; the style is tentative, personal, and exploratory,” and the extensive, which “focuses upon the writer’s conveying a message or a communication to another; the domain explored is usually the cognitive; the style is assured, impersonal and often reportorial” (4). These two modes form the foundation of the coding schema I use to study the student writing composed on the Macaulay ePortfolio system described in Chapter 3 and analyzed in Chapter 5.

Emig’s process also influenced another landmark in composition studies, Sondra Perl’s “The Composing Process of Unskilled College Writers.” Published in 1978, Perl’s study employs a scientific approach to observing and recording the writing habits of students at the college level. In Perl’s test case, she uses Murray’s writing stages but extends each to include actions indicated through the close observation of five “unskilled” writers. Perl created a coding system to mark the recursive writing processes of her subjects, including the amount of time spent and
the strategies used during the prewriting, composing, and revising stages. Perl marked patterns found in the behavior of each student as they narrated their writing process out loud while they wrote four different essays—two of each in the “two dominant modes of composing” defined by Emig. Both Emig and Perl affirm what Murray heralded in his manifesto: composition pedagogy should aim to “identify” and “facilitate” each student’s writing process. As Perl concludes, “[t]eaching composing, then, means paying attention not only to the forms or products but also to the explicative process through which they arise” (39).

**Process and the Portfolio**

Process theory, and the bevy of subsequent studies that corroborated Perl and Emig’s work, led to new practices in the writing classroom. Most significantly for the purpose of this study, is the rise of portfolio-based assessment. Portfolios used for writing assessment in higher education differ significantly from professional portfolios widely used in the fine arts. Both are intended to showcase a range of work, but the student portfolios utilized in writing assessment tend to focus on progress rather than polished products. But like portfolios for professional purposes, the writing portfolio system was spearheaded by a desire for an objective critique of student work. As Michelle Gibson recounts in “Alone and Loving It,” portfolio systems have been utilized in the context of college writing classrooms since 1970 when a group of English faculty implemented the system in order to “combat grade inflation and the decline in student’s English abilities” (Ford qtd in Gibson 2). Perhaps the most renowned early adoption of the portfolio was at SUNY-Stony Brook in the 1980s by Peter Elbow and Pat Belanoff, who established the system in order to replace a departmental proficiency exam abolished by their Faculty Senate in 1983. In their article, “Using Portfolios to Increase Collaboration and Community in a Writing Program,” Elbow and Belanoff explain that the charge set forth by the
administration was to establish “a uniformity of standards” which they sought through collaboratively reading student work and discussing the assessment as a community. The structure of the portfolio system instituted at Stony Brook will be familiar to most readers here: three essays written in various modes framed by a reflective piece through which students describe their writing process. In the case of Stony Brook, the portfolio also included unrevised writing produced in class. The structure is designed to showcase student improvement over time, highlighting the fact that these are works in progress. Teachers in the department review the student portfolios in groups, and grade them in a two tier system whereby the group member places only a grade letter — without comment or explanation — and then the portfolio is returned to the student’s original instructor for assessment. Preparation for this process includes both a norming session in which the entire department reviews sample portfolios and decides collectively on the grade earned, and a teaching practicum mandatory for first year teachers in the department, both of which facilitate important discussions about writing pedagogy. The scaffolding Stony Brook employs to execute the portfolio system remains the standard, with slight variation, in universities across the nation.

Voices in support of the portfolio system claim that research shows that collaborative writing is the industry standard in the sciences, business, and legal professions, and is increasingly so in the social sciences and humanities, and that assessment via timed testing works against this model by constructing writing as a solitary act that prevents students from working together (Elbow and Belanoff 28). This argument assumes that by design, the portfolio system encourages instructors to include collaborative writing activities throughout the course along with the collaborative assessment process. The structure of a portfolio system does support collaborative writing since the author composes in multiple rhetorical modes, inviting the
instructor to introduce various prewriting activities and necessitating the development of audience awareness. Furthermore, since the portfolio often includes drafts from different stages of the writing process, it emphasizes the role of revising activities as well. Including evidence of revision, especially when that revision occurred through collaborative intervention such as peer review or in conference with an instructor, presents these interim texts as equally important as the “finished” products. Like the studies by Emig and Perl discussed earlier, Nancy Sommer’s “Revision Strategies of Student Writers and Experienced Adult Writers,” systematically codifies how adult students revise, and Sommer’s findings demonstrate that the revising process is recursive, a recursion that is stunted if not eliminated by the constraints of timed testing. Furthermore, as David W. Smit argued in 1990, implementing department-wide portfolio systems improves the overall quality of writing instruction because they stimulate conversation about the writing process among the faculty, and between the faculty and their students (“Evaluating a Portfolio”). By examining the development of student work collectively, faculty within a program learn to recognize strengths at various points in the arc of a writer’s career. Likewise, they can identify areas that need improvement and crowdsource solutions to those weaknesses. Transparent, open discussions of writing pedagogy and assessment, while often difficult and complex, can lead to cohesion across a writing program based on the shared knowledge and experience of a dedicated faculty. Ideally, this also results in a unified student experience, which will prepare the student for upper-level and professional writing tasks.

However, there are important reasons to be critical of the use of portfolio systems in the university as well. As Lyons and Condon point out in “Questioning Assumptions about Portfolio-based Assessment,” published in 1993, the transition from single-essay, single-prompt based assessment to reviewing multiple texts created in multiple contexts requires careful
preparation and consideration. Ideally, instructors have the opportunity to get to know their students over the course of a semester, and gradually begin to understand the process of each student on an individual level. That intimate knowledge gives the instructor a certain power in the assessment process: personal connection to the student can invoke empathy or retaliation. Lyons and Condon articulate this in their claim that “portfolio assessment involves a ‘people-oriented’ self-evaluation,” meaning that instructors need to be aware of the bias they bring to the assessment process (178). In the case of an outside portfolio grader, the evaluator is charged with the monumental task of understanding a body of work without access to information about the course, assignments, or personal journey of the author that would help them to situate the writing, which can lead to an unfair assessment of the writer’s work. Lyons and Condon also find that portfolio readers tend to make evaluative judgments after reading the first paper in the series, and many neglected to read the portfolio in its entirety, a finding that most likely occurs across institutions due to the real pressures of time and lack of compensation for this work, especially for contingent faculty members. In fact, Lyon and Condon conclude that “readers tend to reduce the cognitive — and time — load in portfolio reading by finding short cut-strategies,” and that “the superiority of portfolios as an assessment tool is dependent on readers reading, judging, and valuing all the texts” (183, original emphasis). With respect to portfolio-based assessment, such shortcuts mean that grading portfolios is hardly different than grading final essay exams or a single essay submission.

Another discovery reported by Lyons and Condon that plays a significant role in subsequent studies of electronic portfolios is that evidence of revision, manifested in multiple drafts of the same assignment, did not positively affect the graders’ perception of the abilities of the student. The researchers assumed that instructors would reward “evidence of the student’s
ability to bring her or his own text significantly forward in quality,” but in many cases, the instructors Lyons and Condon surveyed made negative assumptions about the revision process when a draft underwent substantial transformation. According to the data collected from the readers who graded these portfolios, a remarkable difference between “impromptu” (first drafts) and revised work was attributed to the work of the instructor and highlighted the low skill levels of the writer in those first drafts (Lyons and Condon 184-5). For students, this is a disadvantage because the graders discount their revision work without knowing the context or process through which the changes were made. Whether or not instructors provided enough feedback and support during the revision process, they are credited for the progress. This is why a reflective essay, now a staple of most portfolio programs, is an essential tool for understanding the work done by the student. The intention of a reflection paper is to provide a framing narrative of how and why students included specific essays and to describe their writing process. The genre of the reflective essay garnered a sizable body of scholarly work in the field of composition, one too large to cover in this review—including work by David Barhtolomae, Wendy Bishop, Steven Pat Belanoff, Lisa Ede, Sandra Harding, George Hillocks, Rebecca Moore Howard, Bonnie Lenore Kyburz, and Peter Suber—but it important to note that this is a typical feature of a paper portfolio. While Lyon and Condon focus on the importance of including both multiple genres of writing and drafts in a paper-based portfolio system, ultimately their results stress the need for the mindful implementation of a portfolio system that includes careful guidelines and training for the participating instructors and the inclusion of a framing narrative that provides reflection from the students.

The Rise of the ePortfolio
Since this dissertation is focused on the Macaulay ePortfolio platform, it is helpful to historicize the transition from a paper-based to an electronic system of creating, collecting, and assessing portfolio work in higher education. The limitations of paper portfolios make large-scale and longitudinal assessment very difficult. One practical drawback of a writing portfolio is the mass of physical paper that needs to be collected, organized, transported, and archived within a department. Searching, coding, and analyzing the data contained in thousands of paper portfolios takes time and human resources that are prohibitive for many programs. Within the humanities, especially in the history of writing programs and writing across the curriculum (WAC) initiatives, assessment data translates into material used to seek funding and support from both internal and external sources. As chronicled in the book Very Like A Whale: The Assessment of Writing Programs, the ability to establish “program coherence” and improvement in student writing ability is an “outcome appealing to the complex ecology of internal stakeholders, such as instructors and administrators, and external stakeholders, such as regional and program-accreditation agencies” (White et al. 39). Electronic portfolios (hereby referred to as ePortfolios), were initially adopted by many programs because of the potential these platforms held for wide-scale assessment and outcomes measurement. As White et al. show through an intricate history, explicit attention to methodology, and carefully structured case studies, transferring to digital portfolios, or ePortfolios, can make the assessment process of large portfolio systems significantly more manageable.

Researchers studying the effectiveness of portfolio use, both paper and electronic, have long relied on a combination of reflective essays, surveys, and interviews with students, instructors, and administrators in order to evaluate and compare writing programs. Both The Handbook of Research on ePortfolios, a collection of scholarship from provosts, information
technologists, faculty, and researchers, and *The International Journal of ePortfolio*, one of the only peer-reviewed academic journals on the subject, contain hundreds of case studies examining ePortfolio use that showcase the diversity of ePortfolio platforms and programs around the world. These two publications represent the current state of ePortfolio scholarship: most ePortfolio research focuses on instruction, management, and assessment. In the foreword to the handbook, Ali Jafari defines the term ePortfolio by comparing it to the popular online shopping site eBay: in 1995 Pierre Omdyar created a new marketplace that used the Internet to buy and sell “stuff” online, around the same time “some provosts and academic leaders thought of using technology or the Internet to present portfolio ‘stuff’ online, called the ePortfolio” (xxxiv). And just as eBay spawned many versions of this concept, from Amazon to Etsy, there are also a plethora of ePortfolio platforms. Since no two ePortfolio platforms or programs are the same, this field of research tends to focus on specific applications or desired outcomes within the context of a single program or on a multi-program installation of a single platform. It is also common for ePortfolio scholarship to combine qualitative and quantitative data.

For example, *Very Like A Whale: The Assessment of Writing Programs* presents case studies of two ePortfolio systems, one located at New Jersey Institute of Technology (NJIT) and another at Louisiana State University, instituted to meet what White et al. term the “Gold Standard” of writing programs. The standard was drawn from a long history of writing program assessment dating back to the Bay Area Writing Project in 1976, which resulted in a handbook for those doing further research on the topic. This project, coordinated by The Fund for the Improvement of Post-Secondary Education, culminated in an important volume published in 1983 by Stephen Witte and Lester Faigley, and a study by the California State University system developed and administered between 1973 and 1981 wherein 31,092 students were examined
White et al. use these studies to argue for a standard of writing instruction that is based on a WAC approach to writing in higher education, defined as “the pedagogical and curricular attention to writing occurring in postsecondary subject-matter classes other than those taught by those in the field of rhetoric and composition/writing studies” (18-19). The WAC movement, as Bazerman et al. (2005) define it, provides “systematic encouragement, institutional support, and educational knowledge to increase the amount and quality of writing occurring in such courses as history, science, mathematics and sociology” (9).

White et al. study the ePortfolio system at NJIT as an example of how to successfully integrate an ePortfolio system across the curriculum by adapting the technology to meet the needs of the course. At NJIT, the system constantly changes to reflect the program objectives and learning outcomes of that particular course. The example provided in the figure below displays the competencies for one discipline-specific course examined in the case study. (See table 2.1)

<table>
<thead>
<tr>
<th>STS Core Competency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STS Analytics</td>
<td>Establish competency in drawing research conclusions, particularly in STS-related fields of policy, economics, and culture.</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Demonstrate accuracy and efficiency in group setting, including working well in traditional and digital environments.</td>
</tr>
<tr>
<td>Communication (Traditional and New Media)</td>
<td>Articulate ideas lucidly through traditional forms of print and digital media.</td>
</tr>
<tr>
<td>Leadership</td>
<td>Assume key roles in collaborative work.</td>
</tr>
<tr>
<td>Information Literacy</td>
<td>Employ a variety of search techniques, both traditional and digital, to inform analysis.</td>
</tr>
</tbody>
</table>

Table 2.1. Description of the Core Competencies from a Study of the ePortfolio System at NJIT (White et al. 37).

After analyzing the student writing produced on the ePortfolio for this course on “Science, Technology and Society,” the researchers determined whether the writing met the criteria listed in the table above and if the course grades matched their analysis. Some of these competencies clearly relate to the medium itself, with “information literacy,” “digital media,” and “digital
environments” listed in this table. Aligning the learning objectives to the design of the platform creates a productive feedback loop: the design matches the goal, which can be adjusted as either or both evolve. As a result of these case studies, White et al. asserted that in order for students to be successful in a portfolio-based program “objectives of the program must be set out clearly so students can connect their work to them and save their writing in their coursework in preparation for assessment episodes occurring on a cyclical basis,” and likewise that “[f]aculty colleagues must own those objectives so they can refer to them in their syllabi and assignments. And the administration must be patient enough to wait for the program assessment to produce data. There is not a quick fix” (38). This is what White et al. call the new “gold standard” for writing programs, and it requires collaboration and preparation from faculty, students, and administrators. White et al. also note that this standard should and will evolve over time as more data is collected and new technologies become available.

Initially, when ePortfolios were adopted by higher education practitioners in the early 90s, the composition products remained largely the same in structure and style as they did in paper portfolios with the added benefit of being accessed, searched, and stored digitally (Ittelson and Lorenzno 3). These early ePortfolios were often stored on CD-ROM or DVD before web hosting became a viable option (Ittelson and Lorenzno 1). In “Overview of E-Portfolios,” published in 2005, George Lorenzo and John Ittelson write about the shift from paper to online portfolios, “e-portfolios are helping students become critical thinkers and aiding in the development of their writing and multimedia communication skills. E-portfolios can help students learn information and technology literacy skills and how to use digital media” (3). This transition from paper to digital grows in complexity as both the technology and our understanding of its capabilities develops. As Serge Ravet writes in his position paper on the
history of ePortfolio architecture:

The order of magnitude of change was mainly additive: electronic media publishing facilities allowed the creation of “enriched” multimedia portfolios, while hypertext made it easier to connect ideas during the reflective process. The Internet brought in a multiplicative order of magnitude, with the ability to connect everything with everything, and above all the possibility to make the content accessible to the whole world. It became an online paperless portfolio. Having one's ePortfolio online in turn led to change at another level of magnitude, not just additive or multiplicative, but exponential: ePortfolios can now be mined by search engines and one can use many different services available on the World Wide Web to create one's own repository, publishing and social environment. (1-2)

Along with the adoption of web hosting comes a new set of learning opportunities. Students are introduced to the complexity of posting information in a space open to a public audience, which includes issues of copyright, privacy, and searchability. As Ravet argues, at the point when ePortfolios are hosted online, and have the capacity to link to endless other digital documents, the question changes from what is an ePortfolio to what is not included in our definition. ePortfolios built in open environments —as opposed to online but not public —can include a variety of complex widgets displaying the author’s social media updates, calendars, and GPS location. This dynamic information constantly changes and may not have a direct relationship to the more traditional academic content of the ePortfolio. It can also host the inclusion and the creation of multimodal products such as images, infographics, videos, timelines, and maps. This affordance transforms an ePortfolio from a paper portfolio hosted in a digital space into an
entirely new form of multimodal composition. Students are negotiating the relationship between text and media, and in some cases making critical decisions about design and user experience, in ways that differ greatly from the demands of paper texts. Furthermore, whereas a paper portfolio has a distinct finality, is a static product (even if meant to reflect an ongoing process), an ePortfolio has the potential to live on as long as the hosting is maintained, and can continue to be added to, edited, and linked to in perpetuity. These shifts from paper-based products to digital compositions require a shift in pedagogy and assessment.

This transition is not easy or simple. Change comes slowly in higher education, and the integration of new technologies requires training and support for all users. In “Distant Voices: Teaching and Writing in a Culture of Technology,” (1991) Chris M. Anson muses on the relevancy of a 1988 issue of Policy Perspectives which states, “[i]t is not that higher education institutions or their faculties have ignored technology. The academy, in fact, is one of the most important supporters and consumers of electronic technology…The problem is that faculty - and hence the institutions they serve - have approached technology more as individual consumers than as collective producers” (qtd. in Anson 798). Anson goes on to say that in the face of administrative pushes to adopt new technologies, students and faculty continue to work—to write, submit, collect, and respond—in the traditional space of a standard size white paper, and “innovations like portfolios are extensions of the use of this textual space, but the spaces themselves remain the same” (799). Anson’s cautionary tone comes from a scholar and writing program administrator (WPA) working to responsibly integrate new technologies into a writing program, rather than one vehemently opposed to change. Anson is calling for an adoption of technology that is substantive, rather than tacked on, and one that transforms those traditional

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8 A writing program administrator includes any individual or team of people who are tasked with designing, implementing, and assessing the efficacy of a writing program in higher education.
spaces responsibly. In fact, Anson writes prolifically on using technology in the classroom, co-authoring several books on the subject, most recently *Understanding and Creating Digital Texts: An Activity-Based Approach*, 2014, with Richard Beach, Lee-Ann Kastman Breuch, and Thomas Reynolds and *Teaching Writing Using Blogs, Wikis, and Other Digital Tools*, 2009, with Richard Beach, Lee-Ann Kastman Breuch, and Thom Swiss, which advocate for the integration of digital tools across the curriculum. Anson’s earlier trepidation reflects a commonly held resistance to new technologies in academia, based on the fear that technology will be adopted simply for the sake of using technology, rather than for sound pedagogical reasons (Shipka; Palmeri; Mueller). This is one reason why digital writing spaces, such as ePortfolios and blogs, were not adopted in waves across programs, disciplines, or universities, by rather by individuals who brought their interest or hobbies into the classroom. This was a risk on the part of those pioneers, and the legitimacy of digital writing in the form of ePortfolios or blogging is still tenuous in the academy. This use of digital writing spaces can appear to be additive rather than innovative, if it is not implemented with purpose to utilize the innovations of the technology.

*Blogs as ePortfolios*

This study focuses on the characteristics of writing composed in online spaces that are open to the public. The Macaulay program labels its platform “ePortfolios,” but they do not match the customary description of ePortfolios because most of the sites are not single-author collections of drafts, final products, and reflective writing meant to showcase what a student has done over a set period of time. However, Trent Baston, the president of the Association for Authentic, Experiential and Evidence-Based Learning (AAEEBL), the professional organization for the ePortfolio community, the term ePortfolio needs to be re-defined. In fact, Baston and AAEEBL hosted a webinar series on defining ePortfolio in 2015, and Baston summarizes this
to the mass of educators around the world, the term “eportfolio” evokes a
technology. Perhaps worse is that the term may also evoke centralized tracking of
student progress and not the positive aspects of personal learning eportfolio our
field holds dear. Our whole movement may be hurting itself by staying with a
term that is not well understood, and more likely misunderstood, outside of our
group. (Portfolio Evidence-Based Learning [PEBL])

Baston is referring to the slew of proprietary systems that host ePortfolios at many universities
when he claims that the term invokes a technology rather than a practice. Due to this
misconception, defining the difference between a closed, out-sourced, proprietary system and an
open blogging platform is important to establishing the terminology used in this dissertation. The
form of ePortfolios featured in this study are WordPress sites built by the instructor and/or
students with the assistance of technology fellows. These sites are used in a variety of ways,
including as course sites, travel blogs, student-run newspapers, and as professional sites. Most
often the sites are open to the public, many are collaborative, and some showcase a wide-range
of digital literacy skills beyond writing, such as interface design, information architecture,
multimedia creation, and social media integration. Also, the students can continue to use, revise,
build, and share these sites even after graduation. Therefore, this form of ePortfolio is more
accurately referred to as a blog,9 rather than a portfolio, especially considering Macaulay
implements their specific ePortfolio platform in ways that extend beyond a typical portfolio of

9 The word “blog” comes from the original term “weblog” referring to the early form of blogging
that developed after the introduction of Blogger (Blood, 2008). In 1998 there were just a handful
of sites of the type that are now identified as weblogs (so named by Jorn Barger in December
1997).
student work collected over a set amount of time. Consequently, the history of blogging in higher education is equally if not more relevant than the history of ePortfolio systems.

Pioneers like Rebecca Blood and Jill Walker Rettberg provide narrative accounts describing the process of translating their successful personal sites into pedagogical tools. On her blog, “Rebecca’s Pocket,” Rebecca Blood explains, “[t]he original weblogs were link-driven sites. Each was a mixture in unique proportions of links, commentary, and personal thoughts and essays. Weblogs could only be created by people who already knew how to make a website” (“Weblogs”). By this, Blood means that an individual needed to have basic coding skills in order to participate in the blogging community, and explains that “a weblog editor had either taught herself to code HTML for fun, or, after working all day creating commercial websites,” contending that these early bloggers “were web enthusiasts” (“Weblogs”). Within this relatively small group of early-adopters, bloggers formed communities identified through links, known as webrings, blogrolls, and pingbacks, and maintained through discussions posted as replies and comments. In these communities, the primary audience was a small group of like-minded bloggers with similar interests, which created a “network sense” that both Blood and Walker Rettberg write about extensively. This network sense is similar to the audience awareness writing programs strive to teach students: it is a built-in community of readers who are all connected, have familiarity with a subject, and often respond with helpful comments. As Allison Ruth writes in “Blogging and Journaling are the same, but different” featured in a 2006 special issue of *The Technical Committee on Learning Technology*, “[o]ne of the potential features of blogs is their contribution to the development of communities of practice. Communities of practice allow individuals to move from the periphery to more central positions within a disciplinary or practice group (Lave and Wenger, 1991)” and that “[b]logs in particular allow individuals to negotiate
their way into a new field of knowledge, weighing and balancing different viewpoints. The interactive nature of blogs, the ability to cross reference and critically analyze traditional and nontraditional sources of information, allows a multi-disciplinary approach to knowledge” (n.p). The close-knit network of a blogging community resembles a classroom setting, where the professor and classmates provide a built-in audience and the course content provides a common interest. Such similarities inspired Blood and Walker Rettberg to experiment with blogging in their courses. Their academic blogs were a place to share work-in-progress, where they could request feedback on early ideas and work out fledgling concepts pre-publication, and these are features that translated directly into the objectives of teaching writing. Alex Reid, who has maintained the blog *digital digs* for over a decade, is one of the many early adopters who connects his personal experience blogging to the rationale behind using blogging in a classroom context. In his book, *Why Blog? Searching for Writing on the Web*, Reid explains the advantages of writing a blog for students. He argues, for example, that blog writing helps students build a regular writing practice, teaches students digital literacy skills, and helps students discover their passions (303-319). Addressing student bloggers, Reid writes:

> it is your autonomous pursuit of your own improvement as a blogger in service of this larger purpose that will help you to uncover your own intrinsic motivation. And maybe, in the end, it will be writing that interests you after all, or maybe writing will only be one small means toward a different purpose. Either way, the experience of blogging will have helped you to uncover something that really matters to you. (309-310)

This advice, in combination with the detailed technical instruction on how to build a blog that follows that quote, really expresses Reid’s philosophy on blogging and his motivation to use
blogs as a conduit for teaching college-level writing: giving students a voice and a medium through which they can express that voice.

The technical advice on how to create a blog cannot be glossed over. Before the introduction blogging platforms such as WordPress, bloggers needed a high level of coding expertise in order to build and maintain a blog. However, in the late 1990’s the rise of self-publishing tools with user-friendly interfaces such as Blogger, LiveJournal, and Geocities, which did not require extensive technical knowledge or individual content hosting commitments, democratized blogging. In “Blogs, Literacies and the Collapse of Private and Public,” Jill Walker Rettberg traces the rise of the blog, claiming “weblogs have become part of the consciousness with a speed that is remarkable by any standards.” She based that assertion on the fact that in 1997 John Barger coined the term “weblog.” Within five years (2002), the Oxford English Dictionary added the word to their dictionary, and by 2006 “39% of US Internet users read blogs” (2-3). Walker Rettberg credits this rise to the self-publishing platforms. These easy-to-use platforms also shifted the genre, increasing the frequency of posts and varying the content from primarily lists of links with short commentary to online journals that chronicled the daily activities of the writer. “In the post-Blogger explosion increasing numbers of weblogs eschewed this focus on the web-at-large in favor of a sort of short-form journal,” writes Blood in her blog, signaling this shift. In other words, writers were literally “logging” their activity like a captain’s journal on a ship, capturing the kinds of personal anecdotes and opinions one would expect from a personal diary or op-ed. Blogs became more about *writing* than about technology. The divide between readers and writers blurred, since avid blog readers could easily join the conversation by

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10 Rebecca Blood dates the historical start of blogging to the early 1980’s when moderated newsgroups gained popularity, but the blog as we know them now—in terms of an online diary—date to the early 1990s. It was not until 1997 that blogging platforms such as WordPress were introduced. (“Weblogs: A History and Perspective.”)
creating their own blogs. This democratization also made bringing blogging into the classroom much easier. Blogging became an established genre, and therefore could be analyzed through rhetorical analysis (Reid). Now, there exists a constantly growing body of examples to use to when teaching students how to identify the genre conventions and mimic when building their own.

As Meredith Badger writes in her contribution to Into the Blogosphere, “[w]eblogs occupy a dichotomous position. They wish to stand out and present an individual voice, but they also want to fit into the genre of weblogs—to be instantly recognizable as being part of a community. Weblogs, as Torill Mortensen and Jill Walker Rettberg observe, are forever hovering on the border between public and private” (“Visual Blogs”). Student writing has always lived in this disputed space between public and private, since writing done in the context of a classroom assignment can be written as a personal, individual expression, but is often read by the teacher, outside graders, and classmates. Emig and Perl use the term “reflexive” for writing intended to be personal and reflective, even when a teacher will eventually evaluate it. These terms are essential to this dissertation, because they are the foundation of the coding schema used to analyze the student writing collected from the ePortfolio sites. However, Emig’s original definition of reflexive needed to be updated to match the particular dynamics on the digital space: in an online forum reflexive writing has a wider audience, and therefore even personal writing can be read by anyone with access to the site. Bringing this form of reflexive student writing to a public, online forum, expands the audience to include the college community, family and friends, and future employers, but also enables the writing to be read by the world-at-large. In fact, the public forum is a hallmark of the of the blogging genre, and fundamentally changes the rhetorical situation of the composition.
However, Walker Rettberg rightly points out in “Blogs, literacies and the collapse of private and public,” that not all blog sites are public, and that of those that are public, many are not diary-like journals but about other topics, such as a hobby, a special interest, politics, or education: “[t]he intimate, personal diary may compare well to diary-style blogs, but more topic-centric blogs (filterblogs, political blogs, commercial blogs and so on) can be closer to the inventor’s or engineer’s notebook” which were meant to be shared and studied (3). This notion of an “engineer’s notebook” also clearly translates into classroom use: students could use blogs to show their process, not in draft form, but in the style of a research log that uses both successes and failures as a learning tool. When analyzing the writing composed on Macaulay’s ePortfolio platform, it was important to remember that the students were aware that they were composing for a public site. The students who were tasked with composing in this public space for their courses knew that their instructor and fellow students would read their work, and many of the students I interviewed from the ePortfolio Expo expressed the hope that their work would be read by the general public. In fact, the students who created their own ePortfolio sites had a very specific audience in mind, and tailored the information presented on the site to match the rhetorical situation they identified. Walker Rettberg writes:

As my blogging students realized that their writing was actually being read by other students and even by people outside the university, their writing changed. I was most impressed by the way in which they began teaching each other.[…]A certain pride was evident as students mastered a topic and shared it with their friends, and a pleasure in sharing that was contagious and seemed to encourage the others to write more as well. (Weblogs 5)

This reflection articulates the ideal outcome of using public blogs in a writing course. The digital
space provides asynchronous access to the writing that enhances the composition process. However, this victory is contrasted by Walker Rettberg’s feelings that some students produced only the bare minimum of text and expressed confusion over the point of the online forum. These pitfalls and triumphs are informative for the curious pedagogue.

Accounts such as these help teachers around the country integrate blogging into the classroom because they are learning from one another and sharing results. As Kevin Brooks, Cindy Nichols, and Sybil Priebe write in “Remediation, Genre, and Motivation: Key Concepts for Teaching with Weblogs,” after being inspired by Rebecca Blood to try blogging in their classrooms,

[w]eblogging seems like such a potentially rich set of online writing activities because it is relatively low-tech compared to producing hypertext or websites, and it incorporates familiar writing skills like summary, paraphrases, and the development of voice. The mix of generic, technical, and psychological factors clearly grabs and compels some people to weblog extensively, and as teachers of writing, we want to tap into that mix. (1)

And indeed, class-based blogging seems to be a logical fit in a writing course. The blog space provides a way for writers to compose publically, receive feedback from their classmates, and record their process through low and high stakes writing assignments.¹¹ This practice helps to foster “habits of mind,” a term used in writing studies to describe “ways of approaching learning that are both intellectual and practical and that will support students’ success in a variety of fields and disciplines” as defined in the Framework for Success in Postsecondary Writing created by

¹¹ The terms low and high stakes are defined by Peter Elbow in “High Stakes and Low Stakes in Assigning and Responding to Writing.” Elbow writes that low stakes assignments are personal, and not weighted heavily in terms of assessment, whereas high stakes writing is formal, written for an outside audience, and assessed as a large part of the grade.
the Council of Writing Program Administrators (CWPA), the National Council of Teachers of English (NCTE), and the National Writing Project (NWP) (2). These habits of mind include curiosity, openness, engagement, creativity, persistence, responsibility, flexibility, and metacognition, all of which can be fostered through a regular blogging practice. In fact, the *Framework for Success in Postsecondary Writing* specifically states that these habits aim to help students develop the “ability to compose in multiple environments—from traditional pen and paper to electronic technologies” (5).

Despite the enthusiasm of early adopters, blogging as a medium for academic writing is still not universally recognized as a useful or accepted practice in higher education. These tensions are amplified when the integration and teaching of technological literacies is pigeonholed as “vocational” and is therefore relegated to job training programs, such as technical and professional writing courses. Sullivan and Dautermann draw attention to the dichotomy between what are considered the pragmatic skills or “uncritical literacy” of the workplace versus the critical literacy skills thought to be the objective of academic pursuits. The unfortunate division between workplace literacy and academic literacy is maintained institutionally by connecting workplace literacy with basic skills and/or vocational education rather than with critical skills. As Heath points out in the closing essay of *The Right to Literacy* (published in 1990 and edited by Lunsford, Moglen, & Slevin,), “[p]erhaps the most important [notion] for direct effects on rethinking literate behaviors is the renewed interest in communication in the workplace” (301). Skills such as effectively searching the Internet for information and creating documents, images, graphics, and even videos are commonly considered basic skills in today’s workplace and therefore should be required and assessed by faculty in higher education.

Implementing a digital portfolio space provides a platform on which students can create, collect,
and present such work. This dissertation seeks evidence that students can and are using the Macaulay ePortfolio to develop these digital literacies.

**Writing in Digital Spaces**

*Learning Multimodal Forms*

As a field, composition and rhetoric has a long history of studying the relationship between oral, visual, and written texts and likewise many practitioners have incorporated various kinds of media into their pedagogy. The integration and study of media in the field of composition, whether it be audio, visual, or material, has fallen under what Jason Palmeri terms “the multimodal turn” in his book *Remixing Composition: A History of Multimodal Writing Pedagogy*. Digital writing platforms, such as blogs and ePortfolios, make it increasingly easy to create multimodal compositions and have therefore revitalized the emphasis on these skills in higher education (Yancey; Shipka; Whithaus). In *Remixing Composition: A History of Multimodal Writing Pedagogy*, Palmeri builds on the work of Bertoff, Comprone Constanzo, Kilgerman, D. Murray, and Wiener in his argument that, “[l]ong before the contemporary multimodal turn, compositionists have been articulating the deep interconnections between seeing and writing — experimenting with ways that visual composing can help students both generate ideas for and consider revisions of alphabetic texts. (132) As Palmeri claims, this focus on media is by no means new; however, the media and medium have changed in the digital age. As traditional forms of journalism such as newspapers and magazines are now moving online and presenting information in dynamic, interactive, digital formats that include graphics, videos, memes, and social media integration, so too are academic publications shifting to focus on multimodal content. This argument has been made by digital publishing scholars and practitioners who have worked to create and promote digital scholarship in composition and
rhetoric, such as Cheryl Ball, Doug Eyman, Jesse Stommel, and Cynthia Selfe. Palmeri provides a clear chronology of the multimodal turn in writing studies in order to analyze the rhetoric compositionists use in discussing the “electronic or multimedia revolution” that he dates back to the 1970s (133). Palmeri focuses on critiquing hyperbolic claims that technology is inherently detrimental to or beneficial to the teaching of writing, and reminds the reader that “emerging technologies open up new possibilities for integrating multimodal activities into the writing classroom, but it is important to remember that composition has always already been a field that has sought to help students draw connections between writing, image making, speaking, and listening (136).

Jody Shipka is another author who traces the roots of multimodal composition in her work. In Toward a Composition Made Whole, Shipka cites a lineage that dates back to 1971, including scholars such as Williamson, Paull and Kligerman, Wiener, Leonard; and highlights over a dozen approaches to teaching composition that were non-traditional, non-linear, and experimental in form (219-220). Palmeri and Shipka both separately caution that resistance to composing in non-traditional forms by students and teachers alike is due to the perception that it is not “rigorous” or “academic”, and is conflated with the kinds of writing students perform outside of the classroom, such as participating in social media, online forums, or other personal communication (see for example, Shipka 245-247). Shipka also stresses that the definition of multimodal should not be limited to the digital: “I am concerned that the emphasis placed on “new” (meaning digital) technologies has led to the tendency to equate terms like multimodal, intertextual, multimedia, or still more broadly speaking, composition, with the production and consumption of computer-based, digitized, screen mediated texts,” and goes on to say that, “I am concerned as well that this conflation could limit (provided that is has not already limited) the
kinds of texts students produce in our courses” (274, emphasis in original). In this history, Shipka raises an important question about the definition of the term *multimodal*. Shipka uses the term multimodal to include material production, for example scrapbooks, storyboards, comics, and even composing on objects, as well as the production of digital, audio, and visual texts, and therefore prefers it over terms such as multimedia, new media, or digital media that connote computer technology. Similar to Whithaus and Bowen define “multimodal composing” in the introduction to *Multimodal Literacies as an Emerging Genre* as involving as “the conscious manipulation of sensory experiences — visual, textual, verbal, tactile, and aural — used in the process of producing and reading texts” (335). The compositions produced on the Macaulay ePortfolio platform analyzed in this dissertation include digital and analogue practices from start to completion and therefore meet Shipka’s definition of multimodal. This dissertation also analyzes a range of media in terms of its production and inclusion in student work, including images, audio, video, and interactive elements, and thereby also meets the definition of multimodal composition offered by Whithaus and Bowen.

The computer and writing community takes up this question of terminology in many places, including the work of Gunther Kress, Dan Anderson, Anthony Atkins, Cheryl Ball, Cynthia Selfe, Richard Selfe, Carl Whithaus and Tracey Bowen. In *Literacy in the New Media Age* Gunther Kress writes in 2003, “language alone cannot give us access to the meaning of multimodally constituted message; language and literacy now have to be seen as partial bearers of meaning only” (35). In other words, it is difficult to write about multimodal composition without incorporating media into the writing. In a meta-analysis of these terms, Claire Lauer

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12 It is worth noting that Palmeri and Shipka are concerned about the limitations of placing emphasis on “new” (meaning digital) technologies that define media. As Shipka writes, “this conflation could limit (provided that is has not already limited) the kinds of texts students produce in our courses” (274).
interprets, defines, and enacts multimodal composition in the interactive, multimodal piece “What's in a Name? The Anatomy of Defining New/Multi/Modal/Digital/Media Texts” published in the field’s oldest online journal, Kairos (celebrating its twentieth anniversary in spring 2016). In this piece, which seeks to differentiate between the terms multimedia, multimodal, digital media, and new media as they are frequently used in scholarly articles, Lauer argues that:

rather than the use of these terms being driven by any difference in their definitions, their use is more contingent upon the context and the audience to whom a particular discussion is being directed [...] these differences can be best explained by understanding the differences in how texts are valued and evaluated in academic versus non-academic or industry contexts. (Introduction)

Since Lauer concludes that the definitions of these terms is contextual, for this dissertation I have chosen multimodal to encapsulate the kinds of academic projects produced within the context of the Macaulay Honors Program. However, throughout my descriptions of student work, I use both the terms multimodal and multimedia: the first to denote the whole composition and the latter to refer to specific elements included as a part of the text.

Of course, scholars in media studies and throughout the humanities have also studied the relationship between technology and writing, creating a rich and diverse body of work on the evolution of communication technologies. Most notably in terms of this study of digitalized texts are the works of Walter Ong, Elizabeth Einstein, Roland Bathes, Richard Lanham, and Katherine Hayles, all of whom contextualize the impact of word processing on the act of writing. For instance, in Orality and Literacy, Ong argues in regard to the transition from manuscript to printed text that “[p]rint eventually reduced the appeal of iconography in the management of
knowledge, despite the fact that the early ages of print put iconographic illustrations into circulation as they had never been before” (127). This is interesting in the context of digital publishing. The history of the erasure of media in mediated composition spaces gives credence to the resistance writers have to adding multimedia to their texts in the digital age: the rigidity of the printing press discouraged the inclusion of visual elements, and this preference for unobstructed text persisted through the adoption of the word processor, despite the affordances of a digital medium. Revitalizing multimodality in written composition requires battling this historic evolution. In *The Electronic Word*, Lanham claims that after the printing press, typeface became standardized to be clear and legible at the expense of self-expression: “this unselfconscious transparency has become a stylistic, one might say cultural, ideal for Western civilization. The best style is the style not noticed” (4). Lanham predicts that personal computers will “restore to the reader ranges of expressivity — graphics, fonts, typography, layout, color — that the prose stylist has abjured” (9). In this claim, Lanham also diminishes the theoretical divide between author and audience (Derrida; Fish) because both have the ability to manipulate a digital text. What Lanham does not anticipate though, is the need to retrain both writers and readers to create and comprehend multimodal texts. As Kress and Lauer argue, the role of the audience intensifies for a multimodal composition because the author must be able to identify and address this audience through the media they choose to present, and the reader must be able to access and interpret these elements.

Multimodal texts are defined by their interactivity (Selfe). The inclusions of interactive media elements such as videos, timelines, maps, surveys, and memes,\(^\text{13}\) as well as the common

\(^{13}\) In this context, I am referring to Internet memes, or the common practice of manipulating and remixing a digital image or video repeatedly in a variety of ways across media platforms. Most often this practice is used to make a joke, argument, or convey an idea through the use of media.
presence of commenting forums, discussion boards, and social media buttons, invite the audience to participate in the text. As Ong claims, “electronic technology has brought us into the age of ‘secondary orality’. This new orality has striking resemblances to the old in its participatory mystique, its fostering of a communal sense, its concentration on the present moment, and even its use of formulas” (133). For Ong, the audience is an active agent in a digital composition. In hypothesizing this “new orality” in 1982, Ong predicts the participatory culture that new media theorists such as Henry Jenkins use to describe engagement in social media. In Confronting the Challenges of Participatory Culture Jenkins et al. define participatory culture as:

A culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another (at least they care what other people think about what they have created). (3)

In this heavily cited text written in 2009, Jenkins and his collaborators describe the affordances of and barriers to participatory culture. The affordances they present include the opportunity to join online communities, to collaborate, to create new forms, and to shape the flow of media; however, Jenkins et al. caution that not everyone has equal access to these opportunities, nor do they comprehend the ways that media informs their experience of the world. Therefore, the authors conclude that “[e]ducators must work together to ensure that every American young person has access to the skills and experiences needed to become a full participant, can articulate their understanding of how media shapes perceptions, and has been socialized into the emerging ethical standards that should shape their practices as media makers and participants in online
communities” (Jenkins et al. 4-5). For Jenkins et al. this includes the use of social media, blogs, mobile devices, and other literacy practices that may not be considered to be writing in the traditional, academic conception of the term. In this dissertation, I take Jenkins et al.’s claim seriously and investigate the ways in which students compose in non-traditional spaces outside of the classroom in order to understand their digital literacy practice.

This call for a participatory culture echoes through composition sourcebooks and textbooks that aide writing instructors in teaching digital literacy as a practice, especially in understanding, analyzing, and designing multimodal texts. These discussions are important in framing the analysis of the student work composed on the Macaulay ePortfolio sites. For example, in the anthology Writing New Media: Theory and Applications for Expanding the Teaching of Composition, editor Anne Wysocki writes that there is “no one correct way into new media, no one grounding theory, no one ‘right’ set of approaches,” and offers guidance on how to “understand these circumstances not as passive observers but as active, reflective, responsible composers” (51). Again, as in the arguments presented by Lanham, Ong, and Jenkins, Wysocki blurs the distinction between author and audience. What follows in the collection edited by Wysocki are a series of article that offer advice and sample approaches based on their experiences in the classroom. For example, contributor Cynthia Selfe suggests that one “way in” to new media is through visual literacy and that writing instructors should learn from their students (67), and in the chapter titled “BoxLogic” Geoffrey Sirc claims that the rapid advancement of technology has created a “pedagogical dilemma” for him and that he sought inspiration from the multimedia texts of the past (111).

Seeking models, as Sirc suggests, is essential to understanding and analyzing multimodal texts. Echoing Wysocki, Sirc writes about his use of Duchamp’s The Green Box as a model for
his implementation of multimodal composition in the writing classroom: it is “a compelling medium and genre with which to re-arrange textual materials — both original and appropriated — in order to have those materials speak the student’s own voice and concerns, allowing them to come up with something obscure, perhaps, yet promising illumination” (113). This eloquent description captures the promise of multimodal texts in the digital age. Sirc also evokes an element fundamental to discussions of multimodal composition, and crucial to the work of this dissertation project: design.

When students create multimodal texts they are engaged in design on multiple levels: they may create media, place that media in relation to textual elements, and arrange these elements within the digital space. In *Keywords in Writing Studies*, Melanie Yergeau positions the term *design* as emerging from a decades long interdisciplinary conversation; “[i]mplicit in these discussions is an understanding of design as tinkering (Ballentine 2009),” and “design as an action or product with modal layers beyond that of a traditional, text-based writing (Handa 2003)” (51). In doing so, Yergeau raises the very important question—is design writing? Authors Cheryl Ball, Kristin Arola, and Jennifer Sheppard provide a response to this inquiry in their textbook *Writer/Designer: A Guide to Making Multimodal Projects*. The slash infers that when asking students to create multimodal projects you are asking them to be both writers and designers, and this textbook (and accompanying instructors’ manual) takes students through the process of performing rhetorical analysis — identifying audience, purpose, genre conventions, and design elements — of digital projects as a gateway to responsibly creating their own. It also offers suggestions on how to assess digital projects, which is one of the many complicating factors that deters instructors from assigning multimodal work:

[m]ost of us who teach writing have been trained in the composition of words.
Although that education often includes attention to rhetorical and genre considerations, transitioning into the teaching and assessment of multimodal texts leaves many people feeling ill-equipped. Not only are we responsible for evaluating how the words (if there are any) communicate to a given audience, but we’re having to consider the role of images, sounds, colors, typefaces, layouts, navigation, and more. (21)

The instructors’ manual for *Writer/Designer* includes a number of approaches to assessing digital work, such as example peer review exercises and sample language to use when crafting grading policies (Ball et al. 22-25). Many other composition scholars have published on this topic as well, for example Carl Whithaus who has edited three full-length texts on the assessment on multimodal composition. The introduction to *Multimodal Literacies an Emerging Genres* co-written by Whithaus and Tracey Bowen states, “new media and new genres are not some achieved utopia for perfect learning but rather are sites where conflict and agreement, success and failure, coexist” (229). I am not seeking perfect multimodal compositions in this study of the Macaulay ePortfolio, but rather, evidence of this process toward a digital literacy practice.

Ultimately, multimodal texts involve a new set of criteria, including interactivity and design, which necessitates a new approach to teaching, assessing, and analyzing these compositions.

**WordPress as a Personal Learning Environment**

Understanding digital literacy as a practice is also highly dependent on context, particularly the genre conventions of the media and medium in which the text is produced. For this study, the course sites are built on WordPress (see intro for a detailed account of why). This platform has evolved over the decade Macaulay has been using it as an ePortfolio platform, but the core structure remains similar enough to elucidate our understanding of the impact of this
interface in its current instantiation. When investigating the writing process in digital spaces, the interface design must also be considered as an active agent. For example, Doug Rushkoff critiqued one popular course management system, Blackboard, in a 2014 presentation at the CUNY Digital Humanities Initiative by saying, “I could teach more by analyzing the design of the Blackboard interface than by teaching with Blackboard.” This is particularly relevant since Macaulay switched to hosting their ePortfolios on WordPress after Blackboard failed to meet their needs. That is to say, the choice of platform has enormous impact on how instructors teach and how students learn.

As research in the area grows, it becomes increasingly evident that design mediates our composition process in significant ways that need to be accounted for and articulated. In their 2005 case study presented in “Movement in the Interface,” Synne Skjulstad and Andrew Morrison work through the difficulties of articulating interface design in their attempt to describe the process of building a multimodal site (BalletroWeb). They write:

> Studied in terms of human-computer interaction (HCI), interfaces have been thought of as intermediary to communication. However, interfaces have come to be understood as more than a static, graphical layer lying between system and user. They exist as devices for shaping and spatialising the organization, selection and articulation of what is to be communicated electronically. As a result, interfaces are now an integral and dynamic part of communication design as a whole. (Skjulstad 415)

Skjulstad and Morrison conclude that the “constructedness” of the interface mediates the content. If taken as true, the platforms on which ePortfolios are built and managed affect the content itself, and therefore, no two systems can be taken as equivalent. The decisions made for the
writer by the interface design are as important to the final product as the choices made by the author themselves. In the case of personal learning environments, the decisions are even farther removed from the student because the administration has chosen the platform on which they are expected to compose. That is why it is important to offer a critique of WordPress before analyzing the student work produced on this platform.

In WordPress, students compose using the “backend” of the platform, an area not visible to a viewer who does not have editing privileges. Known as the “Dashboard,” the control panel for the site obviously resembles a word processor, such as Microsoft Word, with icons that serve as action buttons representing common tasks (see fig. 2.1).

![Fig 2.1. A Screenshot of the WordPress Dashboard.](image)

The new post page looks almost identical to a traditional word processor. The menu bar, style icons, and media options are all modeled on programs such as Microsoft Word. From a usability standpoint, which is to say an approach that prioritizes easy-of-use over utility, what-you-see-is-what-you-get (WYSIWYG) blogging platforms are a desirable content management system for use in higher education. ¹⁴ With lower barriers to entry, and the familiarity of the basic composing functions, users comfortable with desktop publishing can transition to the online

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¹⁴ This is a commonly-used abbreviation for what-you-see-is-what-you-get, referring to text editors that display the text as it will appear in the final product (or front end) rather than showing the code or mark-up language that will render style, formatting, and media options.
space with minimal instruction. Patricia Sullivan published research on the use of word
processing programs in the composition classroom, writing one of the first articles to address
desktop publishing in a 1998 issue of *College Composition and Communication*. In this article
Sullivan defines desktop publishing as “a computer system that can be used to produce a finished page” that utilizes a WYSIWYG environment, eliminating the need to know code in order to identify style elements. Sullivan identifies four advantages to using desktop publishing: it spurs creative activity; it draws attention to the relationship between the visual and verbal elements of a page; it encourages social application; and it can give students useful skills (346–7). Yet, Sullivan also cautions that desktop publishing is a tool best suited to advanced composition courses because learning new software taxes the already overloaded first year writing curriculum and notes that integrating this technology “requires an investment of time and money” (347). It is startling, although perhaps not surprising, how similar Sullivan’s arguments about the use of desktop publishing mimics those made about the integration of blogging technology in composition courses.

Early adopters of blogging use strikingly parallel language to describe the benefits and drawbacks of blogging in pilot platform studies (See Walker, 2002; Blood, 2000). As Charles Bazerman writes in his 1997 work on genre, “[w]hen we travel to new communicative domains, we construct our perception of them beginning with forms we know” (19). New writing technologies, such as desktop publishing and blogging, offer skeuomorphic methods of composing with new functionality—a well-documented phenomenon in new media studies (Bolter and Grusin; O’Hara). Take, for example, the use of a floppy disk icon as the “save” button when most word processor users no longer, or have never, had a floppy disk in their possession. Lev Manovich (2001), drawing on Marshall and Eric McLuhan’s concept of “law of
retrieval” (102-06) and Jay David Bolter and Richard Grusin’s (1999) “remediation” (2-15), says, “the language of cultural interfaces is largely made up from elements of other, already familiar cultural forms” (71). The descriptors used to articulate how a blog works come directly from the “old media” it was built on. Therefore, new blog users will already be familiar with these functions, which makes it easier to learn to compose in this new medium. For example, the button used to post content to the web on the back-end interface of a blog says “publish,” although this form of publishing is significantly different from sending a manuscript to a publishing company to be printed, bound, and sold. This could send a conflicting message to novice users, especially those who are also novice writers, who may not be aware of the fundamental differences between the process of publishing a text through a traditional publication venue and the instantaneous dissemination of posting to a public, digital space. Publishing on a public blog—or for that matter a social media site—immediately makes the work public without a mandatory vetting and revision process by trained professionals. Yet, the result is the same: the work is available an audience and is therefore subject to critique.

The transference of these structures to the blogging interface carries further implications. Designing the backend of the blog to look like a blank page of a document signals to the composer that words should be the primary mode of creation. Most of the icons offer options to manipulate the text, including font styles, font sizes, and font color options, alongside functions that directly apply to the delivery of text such as spell check, line spacing, and paragraph formatting. The majority of the elements that encourage the composer to experiment with multimedia also match those found in word processors, such as the ability to add hyperlinks to other webpages, internal bookmarking features, and a WYSIWYG insert media function, which uploads images, info-graphics, or videos from files on the user’s computer. All of these align
themselves with the word processor rather than with the practice of original bloggers who used the command line to write—requiring code. This move away from composing with mark-up languages such as HTML and style sheets such as CSS is an interesting one, with benefits and drawbacks (for a discussion on this see Kristin Arola, “The design of web 2.0: The rise of the template, the fall of Design,” 2010). These user-friendly spaces democratize the medium, but they also eliminate the need to learn code, which is a useful skill with applications beyond blogging. Many blogging platforms hide the mark-up language (such as HTML and CSS) and code (PHP for example) in favor of these visual text editors, obscuring how the site actually works, which is a missed opportunity for students to understand the technology at a deeper level. WordPress does provide a tab that shows the text in mark-up language, providing a literal and figurative window into the language that runs the site. This feature has the potential to function as a sandbox for students to develop a more technical understanding of the relationship between their writing and the way the machine reads and renders that text. If utilized, this space could be a bridge to learning mark-up language and coding skills. If educators believe that understanding how and why a site functions at this level is an important part of digital literacy, then they should factor in transparency when selecting a personal learning environment for their students. WordPress is one of many platforms that afford this potential, but it is up to the student and the instructor to capitalize on this feature.

**Lifelong Digital Literacy Skills**

This study examines many aspects of student engagement with the ePortfolio site that extend beyond composing. In the following chapters, I investigate the ways in which students experiment with the capabilities of the WordPress platform, specifically in terms of design. For example, when examining sites created by the students, I consider the choice of theme, the
information architecture of the site, and the use of the comment features and widget areas of the site. Within the context of coursework, the skills needed to control these elements can be outsourced to a site administrator, which in the case of Macaulay Honors College is typically a combination of the instructor and the Instructional Technology Fellow. But, both the platform and the mediation by the administrators can distance the student from understanding how the technology works, and can dilute the control students have over their composition process. Essentially these mediators are doing the work that makes online publishing different than composing on paper or in a word processor instead of the students. This is a missed opportunity for the development of what Cathy Davidson calls “life-long” digital literacy skills. In The Future of Thinking, Davidson, David Theo Goldberg, and Zoë Marie Jones argue that “from the point of view of participatory learning there is no finality,” and qualify this statement by explaining that “the increasingly rapid changes in the world’s makeup mean that we must necessarily learn anew, acquiring new knowledge to face up to the challenges of novel conditions as we bear with us the lessons of adaptability, of applying lessons to unprecedented situations and challenges (33 emphasis in original). In other words, technology advances so rapidly that one set of skills will not suffice to meet the needs of this changing landscape, which echoes the idea that we do not need to teach digital literacy skills, but rather engage in a digital literacy practice. As Stuart Selber states in Multiliteracies for a Digital Age, “computers are indicated in a wide range of crucial literacy issues no matter the view of any particular teacher or program. And the stakes could not be higher” (147). Writing in 2004, Selber intended this book to help writing programs establish basic computer literacy initiatives, and since then many innovative instructors in higher education have expanded this to include more advanced digital literacies applicable to a specific field of study. For example, Karl Stolley has his students
compose entirely in code, setting up their own servers and designing their own sites from the metaphorical ground up. As Stolley argued in his keynote address at the 2013 Computers & Writing conference:

Given the opportunity for extended encounters with difficulty (rather than the software tools that route around it), digital writers can become specific intellectuals: people whose deep technological expertise rivals that of their command of rhetoric — who are therefore able to learn, teach, and build things that scare the living crap out of others.

Stolley’s assertion includes two supporting points worth mentioning here: first, that even though all digital writing is difficult, if we can avoid “excessive mediation” (an example of which would be a content management system that does not grant access to the backend) then we can avoid the second pitfall, which is the need to “keep up” with impediments such as platform upgrades that can delay progress. The remedy for these common pitfalls in digital writing pedagogy for Stolley remains command line level learning. Stolley’s practice represents one extreme, albeit admirable approach: it is representative of a turn away from remediation back toward the fundamentals of computer programming (“In Search of Troublesome Digital Writing: A Meditation on Difficulty”). That the future of rhetoric is an ability to communicate with computers is at the heart of this nascent practice. Returning to Vygotsky’s theory of cognitive development, a digital writing platform can serve as a “zone of proximal” development for the student of digital writing. In fact, a site created for the purpose of playing and learning is called a “sandbox.” The middle ground between the command line and the word processor represented by a WordPress Dashboard functions as a learning environment in which students can develop skills that could be applied to more advanced system engineering. In experimenting with the
creating their own sites, students embark on participatory design (DiSalvo et al), which applies the concept of participatory culture to a theory of visual communication.

An amalgamation of classical rhetoric, new media theory, and critical pedagogy, participatory design proponents argue that by developing an understanding of the mode of delivery through which we communicate, we are better able to craft our message and reach our audience(s). In their article “Toward a Public Rhetoric Through Participatory Design: Critical Engagements and Creative Expression in the Neighborhood Networks Project,” Carl DiSalvo, Marti Louw, David Holstius, Illah Nourbakhsh, and Ayça Akin write:

Taken together, critical engagements with technology and the creative expression of issues through technology begin to form a public rhetoric: They constitute the activity of discovering, inventing, and delivering arguments about how we could or should live in the world. The artifacts or systems conceived or created become rhetorical by their persuasive intentions and capabilities, and by the way they inform and/or provoke a response from or dialogue with others. (48-49)

In its ideal form, an ePortfolio system built on an open platform such as WordPress enables learners to make sophisticated design choices; in the process of conceptualizing, implementing, critiquing, and revising the digital space, students develop a deeper comprehension of the relationship between content and delivery. Scholars such as Collin Brooke and Ben McCorkle have already made the connection between design in digital publication and delivery as a canonical rhetorical mode. Both scholars claim the field of writing studies has neglected the rhetorical modes in recent years and call for a return to theorizing particularly the role of delivery in the age of digital publication. This call is echoed by Carl DiSalvo, Marti Louw, David Holstius, Illah Nourbakhsh, and Ayça Akin who argue,
Positioning design as rhetoric does not claim some essential or deterministic quality of technological artifacts or systems. Nor does it suggest that design is fundamentally duplicitous, as contemporary pejorative notions of rhetoric might imply. Rather, positioning design as rhetoric calls attention to the ways in which the built environment reflects and tries to influence values and behavior and explicitly recognizes the capacity of people to design artifacts or systems that promote or thwart certain perspectives and agendas. (48-49)

When students use WordPress as a platform for composition, they engage in the rhetorical conventions of that genre, including the design. Students need to be instructed on the elements of design that impact delivery, or how their work is experienced by their audience. Choices such as font, color, and alignment, are all complex decisions that affect the accessibility of a digital composition. These decisions need to be informed by an understanding of the impact design has on a reader or user of a web text. Alex Reid, Cheryl Ball, Kristin Arola, Jennifer Sheppard, and Anne Wysocki are just a few of the composition scholars to publish guides on teaching design in relation to the creation of digital projects at the college level, but these strategies will continue to progress as the technology evolves. Meanwhile, studies such as this dissertation will provide insight to researchers and instructors on the practical results of these teaching methods.

Summary

Despite the continuing reevaluation of the underlying assumptions of student composition in online open spaces, still there is much to be learned. Prensky’s stereotype or myth of the “digital native” persists in no small part because of the increasing ubiquity of digital tools in our everyday lives, which has wide-ranging ramifications for student composition, including the teaching and evaluating of digital composition at the college level. While process theory helps to
further explicate the demand for portfolio-based assessment in higher education, there remain several outstanding issues with such an approach. Portfolios allow for the inclusion of writing throughout the three stages elucidated by Murray: prewriting, writing, and revising. However, this does address the need to collect, distribute, and archive these portfolios and the need to train instructors on portfolio assessment practices. One of the ways scholars have tried to remedy those issues is by converting paper portfolios to digital or electronic portfolios (ePortfolios). ePortfolios allow institutions, instructors, and students to collect student work while still maintaining the impulse to evaluate student composition. While ePortfolios have elements of traditional portfolios, they also include elements more widely associated with blogs. These include multimodality, reflexivity, and website design. Taken together, the use of ePortfolios creates opportunities for students to engage with and learn what Cathy Davidson calls “long tail skills.”

What remains to be understood, however, is if the use of blogs as a personal learning environment produces multimodal, digital compositions that could not be produced in another medium. To that end, this dissertation investigates WordPress as a personal learning environment in higher education. It will dissect the ecology of writing as a mode of delivery for multimodal content through a triangulation method including surveys, content analysis, and interviews. This study elucidates the benefits and drawbacks of the Macaulay ePortfolio program as a site of digital writing and multimodal content creation. The following chapter describes the methods used to execute this study in greater depth.
Chapter 3

Triangulating Data: A Mixed Methods Approach

Overview

This research study seeks to address the gaps in the literature presented in the previous chapter, particularly those concerning undergraduate digital literacy practice, by offering quantitative and qualitative data gathered through an investigation of multimodal composition practices in an open ePortfolio environment. Developing such a study called for a three-pronged research method that considers students’ preparedness to compose digitally, the style and multimedia components of student writing, and the transferable digital literacy skills attained by students through this process. This chapter describes these methods as a series of case studies grounded in process theory and constructivist pedagogy, which are then triangulated with quantitative data from a targeted survey analysis, coded data derived from student compositions, and qualitative data gleaned from interviews and textual analysis of student ePortfolios. First, this chapter describes the research questions that have guided the study. Second, it grounds the investigative methods in quasi-experimental inquiry. Third, it outlines the parameters of the study, which include planning and preparation, data collection procedures, the coding process, conducting the student interviews, and analyzing students’ ePortfolios. Finally, it briefly summarizes the steps of the analytical processes.

Research Questions

This research project has developed out of several guiding questions regarding the need to understand more fully the nature of WordPress as a personal learning environment in higher
education, as a vehicle for multimodal writing production, and student preparedness to compose in online open spaces. The results are intended to help instructors integrate digital writing platforms into their courses more effectively. As Chapter 2 shows, while educators continue to reevaluate underlying assumptions about student composition in online open spaces, they still need evidence to determine if and how students are using the affordances of digital composition spaces. The first research question considered student preparedness relating to composing in online open spaces and required a quantitative analysis: How do prior experiences writing in digital spaces impact students’ ability to complete college-level work in an ePortfolio environment? This question is intended to address the digital native myth, which suggests that “Net Generation” students enter college with digital literacies based on their life-long exposure to web-based tools. The myth is explored historically in Chapter 2 and is used as a framework here to explain the impetus for each survey question. The survey design was informed by Mary Sue MacNealy’s guide, *Empirical Research in Writing*, which carefully lays out best practices in question wording, organization, and distribution, along with analysis techniques (148-175). The questions address student social media use and exposure to blogging technology in their personal, educational, and extra-curricular experiences. The underlying goal of this survey was to generate a local context from which to compare both data-driven and speculative assumptions about how familiar college-aged students are with digital technology. Qualitative analysis derived from distant readings of ePortfolios, and interviews help to more fully answer the first research question.

Second, having assessed student experiences with writing in online spaces prior to entering college, it was important to determine whether the ePortfolio platform itself or the wording of the assignments had any impact on student composition. The second research
question used data collection and coding to analyze student writing in order to address three related questions: What are the characteristics of student writing in the online, open space of the digitally enhanced ePortfolio? How does the platform influence and shape student writing? And what impact does the language of the assignment prompt have on student composition? Answering these questions required looking at platform-specific affordances, such as the integration of media and the use of folksonomic elements, and comparing those results to what I learned about their previous experience composing in public, online spaces. Analysis of these questions allowed a deeper understanding of how instructors integrate the digital writing space into courses across the curriculum, and how students craft responses to those assignments using the affordances of the digital space.

Third, once the ePortfolio platform itself was considered, it was important to consider the influence of academic discipline on student writing. In the Macaulay Honors Program, students compose in online open spaces for classes in both the humanities and sciences. Thus, comparing student writing in a range of disciplines seemed crucial and inspired two further questions: How are these characteristics similar and different in writing across the disciplines? Specifically, how do they compare when the subject or content of the writing emanates from humanities/art courses and from science/technology courses? Answers to these questions allowed me to compare modes of writing across the disciplines and to determine the extent to which the medium influences these differences and similarities.

Finally, having considered pre-existing experience, the ePortfolio platform, and writing across disciplines, it was crucial to consider whether the digital literacy skills gained in the teacher-directed coursework transferred to self-directed work generated by the students. The final set of questions used interviews and close readings of three students’ personal ePortfolios to
consider: How is student writing similar and different in teacher-directed work versus student-directed work? Do students apply the digital literacy skills developed in formal coursework to their personal and professional ePortfolio sites? Analysis of these questions allowed for a better understanding of student acquisition of so-called “life-long skills” and their potential transference between their academic, personal, and professional lives.

**Investigative Method**

This is an empirical study that employs both qualitative and quantitative research strategies. The multivariate approach used in this study is modeled after Bereiter and Scardamalia’s six level research schema presented in *Knowledge Building: Theory, pedagogy, and technology* (2006). Designing my research plan to Bereiter and Scardamalia’s scheme helps to ensure the validity of my process. As defined by Bereiter and Scardamalia, level one is knowledge building, which is achieved through the literature review in the previous chapter; then the second level of writing studies research is “empirical variable testing,” which includes the survey method such as the one employed in Chapter 4 of this dissertation. In this framework, the survey phase should lead into text analysis (detailed in Chapter 5), followed by “clinical-experimental interviews” (described in Chapter 6), and finally include “computer simulation” (depicted in Chapter 5) (Bereiter and Scardamalia 3-5). These suggested stages correspond to the coding phase, interviews, and text analysis processes\(^\text{15}\) outlined in this chapter. Employing multiple forms of data collection protects against relying too heavily on one set of testing results, which could influence the conclusions.

According to MacNealy’s guide, *Empirical Research in Writing*, empirical research can be divided into four categories “according to the source of the data used:” historical, descriptive,

\(^{15}\) For an updated explanation and critique of this framework see Gesa Kirsch “Methodological Pluralism” in *Methods and Methodology in Composition Research.* (1992).
This is not a true experiment since a strict control group is impossible, for reasons including uncontrollable variation in the respondents’ demographic and educational history, as well the researcher’s bias as a participant-observer. As defined by The Writing Studio at Colorado State University, this dissertation project can be considered a quasi-experiment,\(^\text{16}\) a common method used as a consequence of the prevailing occurrence of the certain methodological limitations, primarily that many researchers are instructors and the subjects of their study are students, so it is difficult to be objective and broad in the reporting of their context specific results. As discussed in the Introduction (Chapter 1), I am a participant-observer in this study due to my previous role as an Instructional Technology Fellow (ITF) at Macaulay. This role gives me a great deal of institutional knowledge and experience working with a subset of Macaulay students and faculty. However, my role did not include evaluating the student work or administering grades. This research bias does not negate the validity of a research project because “although results of this kind of research are context-dependent and difficult to generalize, they can act as a starting point for further study” (“Experimental and Quasi-Experimental Research”). This goal resonates with the intention of this study, which is to provide data-driven results from which instructors and administrators can derive best practices in digital writing pedagogy, as well as information to use to argue for the inclusion and instruction in educational technology at their institutions.

Ultimately, this method aims to “try to improve our understanding of education and to strive to find ways to have understanding contribute to the improvement of practice” (Floden 197). The desire to improve pedagogical practice drives this investigation into the effectiveness of the ePortfolio system in order to improve digital writing instruction in the future. The data for

\(^{16}\) Writing@CSU is a respected resource for composition researchers.
this dissertation consist of survey results, student compositions, assignments, interviews, and ePortfolios. Since the data are complex, this also requires a multivariate research design that provides a more dynamic and complete analysis. This study falls into the category of descriptive research since it does not employ a control group and does combine qualitative and quantitative methods (Beach; MacNealy). Text analysis, surveys, and interviews are often associated with what MacNealy terms “quantitative descriptive” data or data that is qualitative but can be counted (45). The student writing in particular, gathered through the student ePortfolio system, represents “quantitative descriptive” data; one set of compositions are the randomly selected samples taken from course sites, which have been coded and analyzed through text analysis, and the other set are three full student ePortfolios which correspond to the interviews and have been analyzed through close reading. Taken together, this can be characterized as an empirical study executed as a quasi-experiment with quantitative descriptive and qualitative data.

**Parameters of the Study**

This was a three stage study: (1) survey preparation and planning, which involved the creation and distribution of a survey designed to assess student familiarity with technology prior to entering college; (2) data collection, which involved collecting class assignments relating to ePortfolios then coding and analyzing student writing produced on the ePortfolio platform; and (3) conducting retrospective student interviews to account for student voices and experiences. The remainder of this chapter details the three-pronged investigative methods of this study—surveys, distant readings, and interviews. The participants in each part are described, as are the survey, the coding scheme, and the interview protocol.

**Survey Planning and Preparation**
As outlined previously, the first stage of the empirical research executed for this dissertation was a survey of first year students enrolled in Macaulay Honors College intended to collect evidence of their experience composing in online, open spaces prior to entering college. In order to reach the greatest number of students, the survey was distributed in an email newsletter to students with a link to an electronic survey made available from 02/04/14 through 02/21/14, and a reminder email was sent by each of the 27 Instructional Technology Fellows (ITF) on 2/17/2014 encouraging the students to complete the survey by 2/21/2014. The survey addresses the students’ experiences writing in online spaces prior to entering college, specifically student social media use and exposure to blogging technology in their personal, educational, and extra-curricular experiences. The underlying goal of this survey was to generate a local context from which to compare both data-driven and speculative assumptions about how familiar college-aged students are with digital technology. Furthermore, as noted in Chapter 1 (Introduction), this is part of a multivariate research method employed in order to compare results through multiple data-collection processes. The survey results are compared to nationwide data and similar studies across CUNY in Chapter 4.

As Kevin DePew argues in “Through the Eyes of Researchers, Rhetors, and Audiences: Triangulating Data from the Digital Writing Situation,” textual analysis alone can “limit researchers to informed speculation” (55). Therefore, both the survey and interview stages of this dissertation are intended to give students a voice in the data, so that my voice as the researcher does not interpret their experience without direct evidence provided by the students themselves. The survey specifically explores the myth that students enter college with a set of digital literacy skills that instructors can reliably expect students to execute in an academic setting. DePew goes on to posit “if we do not bring the individuals who inhabit and visit these spaces into the
epistemological process, researchers become the single voice that re-creates the space for their academic peers,” which is essentially a situation that the digital native myth creates in literature by spurring the wide-spread adoption of educational technology based upon its assumed benefits to students in higher education (55). Both the survey and interviews address this concern by asking students to report on their experience using the ePortfolio site: the former focuses on initial encounters while the latter concentrates on advanced users. In the survey stage, the responses are anonymous; anonymity presents the opportunity for students to answer questions with the assurance that their responses will in no way affect their standing within the Macaulay community. This format allowed students to opt in to participation in the survey and to respond only to the questions they felt comfortable and able to answer. In the interview Chapter (6), students have agreed to be identified, and both their recorded interview responses and their digital writing are presented and contextualized. Taken together, these two stages of data collection frame the textual analysis with evidence from the students’ experience, not solely the researcher’s assumption of their status as members of the “Net Generation” or my interpretation of their work.

**Survey Creation and Distribution**

Given the history of the use of word processing technology in the classroom, and the prevalence of Internet access for college-aged Americans, it should be safe to assume these two things to be given. Moreover, this assumption was verified by drawing from a study of City University of New York (CUNY) students conducted by Maura Smale and Mariana Regalado and reported in a 2014 edition of *Educause Review* that found:

Most CUNY undergraduates are, at least by age, “digital natives” born into a world in which digital technology is widely integrated into daily life. The
overwhelming majority of students we spoke with had a cellphone or smartphone and home access to computers and the Internet [...] our research revealed that CUNY students had a wide range of access to and use of information and communications technologies. (“Commuter Students Using Technology”)

However, Smale and Regalado also caution that access does not ensure that students use these digital tools for academic purposes. Therefore, the questions of my survey focus on which web-based platforms Macaulay students use to compose and for what purposes. This survey was created in Opinio, a survey-creation software licensed by the Graduate Center, CUNY. As a participant-observer in this research study, I have institutional knowledge that helped me craft the survey and distribute it effectively. This survey was distributed online as part of a newsletter received by students every Monday via email. The call for participation targeted first-year students who had just completed their first required seminar in the Macaulay Honors Program; it appeared two weeks in a row with a small explanation of the study and a link to the full consent form and online survey. The ITFs were also asked to encourage their Seminar 1 students to complete the survey either in person or via email. However, neither I, the ITFs, nor anyone affiliated with the school gave students any incentive to participate. The survey was entirely optional and did not factor into student assessment in any way. This is expressed clearly in the consent form presented to students before they agree to participate in the survey (Appendix 1). Both the consent form and survey questions were approved by the Institutional Review Board at

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17 This data was secured through the institution’s library. The data is stored on the institutional network only accessed using institutional credentials, and the resulting analysis was maintained in encoded files on my Macaulay-issued hard drive. The answers provided by students cannot be traced to the respondent, and the results reflect only information collected via Opinio, which were not tampered with by anyone including the researcher.

18 This newsletter is called “Macaulay Monday” and contains curated information and announcements for the students, faculty, and staff associated with Macaulay Honors College.
CUNY and were vetted by the Instructional Research Director at Macaulay Honors College before distribution.

Once students agreed to participate, the survey questions appeared one at a time in a pop-up box on the computer screen. As stated, the student could choose to skip any (or as many) questions they wished for any reason. Students did not have to provide an answer to continue to the next question. Since the objective was to assess the technological fluency of the students before they entered college, it was particularly important for the rhetoric of the survey questions—and the accompanying consent form—to be assessable to the participants. Knowledge of the general level of digital literacy of first-year Macaulay students and the modes in which they receive information from the school was essential to the success of this survey. A full list of questions (Appendix 2) is available in the Appendices and each question is explained in depth in Chapter 4.

Survey Participants

Over 150 students participated in the survey, although not all of the participants completed all of the questions. This represents over 20% of the targeted demographic. The survey asked students to identify their age, the high school they attended, and what languages they speak (indicating which is their primary language); these first three questions served to ensure all of the students were eligible to take the survey and could understand English, the language in which the questions were composed. Additionally, starting with these questions situated the participants to the survey software and exposed students to the format of the questions. Due to the nature of the Macaulay program, all of these students were freshman entering from high school; the mandatory seminar structure at Macaulay does not allow for
transfer students. All of the students who participated in the survey were between the ages of 18 and 20 years old as of February 2014. That all participants were in the same age group and had the same level of education does limit the overall diversity of the responses. However, these limitations also provide a controlled data set for this survey. While the large majority of respondents claims English as their primary language, roughly half report fluency in two or more languages. The respondents represent a narrow geographic region, since prior to entering Macaulay all but three participants reported attending high schools in the New York City area (including the five boroughs and Long Island), and two of those three attended North Jersey schools in proximity to New York City. Despite a narrow geographical representation, these students represent a diverse range of ethnic backgrounds not identified in the survey process but verified by institutional research. It was evident from my experience working with these student, and the experiences described in the student writing presented in Chapter 5, that the Macaulay Honors College students come from a wide variety of cultural backgrounds, therefore I asked Diane Philips, Director of Institutional Research at Macaulay Honors College, to provide the demographic information for this class of students. (See table 3.1)

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19 This policy is something the Associate Dean of Teaching, Learning and Technology is hoping to address in order to allow for community college transfers. The potential expansion of access to the Macaulay Honors College may require further studies like the survey this dissertation presents in order to adequately address the differing digital experiences and needs of students arriving from community colleges.

20 Data on the student population at Macaulay Honors College is public and can be accessed on their website: https://macaulay.cuny.edu/about/factsheet.pdf
Table 3.1. Imputed ethnicity for entering freshmen class 2015. Data from Diane Philips. Director of Institutional Research at Macaulay Honors College. Student demographics. Message to author. June 29, 2015. E-mail.

This table displays a breakdown of Macaulay students by imputed ethnicity drawn from their application materials. Since this data is self-reported and voluntary, the results are incomplete, but match with the range of languages student supplied in my survey. The largest demographic is white, non-Hispanic students, followed by Asian or Pacific Islander, and according to this data this class is composed of less than 10% Hispanic, Black non-Hispanic, and American Indian or Native Alaskan students. It should be noted that this demographic breakdown is only representative of Macaulay Honors College students and not CUNY as a system. Each of CUNY’s 24 campuses has a separate and distinct student population that may not resemble the honors students enrolled in 2013-2014.

**Survey Questions**

Questions were arranged from simplest to most complex, and from general to more specific, as suggested by MacNealy in her chapter on survey methods (158-161). Also as MacNealy suggests, the questions were grouped by topic, and the format of each question was

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMERICAN INDIAN, NATIVE ALASKAN</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>ASIAN OR PACIFIC ISLANDER</td>
<td>199</td>
<td>35.3%</td>
</tr>
<tr>
<td>BLACK, NON-HISPANIC</td>
<td>23</td>
<td>4.1%</td>
</tr>
<tr>
<td>HISPANIC</td>
<td>39</td>
<td>6.9%</td>
</tr>
<tr>
<td>WHITE, NON-HISPANIC</td>
<td>301</td>
<td>53.5%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>563</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
similar to all previous questions (158). There were a total of eleven main questions, and several of these prompted follow-up questions if answered in the affirmative. Aside from the first three contextual questions, presented in a Y/N format, the substantive questions asked if the participant performed a specific act, and if so, how often (with options provided). In order to ensure these questions were clear and well-defined I solicited feedback from the ITFs and the Macaulay Research Director before distributing the survey to the students. The first three questions were contextual questions regarding the participants’ age, primary language, and high school. Again, these were meant to be simple, general questions that provided me with necessary contextual information, and gave the participant a chance to assimilate to the structure of the survey environment.

The next two questions focused on the students’ use of social media sites based on research that shows that the majority of American teenagers have social media accounts (boyd; Donovan; Turkle). This dissertation is focused specifically on social media sites that are communication platforms dependent on peer-to-peer interaction. The survey provided a list of the most popular social media platforms to participants with the intention of capturing as many sites as possible, not just those that the students might remember and name on their own. The sites listed were selected by researching which social media sites had the most traffic and users at the time, and those search results were compared across several sources. The survey of Macaulay students identifies which social media sites the students had accounts for and how frequently they used the sites with the intention of understanding what kinds of sites they use most often. The use of social media sites serves as an entrance point that built on a presumed familiarity with writing in online spaces (even if students were infrequent users of social media)

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21 For example, at any given time Alexa provides a list of the top Internet sites by country and category http://www.alexa.com/topsites/countries/US
to lead into questions that specifically addressed the use of blogging platforms and the level of literacy students had with blogging technology.

The next set of survey questions introduced the concept of a blog and asked if students were exposed to blogging technology, or if they maintained a personal website, in order to learn how extensively students engaged in digital literacy practices prior to entering Macaulay. Aside from using social media and blogging platforms for personal use, this study is explicitly interested in how students use these resources in an educational context. Therefore, this set of questions anticipates potential avenues through which students might have been exposed to blogging technology, i.e. through reading about personal interests, through extracurricular organizations, through employment and internship opportunities, or through classroom use. Each question also included an open text field to provide a URL or name of the specific site(s) students used.

The next step of the survey process was to consider the results in terms of the composition and digital literacy practices involved in the use of social media sites and blogging platforms in order to understand what skills these technologies helped students to cultivate. In an effort to contextualize those findings, I researched studies of K-12 teachers and students in relation to their perception of digital writing outside the classroom. According to Pew Research Center’s Internet & American Life Project “Part II: How Much, and What, Do Today’s Middle and High School Students Write?” authored by Benjamin Wormald, focus groups noted that in addition to the “formal” writing students do for class, students engage in writing outside of class, often using digital tools and platforms. The report further found that neither teachers nor students consider experience composing in online spaces—such as texting, posting to social media, or blogging—transferable to the classroom. However, Wormald claims that “most agree that among
students, ‘writing’ continues to be defined as assignments they are required to do for school, as opposed to textual expression they engage in on their own time” (“Part II: How Much, and What, Do Today’s Middle and High School Students Write?”). This division between the types of writing done in school versus the types of composition students engage in through social media may be perpetuated by the assignments given to them in their pre-college education. Thus another series of questions was designed to interrogate that discrepancy. In the survey of Macaulay students, respondents were asked to report if they used blogging technology for personal, extracurricular, or educational purposes, and were provided with open text fields to provide more specific details.

The results were collected in Opinio, which sorted results into raw data, quantitative results, and comments (or qualitative results). I analyzed the survey results by looking at the responses to individual questions, and partial responses were considered in order to have a representative sample of responses, or at least 20% of the total population of first-year students at Macaulay. Opinio also generated charts and statistics for each question, which is a particularly useful feature of this platform. The resulting infographics are discussed in Chapter 4 of this dissertation.

Data Collection

Following the survey, additional data were collected to verify and deepen my understanding of student composition in online open spaces. While the survey of incoming students provided a broad overview of student exposure to digital tools prior to entering the Macaulay Honors Program, the assignments produced by students in the four required honors seminars augmented and refined my initial impressions. I collected representative examples from each of the four Macaulay Seminars: The Arts in New York City (Seminar 1), The People of
New York City (Seminar 2), Science and Technology in New York City (Seminar 3), and The Future of New York City (Seminar 4)\textsuperscript{22} but focused on the humanities and sciences courses. As stated in my research questions for this dissertation, the objective of this textual analysis was to compare student writing generated in humanities-based classes with text composed in science-based courses to identify similarities and difference in writing mode and media use across the disciplines. Each seminar has a different structure and different requirements that affect the use of the ePortfolio system. For example, Seminar 1 requires students to attend and review cultural events; Seminar 2 requires students to make their own websites; Seminar 3 requires students to create posters and to present these posters at a common event; and Seminar 4 requires students to present their work at a mock city council. I needed to select a manageable number of individual ePortfolio sites to investigate, and sites needed to correspond to the same year as the survey data (2013-14). After identifying a list of ten potential sites based upon which were public and heavily populated with content, I contacted the ITF associated with that site to ask whether the course was writing intensive and whether the ITF thought that the instructor integrated the ePortfolio platform effectively. These conversations resulted in the selection of two sections of each seminar from the 2013-2014 academic year, equaling eight total sites. Again, all of these sites were open to the public at the time of this study and only content publically available was used. As an Instructional Technology Fellow, I had access to the backend of each site, which enabled easier scrapping of post content and meta-data such as the number of categories, comments, and tags applied to each post.

Two assignments were chosen from each site to show a range of the work done in each course and both the assignment text and a link to the assignment were captured in the database.

\textsuperscript{22} Across the Macaulay system, and therefore in this dissertation, these courses are referred to by their seminar number.
The seminars are capped at 18 students, so a random sample of students was chosen from each site by placing all of their names into a hat and selecting six. This process was repeated for each of the eight sites, equaling 48 students total. For each of the six students selected, posts from both a low stakes and high stakes assignments were collected and analyzed. The posts were analyzed according to the coding schema I devised for this project, which was designed based on studies conducted by Sondra Perl, Janet Emig, and Peter Elbow. This process was intended to provide a manageable number of sites to code from within an archive of over 3000 potential sites. This project is only a first step into this archive, and I intend to do further research on this site after considering the results of this dissertation project.

Coding Schema

Textual Elements

In Sondra Perl’s original dissertation, “Five Writers Writing: Case Studies of the Composing Processes of Unskilled College Writers,” defended at NYU in 1978, she created a method of coding student writing systematically, rather than relying on a narrative account of the composing process. According to Perl, narrative accounts often used to observe and analyze the behavior of writers are interesting but lack the systematic approach necessary in order to establish “what the relation is between discrete behaviors and the whole, and for detecting patterns among those behaviors” (55).²³ Perl explicated the value of coding student writing in five ways, stating that this research method provides “a means of viewing the composing process” that is:

1. Standardized—it introduces a coding system for observing the composing process that can be replicated;

²³ This dissertation is unpublished, but original copies were provided by Sondra Perl with permission to quote and re-print images.
2. Categorical—it labels specific, observable behaviors so that types of composing movement are revealed;

3. Concise—it presents the entire sequence of composing movements on one or two pages;

4. Structural—it provides a way of determining how parts of the process relate to the whole; and

5. Diachronic—it presents the sequence of movements that occur during composing as they unfold in time. (55)

These objectives, particularly the first two, are also the impetus for coding the student writing generated on the Macaulay ePortfolio sites. Aside from the general observations I made as an Instructional Technology Fellow (ITF) in the program, as well as the observations of instructors and other ITFs, this study seeks empirical evidence of the kinds of writing students engaged in on this platform. The coding process implemented in the text analysis completed for this dissertation follows Perl’s model in the design of the research methods and coding schema. (See fig. 3.1)
Perl broke down her dissertation data into two categories, writing and talking, and then further delineated the text into various operations performed by the student through these modes of communication. As seen in Figure 3.1, Perl marked the text for evidence of process; for example, in the “talking” category, Perl noted indications of planning, commenting, interpreting, and repeating, and in the “writing” category Perl identified when the author was writing silently, writing aloud, or editizing.
For the writing collected from the Macaulay ePortfolio sites, the schema focuses on aspects of digital writing, broken into two categories as well: textual elements and multimodal elements. The category textual elements refer to the mode of composition, grounded in the theory of Janet Emig as discussed in depth in Chapter 2 of this dissertation. These modes are the reflexive, which is identified as personal, experiential, and reflective writing and the extensive, which is impersonal, informative, and analytical. One change was necessary when applying Emig’s terms to the digital writing of Macaulay students. When studying paper-based texts produced by high school students, Emig defines the reflexive mode as only having an internal audience. In other words, the authors engage in this form of writing for their own benefit, and it includes writing such as journal or diary entries not meant to be shared with an outside audience. In contrast, for Emig, it is in the extensive mode that students produce text intended for an external audience, even if that audience only consists of their teacher (33-35). In order to apply these modes to the digital space, these distinctions must be modified because everything composed on a public ePortfolio site has an external audience—whether that ePortfolio was created as a part of formal coursework, such as in the required seminars, or in the context of an individual sites created for personal, extracurricular, or professional purposes. The data for this study does not include any posts marked “private,” and all of the posts used in this study are on sites that are open to the public as of January 2016. However, after studying the writing, it is clear that many of the posts were intended for an internal audience associated with the course, such as the instructor, students, ITF, and administrators. These posts refer to conversations, events, and readings that happened within the context of the course, as well as references to

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24 There are many reasons these sites may be taken down in the future or may simply be unavailable to the reader after this study is published. What is important for the purposes of this dissertation is to understand that these posts were intended to be open to the public.
people that are a part of the course. It is important to remember that these are not online courses, but rather classes that meet face-to-face in a physical classroom and attend off campus field trips together. Therefore, the coding schema for the reflective mode is modified to reflect an internal audience I have termed “intra-class” on the schema diagram as opposed to the external audience of the extensive mode that includes anyone from the general public. Furthermore, the data revealed that within the context of the Macaulay ePortfolio program, both modes displayed observational elements, or language that refers to first-hand insights from the author’s perspective. Therefore, this element is displayed as a shared attribute in the coding schema. The coding schema for textual elements is broken down visually in the left side of Figure 3.2. I determined if a post is mostly reflexive or extensive based on these distinctions, and if the post contained elements of both modes, I marked it as primarily one or the other.
Fig. 3.2. Coding schema used to break down Macaulay students’ ePortfolio compositions.
The Assignments

The data collected from the student writing samples are also broken into low and high stakes assignments, as defined by Peter Elbow. In “High Stakes and Low Stakes in Assigning and Responding to Writing,” Elbow distinguishes low stakes writing as informal, that is, either not graded or not weighed heavily: in Elbow’s words “we get to throw away the low stakes writing itself but keep the neural changes it produced in students’ heads” (5) Whereas high stakes assignments are typically formal and graded “carefully for soundness of content and clarity of presentation” (Elbow 5). For Elbow, it is important to remember that both high and low stakes work stimulates students’ cognitive development in terms of concept mastery, idea formation, and writing ability. Elbow also address non-verbal low stakes work in a classroom context, which is useful in translating these terms to a digital space. Elbow states that “[w]e should honor nonverbal knowing” which manifests in tangible forms such as in-class discussion and pre-writing activities, as well as multimedia interpretations students use or create to convey their ideas (6). In this study, low stakes assignments are identified by their percentage of the course grade they counted for (if any amount was specified), and through the characteristics of being short, exploratory, and clearly leading toward a larger, more in-depth project. Most of the assignments identified as low stakes expressly mention that the purpose is to develop ideas for a final project or raise questions for consideration to help clarify or explore concepts, and most also include a weighted grade of less than 30% of the course total. Elbow writes of high stakes work that “if we assign lots of low stakes writing, students are much less liable to be held back by fear or inability to put what they know on paper when they come to high stakes writing” indicating that the low stakes work should inform high stakes projects (5). For every course site included in the data for this study, at least one low stakes and one high stakes assignment was
analyzed to test whether Elbow’s notion of the relationship between low stakes and high stakes assignments is supported. The assignments marked as high stakes typically count as final projects worth 30% or more of the final grade. Many of the final projects correspond to an in-class presentation not captured on the site, which complicates the analysis of these texts. However, since the goal is to study how students are incorporating multimedia, any oral component to an assignment is noted and accounted for in the database. Likewise, some of the assignments selected for coding do not contain any substantial textual elements but are comprised of media elements with accompanying captions or brief descriptions. These are difficult to reproduce in the database but are described briefly and linked to for clarity.

The exact language of the assignment is purposely included in the data for consideration along with the text of the student posts. For example, see the language posted by Professor Allen in the syllabus for a Seminar 1 course offered in fall 2013: (See fig. 3.3)
This decision to include the assignment language was a conscious choice that not only opens the data to further research, but also provides the research with context for the student compositions. As Laura Aull argues in “Linguistic Attention in Rhetorical Genre Studies and First Year Writing,” published in the spring 2015 issue of *Composition Forum*, “rather than only highlighting corpus patterns, the attention to the prompt informing each FYW subcorpus highlights distinctions that carry implications for FYW research and assignment design,” and that “assignment prompts remain frequently underconceptualized by those who create them (Gere, Aull, Lancaster, et al.), and to my knowledge there is almost no research in rhetoric-composition or specifically RGS (Rhetorical Genre Studies) that includes analysis of textual features vis-à-vis different writing prompts” (75). Aull’s project is a linguistic analysis of over
19,000 first-year writing samples using very similar methods to this study of the Macaulay ePortfolio system. In Aull’s case, all of the prompts are diagnostic entrance exams used for self-directed placement of students into a first-year writing course, and all of the texts Aull studies are timed tests that do not contain media, yet the process of analyzing these texts through computational text analysis serves as a model for this study. In this study of the Macaulay ePortfolio system, the assignments are designed at the discretion of the instructor, and therefore the data contains a variety of prompts on a wide-range of topics. For the purposes of this study, the prompts are used to determine if the assignment is low or high stakes and to see if the prompt specifically includes language that either requires or suggests that students include media in their posts.

*Multimodal Elements*

A primary purpose of the study is to investigate the use of multimodal features by students, beginning with whether or not the post contains any form of multimedia, including images, videos, infographics, links, or interactive media (defined as any other element that can be manipulated by the audience, such as maps or timelines). If any multimedia element is present, then it is identified as being made by the student or taken from an outside source; in other words, if the student took the picture, created the video, made the timeline, or customized a map or can otherwise claim to have made the media that would fall under the distinction “created by student” on the schema. If the media included was not made by the student, but rather found in an outside source and included in the post, this falls under “cited from external source.” Ideally, media of this kind will be labeled properly with attribution, which is a skill the ITFs focus on in several of the mandatory workshops all Macaulay students attend. Yet, this distinction does require the coder to make a judgment call in some cases when ownership of the
media is unclear, for instance if is not cited, or the student manipulated a text in a substantial way (most often found in the creation of memes or collages). In either case, the inclusion of media displays digital literacy skills, either in finding and incorporating outside media or in the creation or manipulation of materials to produce original work.

The coding schema also includes what I am calling folksonomic elements, or elements generated by participants of the site such as tags, categories, and comments. When the term folksonomic emerged in the late 2000s, PC Magazine defined it as “[c]lassifying web sites by the user community rather than by taxonomy professionals. Folksonomy is said to provide a democratic tagging system that reflects the opinions of the general public,” and Oliver Burkeman defined the term in a 2005 Guardian article as “[f]olksonomy’ –the word is derived from ‘taxonomy’ – adopts an ingenious strategy for imposing some organization on the endlessly rising flood of data online: persuade the Internet's millions of users to do it themselves.” These two definitions partially explain the growing use of this term to describe user-driven moderation of digital content through categorization, tagging, up-voting, commenting, and responding. For the purposes of this project, however, folksonomic elements are considered part of the composing, and therefore learning, process. As Jeff Rice writes in “Folksonomic Narratives,” “[c]omposing with folksonomies has not received the type of attention that using tags has... Instead of framing folksonomies as merely applying tags, we can understand the folksonomic gesture as composition or the beginning of one” (121). In the coding schema (See fig. 3.2), “folksonomic elements” encompass categories, tags, and comments based on these evolving demarcations. The inclusion of tags and categories offers an opportunity to consider this action

25 Research on this crowdsourced labor is generating a great deal of interest in digital humanities right now, especially by Lisa Nakamura, Bonnie Mak, and Sarah Roberts, who have all presented on issues of digital labor in 2015.
as a digital literacy practice; assigning information a keyword in the form of a category and tag demonstrably affects the usability of the site by making that post more discoverable via search, tag clouds, and filters on the backend of the site. On some of the course sites, and in all of the student-created sites, categories are chosen and implemented by the students, and therefore blur the line between a formal taxonomy and a folksonomy, whereas tags tend to be truly folksonomic in the context of both the course sites and student ePortfolios. This skill translates outside of the WordPress platform in terms of a basic understanding of how information is presented and found digitally. Including the presence of comments as a folksonomic element helps me determine whether an online post spurred discussion and whether those comments were generated internally from a member of the Macaulay community or externally from the general public. Additionally, when the only comment made on a post comes from the instructor this is noted in the data table. This is noted in order to determine the audience reach of these public posts. The ability to generate discussion and respond meaningfully in open discussion forums in a digital literacy practice that directly informs digital citizenship outside of the classroom.

Coding Example of Student Composition

As an example of how the student writing was collected, analyzed, and coded, fig. 3.4 is a post composed in response to low-stakes assignment in a humanities-based Seminar 1 course taught by Professor Esther Allen. This is the first in a series of almost weekly posts, which all address different prompts. In this sample, Victoria responds to a prompt asking her to consider the term “transcultural” drawing primarily from personal experience. In this sample, Victoria walks her audience through her learning process by giving specific examples from her personal experience and putting them in the context of the keyword. This screenshot illustrates how the post is displayed on the course site. (See fig. 3.4)
This post corresponds to the blog post assignment provided by Professor Allen, which states, “Your blog posts will describe, analyze, contextualize and evaluate the art, performances and readings you seek out and experience.” This is a low-stakes assignment, worth 20% of the total grade cumulatively over all of the posts, and it does not specifically request or require the use of media. This sample demonstrates that Victoria’s writing is reflexive due to several factors: 1) her use of the first person; 2) the content is based on personal experience; and 3) the post is a reflection on the student’s experience within the context on the assignment (See fig. 3.4). The first two lines of Victoria’s posts indicate a reflexive sample through the liberal use of the pronoun “I” and in the reflective tone: “I didn’t think that I would able to write this blog post. Especially since I never heard of the word ‘transcultural’ but I was able to realize that my life is a transcultural moment.” Also, in this post Victoria reflects critically on her experience growing up in an American-Chinese family, writing:

Growing up in my house was like grouping in a “mixing bowl” of Chinese and American culture. Part of my childhood was like the classic “American” family where my dad would drive me to soccer practice every week. Every Sunday was for homework in the morning and then football in the afternoon and night. Instead of coming home from school to a house smelling like Chinese food, I would find a meatloaf or baked lasagna sitting on the stove. But on the flip side, my parents made sure that we always followed traditions such as Chinese New Year, going to the cemetery to pray to my ancestors and to respect my elders. I can’t say that I have had “one” transcultural moment because every night that I go home, I’m stepping back into the mixing bowl. (“Transcultural Moment.”)

Victoria provides evidence for her claim that her “life is a transcultural moment” by writing about how her family incorporated elements of both traditional American and Chinese
culture. While her family enjoyed American sports and food, Victoria’s parents still made sure to teach her the importance of celebrating Chinese New Year and venerating her family’s ancestors. Victoria does not integrate outside sources, nor does the post reference research or course material, which would be indicators of the extensive mode. The post does seem to address an audience of Victoria’s peers, perhaps most apparent in this line: “When I told my classmates all of this they gave me this wide-eyed stare, as if I poked a hole in their little epiphany. The funnier part was how some of them didn’t believe me so they decided to come to my house to see if I was telling the truth or not.” In my revision of Emig’s terms, this is indicative of the reflexive modes due to the nature of composing in an online space: although comprehensible by and accessible to a general audience, this post is clearly addressed to the members of this course who are familiar with the keyword, assignment, and class discussion, making this post reflexive rather than extensive. The post does not contain any media, tags, or comments, but it is marked with a category, which is an element of information architecture built into WordPress that enables the site to sort posts by keywords (See fig. 3.5). The category marked by Victoria enabled the platform to group this post with other posts marked with the same keyword, “Transcultural Moments” across the entirety of Professor Allen’s Seminar 1. The image below shows how these conclusions are coded on the spreadsheet created for this dissertation. (See fig. 3.5)
Fig. 3.5. A sample of this dissertation’s coding database created using Victoria’s low-stakes post.
In the analysis of a post like Victoria’s, the lack of media, tags, or comments is concerning. The question remains: how did the digital space influence the composition process? In this case, the student writing could have been published effectively in a print medium; there is no evidence that the student utilized the affordances of WordPress when crafting this response. However, the language of the post is clearly directed to an outside audience—an exchange that is facilitated through the public course site. In Chapter 5, posts like this example are compared to the other student responses to this assignment, as well as the responses to the high stakes assignment for this course. Totals are tallied for the mode, media, and folksonmic elements across all sections of the seminar, across multiple sections of that seminar, and across sections from the other academic disciplines. This provides a comprehensive data set from which I can draw conclusions about discipline-specific digital writing.

**Interviews**

The third stage of the multivariate research method employed in this project was open-ended interviews with students who had completed all four mandatory seminars at Macaulay Honors College and went on to create their own ePortfolio sites, as well as close readings of the sites they submitted. Students who participated self-selected by answering my request for participants directed toward students who had submitted their personal ePortfolios to the annual ePortfolio Expo competition held at the end of the 2015 spring semester. At Macaulay, students are given the space to create sites for whatever purpose they wish, within the legal and ethical constraints of the university. Many create group sites for clubs, organizations, or newspapers, while others create individual sites to showcase their art, music, or research, and some create travel, food, or fashion blogs. The ePortfolio Expo competition provided me with an opportunity to examine the digital writing practices of these students.

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26 These seminars and the role they place in this study are explained in further detail in the Introduction.
to hear students articulate the value of their ePortfolio sites to an audience of their peers as well as a group of judges composed of faculty members, administrators, and Instructional Technology Fellows. I witnessed the ePortfolio Expo presentations and served as a judge for the prize along with Joseph Ugoretz, Associate Dean Teaching, Learning and Technology at Macaulay Honors College and Su Ng, Assistant to the Provost at Macaulay, who organized the spring research conference at which the Expo was held. In their Expo presentations, held on May 17th, 2015, the students expressed the results of a reflective process that helped them understand the purpose, audience, and context of their sites. In turn, the presentations prepared students to speak with me one-on-one about these same concepts in the interviews—conducted directly after the student presentations—making these discussions particularly fruitful.

In order to prepare for the interviews (and to participate as a judge in the Expo), I examined each portfolio site for elements of information architecture, multimedia content, interactivity, and the quality of writing and research. I paid particular attention to the cohesion displayed in the design choices, asking questions like: Did the header images match the purpose of the site? Did the widgets function to enhance the research? And did the creator organize the information in a logical, intuitive way? The Expo judges also discussed these questions with each other before awarding a winner. I considered their evaluations when analyzing the sites in the close readings.

There were a total of nine submissions to the ePortfolio Expo, and of these nine, I was able to arrange five one-on-one interviews due to participant availability. This was arranged via email directly with the students, sent with the permission of Joseph Ugoretz who provided a spreadsheet of the submissions and the contact information for each participant. Two of the five consenting students agreed to meet with me in the common space for 15-20 minutes immediately
after their presentations for a brief interview about their project. Two others agreed to answer my questions over Skype later that week. The fifth participant also agreed to participate virtually but this session did not record properly. The in-person interviews were conducted after the ePortfolio Expo presentations in the common room of the Macaulay building individually with each participant at pre-scheduled times. No was in the room except for me and the participant, and these interviews were recorded on a handheld camera provided by Macaulay. I provided students with the consent form via email before their interview, and after a brief explanation of the interview process from me, they signed the document in person before the interview commenced. The Skype interviews happened in the same week as the Expo, and these students had access to both the consent form and the questions electronically via email to ensure that a bad connection or other interruption would not interfere with the participants’ understanding of the questions. Students electronically signed the consent form and provided verbal consent in the interview. I selected three of the five videotaped interviews to focus on for this study due to the clarity of the discourse and the richness of the corresponding sites.²⁷ The sophistication of the three sites I choose to focus on provided ample material to analyze both in the interviews I conducted with the creators and in the content of the sites.

Each participant was asked five open-ended questions, with follow up prompts when needed (Appendix 4). The questions were intended to give the students time to think through the purpose, intention, and audience of their ePortfolio site. The questions also specifically connected to the survey by asking participants, “What was your experience blogging before creating this site?” and encouraged them to link the skills they learned in their coursework to

²⁷ The videos were transcribed by an academic transcription service, GMR Transcriptions, which was recommended by participants in CUNY’s Internet Research Team. I revised the transcripts for accuracy, especially in cases where disciplinary terminology was unintentionally altered by the transcriber.
their ability to complete this self-directed project. These sessions put the learning process into a long-range perspective over the student’s four years at Macaulay, while also considering influences from their experiences outside the classroom. The last interview question prompted students to project what they learned from this experience into their future by asking, “Where do you see this site in 5 years? What do you hope to be doing then?” Not only did this inquiry ask students to articulate elements of their learning that would translate outside of their college experience, it also engaged the student in thinking through issues of planned obsolescence, which is a critical concern in web-based project management. The goal of the interviews was to identify transferable skills gained through the use of the ePortfolio system in various ways throughout the student’s college career, and the results show that considerable progress was made by these students with respect to the sophistication of their understanding and use of the platform during their time in the Macaulay program.

In order to contextualize the interviews, I performed close-readings and analysis of the work as they stood in a particular moment in time. This was an extended, more comprehensive version of the evaluations performed before the Expo, but with the intention to produce a thorough analysis. This analysis focuses on elements of production, including, but not limited to, design, rhetoric, multi-media incorporation, and audience-awareness displayed in each site, and I grounded this stage of analysis in post-process theory. In Post-Process Theory: Beyond the Writing-Process Paradigm, Thomas Kent identifies three principals of post-process theory: “1) writing is public; 2) writing is interpretive; [and,] 3) writing is situated” (25). While these assumptions are heavily debated in the field of composition and rhetoric, when applied to the
digital writing at stake in this study, all three principles ring true: each site created by the
interviewees was intended to be public, to serve a specific interpretive function for their
audience, and to be situated in both personal and academic contexts disseminated as an
interactive website. Some of these principles connect back to other sections of this study,
specifically the surveys and text analysis presented in Chapters 4 and 5, and some are inherent to
the intentions of the interview process, which attempted to identify the transference of digital
literacy skills from coursework to the personal sites. In order to complete this analysis, I took
screenshots of the production sites at time of the interviewing stage and considered the
“situatedness,” or context, in which they were created as informed by the knowledge gleaned
through the interview process. I compared the work done by each student on their personal sites
to the evidence collected from the surveys and analysis of course sites performed in the earlier
stages of this study.

In order to analyze the transcripts of each interview alongside the corresponding website
created by each participant, I read each interview transcript and the text of each site closely and
identified recurring themes in each. From these patterns I developed a set of terms to code the
interviews: access, community-building, previous experience, design, future-oriented, and
reflection. Each of these terms identifies a subject that was addressed by each participant; I use
the terms to organize the three interviews into parallel topics of discussion. Unlike the coding
schema for the text analysis (see Chapter 5), the system used for the interviews was created from
the context of the student responses, rather than from terms adopted from previous studies. The
terms I used to code the interviews and Expo sites provide a framework to analyze elements of

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28 For more on this debate, see “Writing and Accountability” by Barbara Couture in Beyond
Postprocess (2011).
knowledge transfer starting with the skills learned in formal coursework and ending with those displayed in the self-directed work of the Expo submissions.

In this interview analysis, access is used to define entry points to the digital work created by the students; therefore, access refers to the various ways in which the authors present and disseminate their materials. The term community-building refers to the ways in which the students define and address the audience for their ePortfolios—a process through which they enter into and build communities for their work. Previous-experience is used to describe the technical and academic skills students learned in their coursework at Macaulay, or through personal experience, that they applied when creating their personal ePortfolios. Design is used to identify elements of user experience, information architecture, and aesthetics that the students implemented when creating their ePortfolios. The term future-oriented was used to code sections of the interviews in which the students specifically addressed their intentions to pursue the paths they identified through the process of creating their ePortfolios, and reflection was used to identify sections of the interviews and the sites that display introspective, insightful thinking. By comparing the ePortfolio sites to the ways in which each student articulated the process of creating their sites, I was able to consider multiple modes of reflection. In *Reflection: Turning Experience into Learning*, Boud, Keogh, and Walker identify three key phases of reflection: 1) returning to experience—recalling or detailing salient events; 2) attending to or connecting with feelings; and 3) evaluating experience—re-examining experience in the light of one’s intent and existing knowledge, integrating new knowledge into one’s conceptual framework (26–31). The interviews forced students to reflect as Boud, Keogh, and Walker define the process: as a way “to take a step back from and return to their work, placing that work into broader personal or intellectual contexts,” which, “gives a learner ‘increased power of control’ of their learning (27).
The elements of reflection also provided insight into the impact this project had on the students’ digital literacy practice, and the life-long learning that happened throughout this process.

The interviews provide a deeper, fuller context for the survey and text analysis by providing the student’s perspective. As DePew argues, “by only examining the textual artifact, researchers potentially leave aspects of the text unaddressed, such as the outcome the rhetor intended the document to create—such as a change in the audience’s actions or beliefs or a good grade” (54). In this case, the “rhetor,” meaning speaker or author, is the student who created the site. The author is only one part of the rhetorical triangle, which includes the text and the audience as well. If this study relied entirely on the analysis of completed course sites or student ePortfolios, the intentions of the author would remain unknown. DePew claims that when relying solely on textual analysis the writing studies researcher risks incomplete data by not considering all points of the rhetorical triangle:

Questions that remain unanswered include how the target audience (or secondary audiences) responded to the text; whether the rhetor successfully generated the intended outcomes, and why or why not; whether the text was particularly well written for the context in which it was written; and how the document might fair in a different context. These questions, combined with the questions that researchers ask of the text, complete the rhetorical triangle and allow researchers, to the best of their ability, to reconstruct how agents negotiate a rhetorical situation. (54)

In order to avoid these gaps in the data, the interviews generated information from the perspective of the rhetor, or site author, on their initial intended audience(s), and how they would expect future, or unintended audiences to use their text. Furthermore, participating in the Expo
allowed me to gather information about how an outside audience viewed these texts, namely, the other judges and audience members present.

The application of mixed methods combats what Donna Haraway calls the “god trick” or “single-voicedness” that a researcher may take on when they speak for a text or rhetor in their analysis (193). Whereas the combination of anonymous surveys and textual analysis alone might “usurp participants agency” (Hawisher et al.), including the interviews incorporates the actual experiences of students and their use of the tools from their perspective. In fact, the gaps in knowledge I identified after analyzing the survey results helped me to formulate the interview questions. The missing elements of particular interest to me centered around how students would reflect on the process of learning to use the platform and articulate the value in these activities. For instance, the surveys did not elicit information on who the students believed to be the audience for their online writing nor did they explain their perceived purpose for the various sites they use. These factors are essential to understanding the why, rather than the how, behind student’s online writing practices.

The three chapters immediately following this overview of my methods explore the results and analysis of each step of the triangulation method employed for this dissertation project. This combination of methods—surveys, text analysis, and interviews—is unique to this dissertation, and therefore, offers an intervention in the field of composition and rhetoric. Both the data collection procedures and the data itself are complex; consequently, each stage warrants its own chapter. Chapter 4 presents my analysis of the survey results and compares these results to nation-wide data cited from previous studies performed by other researchers; Chapter 5 describes the coding schema and text analysis in further detail, and Chapter 6 provides an in-depth analysis of all three interviews along with a close reading of each corresponding Expo
submission. Finally, Chapter 7 offers synthesis of all three stages, as well as suggestions for further work in these areas. These chapters are intended to be read together and considered collectively as a way to understand how students compose in online spaces and to better craft digital writing pedagogies in the future.
Chapter 4

Exposure and Experience: Surveying Students’ Pre-College Digital Writing Practices

Overview

The myth of the digital native makes it easy to assume that eighteen-year-old students, especially those at an honors college in New York City, have some innate knowledge of technology. The tendency to presume American teenagers are sophisticated users of the Internet can and does have consequences: downplaying the need for digital literacy education does a disservice to students who need support when given assignments that require navigating, evaluating, and creating sources online. This chapter uses a survey of incoming Macaulay Honors Program students to assess their preparedness and past experience with writing in online open spaces in order to base conclusions on data rather than assumptions. The quantitative methods employed identify and discuss the characteristics of student social media use and exposure to blogging technology in their personal, educational, and extra-curricular experiences. This analysis conforms to Bereiter and Scardmalia’s framework, relying on “empirical variable testing” (3), and reveals that Macaulay Honors Program students have minimal, if any experience, using blogging technology prior to entering CUNY, despite widespread social media exposure.

This chapter begins with a discussion of student access to the Internet in order to define access for the purpose of this study and to situate Macaulay students’ experience with digital technology. The remainder of the chapter is organized according to the survey questions in order to devote space to each finding and to enable comparison between results. The detailed discussion of each question places the quantitative results of the survey analysis into a local context from which to compare both data-driven and speculative assumptions about college-aged
students’ familiarity with digital technology, thus offering a more dynamic picture of the ways incoming students have used blogging technology in the past.

**Access to Technology**

This study focuses on the use of digital technology in higher education; consequently, access must be assessed on two levels: at the institution and in the home. For the purposes of this study, I define access as the ability to use a given technology on a regular basis, with a basic understanding of how to use those tools effectively for personal, educational, and/or professional purposes. This definition is fluid and was created with the intention to encompass a general understanding of digital technology use. Contact with a web-enabled device or personal computer is not enough to indicate access. Knowledge of how to use the tools must be considered before students can achieve a useful level of access. Therefore, assessing access also includes assessing education or training in the use of digital writing technologies. In order to provide further evidence that an average Macaulay student would have access to a computer and the Internet throughout their education—both before and during college—this section considers nation-wide computer access surveys from the last 20 years as well as a CUNY-wide study. As Chapter 3 details, all of the students who participated in the Macaulay survey were between the ages of 18 and 20 years old as of February 2014, and a majority were educated in New York City. By the early nineties, when the average Macaulay freshman was born, the personal computer was widely available, and formal composing took place on computers through the facilitation of text editors and word processors.

In the introduction to *Electronic Literacies in the Workplace*, editors Patricia Sullivan and Jennie Dautermann note that “[t]he U.S. Department of Education (1992) reported that by 1990 more than 95 percent of all public schools of any size offered their students some access to
microcomputers,” and that “[i]nstructional activities related to writing (word processing, keyboarding, learning English) were rivaled only by mathematics instruction in frequency of use” (xi). These finding show that the large majority of students educated in the United States since the 1990s have had some level of access to computers at school. Furthermore, Sullivan and Dautermann cite a U.S. Bureau of Census statistic published in 1991 that indicates “41.1 percent of people who reported using computers at work also reported using them for word processing (which we take to be an indicator of writing activity)” (412). They go on to argue that increased activity in the workplace demands the incorporation of computers into writing instruction in higher education (xi). Sullivan and Dautermann’s study indicates that digital literacy training has been a topic of conversation, if not a priority, since the early 1990s—well into the time period when the Macaulay students under study in this dissertation began their educations.

In fact, the word processor has become so ubiquitous in K-12 education that educational research has shifted to focus on Internet access. The requirement that the education system provides access and training in the use of computers, especially in terms of writing instruction, continues as is evident in the most recent Common Core Standards. As of January 2016, the current Common Core Standards for Writing state that students in grades 9-12 should be able to “[u]se technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information” (CCSS.ELA-Literacy.W.11-12.6). When I contacted the New York City Department of Education (NYCDOE) to verify that students receive word processing training in K-12 public schools, the director confirmed that all schools must comply with this Common Core Standard (“Word Processing Training at NYC Schools,” January 20th 2016, Email). Of course, not all schools can and will implement standards in the same way, and therefore, it is difficult to prove
that these standards are being met across all NYC schools. In fact, to ensure that all New York City schools comply and assess these Common Core Standards, the Department of Education has created common curriculum maps that lay out each assessment standard with suggested assignments. The “9-12 English and Languages Arts Curriculum Map” was recommended, but not required in the 2013-14 school year, and was required by the 2014-15 school year. In this document, the “Performance Assessment Prompt” that addresses standard W.11-12.6 cited above, specifically asks students to create a digital text that includes outside research and media. The prompt reads:

Create a blog post using information from your research paper and various multimedia components to enhance your research findings. Update or enhance the information from your research paper by linking to other supporting information and displaying the information flexibly and dynamically. Make effective use of available multimedia components, including hyperlinks, images, graphics, animation, charts, graphs, video, and audio clips. (“Grades 9-12 ELA Curriculum Map”)

These skills exactly match the research questions that guide this dissertation, which seeks to find evidence of multimodal composition in college writing. The New York City Department of Education (NYCDOE) curriculum map clearly shows the importance that the NYCDOE places on digital literacy skills, specifically the ability to compose a digital text using multimedia. As of 2014-15, all New York City public schools must assess this skill; compliance is enforced through mandatory testing. The students surveyed for the Macaulay study graduated in the spring of 2014; therefore, this curriculum would have been recommended, but not required, in their last year of school. This could explain why some, but not all, respondents report exposure to
blogging technology in an educational setting. However, I do not know which schools incorporated this NYC DOE recommendation, nor do I know if the survey respondents attended the schools that chose to implement the recommendation.

Currently, there is no reliable evidence that all New York City high schools have computer labs or the equivalent technology required to execute this demand. In the Spring 2011 issue of *Radical Teacher*, Tricia Kress writes:

In 1985, when computers first began to make a significant entrance into schools, the average student to computer ratio was 63:1, and the Internet was not even a figment of most people's imaginations (Kafer, 2002). Now, twenty-five years later, the state of technology integration in U.S. schools has made great strides. Ninety-nine percent of the nation's schools have Internet access, and the student-to-computer ratio has steadily decreased to approximately 4:1. Even in urban schools the ratio has decreased to just over 5:1 (Parsad, 2005). (15-16)

According to these findings, many students should have computers at school, and those computers should have access to the Internet. The study Kress cites, conducted by the U.S. Department of Education in 2005, found that nearly 100 percent of public schools in the United States had access to the Internet compared with 35 percent in 1994 (4-5). The 2006 report on “Internet Access in U.S. Public Schools” by the U.S. Department of Education shows that access to the Internet has increased dramatically in the American school system since 1994, with 94% of schools reporting instructional rooms with Internet access by 2005. Considering that the oldest survey participants were born in 1994 in conjunction with the evidence that 94% of public school classrooms offered Internet access by 2005, it follows that every participant would likely have had Internet access at school for some portion of their education (Wells and Lewis).
Furthermore, in 2015 the NYCDOE announced a Capital Plan calling for “a $450 million investment to modernize all major components of our internet infrastructure (network design, bandwidth capacity, and wireless technology), as well as upgrades to building electrification” in all NYC schools by 2020 as part of their strategic plan (“Strategic Technology Plan 2015-2020”). Part of this strategic plan states that the city will invest $50 million to “make a significant investment over five years to increase the number of devices available for student use” in order to ensure that “[a]ll students have consistent access to computers and other technology tools while at school” (“Strategic Technology Plan 2015-2020”). To achieve this goal, The Smart Schools Bond Act (SSBA), approved by the voters in a statewide referendum held during the 2014 General Election on Tuesday, November 4, 2014, authorized the issuance of $2 billion of general obligation bonds to finance improved educational technology and infrastructure to promote learning and opportunity for students throughout the state (Educational Management Services). This considerable investment of funding and resources exhibits a commitment to improving access to digital technology in all NYC schools.

The NYCDOE’s plan to ameliorate gaps in the availability of computing devices in NYC schools includes “lifting the prohibition on student-owned mobile phones in school” in order to offer “new opportunities to expand the use of devices in learning environments.” Allowing students to “BYOD” or bring-their-own-devices matches research that suggests the majority of students have access to Internet-enabled personal computing devices at home. A Pew Research Center study drawing from student data collected in 2010 found that close to 100% of college students in America have the ability to access the Internet at home. This phone survey involving a total of 9,769 undergraduate and graduate students found that almost all 18-24 year olds are able to access the Internet at home by either a broadband connection or wirelessly depending on
the type of device they use to connect (Smith, Rainie, and Zickuhr). The Pew Research Center & American Life Project “College Students and Technology,” broke down Internet connectivity into age cohorts as well as education level, with results that indicated 98% of undergraduate four-year college students use the Internet at home, compared to 75% of all adults, 92% of all college-aged non-students, 99% of graduate students, and 94% of community college students. Further, the report discusses how age groups and education level impact access. A greater percentage of all college students—undergraduate and graduate, and to a slightly lesser degree community college attendees—connect wirelessly than all adult Internet users as a whole. Therefore, the 18-20 year old American undergraduate is likely to have access to the Internet at home as well as in school.

However, it is important to note that this data does not assess the participants’ depth of understanding of how the Internet works or their ability to use the Internet effectively, especially for academic purposes. As mentioned in Chapter 3 of this dissertation, a recent study of students from six of CUNY’s 24-campuses performed by Maura Smale and Mariana Regalado found that the “overwhelming majority” of students have access to a computer and the Internet at home. Furthermore, all of the students at Macaulay are provided with new laptops upon entering college, and all of the CUNY campuses are Wi-Fi enabled. Yet, importantly, Smale and Regalado argue that “[d]espite constant connection to friends and family via text messaging and social networks, students’ experience of and preparation for using technology in their academic work was uneven — not just in their online research skills but also in their proficiency with basic productivity, word-processing, and presentation software.” Consequently, access does not equal the competence necessary to complete college-level work using web-based tools. Furthermore, Smale and Regalado found that the level of access to technology was unequal across the
population of CUNY students they interviewed, noting that “[f]or many of the students we interviewed, economic constraints imposed real limits on their access to and use of technology off campus. Because such technologies can be leveraged for scholarly uses as well as for communication more broadly, these constraints have serious implications for students’ academic lives and beyond.” Similarly, evidence from Kress supports this claim by showing that students from different backgrounds use technology differently outside of school, and that while middle-income students often have parents or teachers who instruct students in the use of digital technology as a resource for finding information and creating resources, lower-income students use technology for entertainment purposes or as consumers (16). Kress warns that “[t]hese positive trends in technology availability are often taken as a sign that the digital divide is indeed closing as technology is becoming increasingly affordable and available,” but “technology has not entered into the lives of all U.S. students to the same extent and in the same manner” (16). Therefore, while it is reasonable to expect that Macaulay students have access to digital technologies, it is unclear how such exposure relates to their learning experience.

Additionally, while it is safe to assume that most students educated in America have access to the Internet, there are important discussions concerning the lack of access to the Internet internationally, especially in developing countries, which need to be considered when assessing access on a large scale. However, those conversations are beyond the scope of this project, and the results of the Macaulay survey suggest this concern is not applicable to this subset of students. All of the participants indicated that they attended high school in the United States, and only two of the respondents reported a language other than English as their primary language. The respondents represent a narrow geographic region, since prior to entering Macaulay all but three participants attended high schools in the New York City area (including
the five boroughs and Long Island), and two of those three attended northern New Jersey schools in proximity to New York City. This indicates they were educated in English and that the participants are fluent in the language this survey was written in. Although 57.6% report fluency in two or more languages, bilingual ability does not directly relate to the student’s ability to use digital technology nor is it generalizable to a wider population.

Survey Questions and Results

The survey provided to Macaulay students assumed generalized Internet access for college-aged Americans. Therefore, the questions focus on which web-based platforms Macaulay students use to compose and for what purposes.

Questions 1-3: Demographics

The first question of the survey asked students to give their age, and the second, to provide their graduating high school. The third question asked students to list any languages they speak (indicating which is their primary language). The fact that all of the participants are in the same age group and at the same level of education limits the overall diversity of the responses; however, these limitations also provide a controlled data set for this survey.

Questions 4-5: Social Media Use

The ePortfolio system at Macaulay Honors College is a WordPress-based platform that is explained to all incoming students at the mandatory “Tech Fair” event they attend prior to the first day of classes. All of the students who responded to this survey had attended the Tech Fair

29 The Macaulay Honors College “Tech Fair” is an orientation for incoming freshman that provides instruction and guidance for the students on specific aspects of interactive technology. At this orientation, every student is given a MacBook Pro computer on which they set up an ePortfolio site. The Instructional Technology Fellows who lead this orientation discuss the basic functionalities of these technologies and introduce the benefits of using the WordPress platform.
event and had completed the first mandatory seminar prior to taking this survey. Exposure to the ePortfolio system before taking the survey provides a frame of reference for the survey questions that ask students about their engagement with blogging technology. Therefore, an introductory level familiarity with the platform and terminology used to describe the technology can be safely assumed.

After the first three demographic questions regarding the participants’ age, primary language, and high school, the next two focused on their use of social media sites. In *It’s complicated: the social lives of networked teens*, danah boyd defines social media as “the sites and services that emerged during the early 2000s, including social network sites, video sharing sites, blogging and microblogging platforms, and related tools that allow participants to create and share their own content” (6). This study is focused specifically on social media sites that are communication platforms dependent on peer-to-peer interaction. Both Questions 4 and 5 were asked to establish whether students have experience communicating in digital spaces prior to entering college. (See figs. 4.1 and 4.2) Since social media sites were the most popular digital spaces used by American teens in the 2000s, the survey focused on such platforms (boyd; Donovan; Turkle). According to danah boyd “although teens have embraced countless tools for communicating with one another, their widespread engagement with social media introduction has been unprecedented” (7-8). In order to capture as many sites as possible, not just those that the student may remember and could name on their own, this survey provided a list of the most popular social media platforms to participants. The sites referenced in the survey were the top ranked websites, based on traffic and total users, at the time of the study, as determined by web
traffic analysis done by Alexa.com and the Pew Research Center\(^{30}\) Question 4, worded exactly as it appeared to participating students as follows:

Prior to entering Macaulay Honors College, which of the following sites did you visit on a regular basis? Select all that apply.

a. Facebook  
b. Myspace  
c. Twitter  
d. Tumblr  
e. Google +  
f. Formspring  
g. Xenga  
h. Reddit  
i. Other

1. Please give URL

Fig. 4.1. Question 4 of the survey distributed to Macaulay freshmen.

Fig. 4.2. The results, in both histogram and frequency table, of Question 4 of the survey distributed to Macaulay freshmen.

Findings from the answers to Question 4 show that 90% of incoming freshman who participated in this survey have social media accounts, although roughly a quarter of participants did not respond to this question. This percentage confirms my assumption, based upon the work done by boyd and the CUNY specific research conducted by Smale and Relgaldo, that Macaulay students used the Internet to communicate in a digital space prior to entering college. Writing on social media sites is composing for a public audience, whether students are conscious of the implications of that practice or not. Thus, if 90% of the survey respondents who answered this question used some kind of social media prior to entering the Macaulay Program, they are then familiar with composing in online public spaces. This matches statistics cited in the March 2016 article “Revisualizing Composition: How First-Year Writers Use Composing Technologies” that reports the results a survey of 1,366 students from seven colleges and universities that examined
the self-reported writing choices of students as they compose different kinds of texts using a wide range of composing technologies, both traditional (i.e., paper, pencils, pens, etc.) and digital (i.e., cell phones, wikis, blogs, etc.) (Moore et al.). The report found that: “[s]tudents regularly use a range of technologies when composing, but they—not surprisingly—use them for different purposes (5). As Kathleen Blake Yancey, past president of the National Council of Teachers of English, writes in “Writing in the 21st Century: A Report from NCTE”: 

With digital technology and, especially Web 2.0, it seems, writers are *everywhere* —on bulletin boards and in chat rooms and in emails and in text messages and on blogs responding to news reports and, indeed, reporting the news themselves as I-reporters. Such writing is what Deborah Brandt has called self-sponsored writing: a writing that belongs to the writer, not to an institution, with the result that people—students, senior citizens, employees, volunteers, family members, sensible and non-sensible people alike—want to compose and do—on the page and on the screen and on the network—to each other. Opportunities for composing abound—on MySpace and Facebook and Googledocs and multiple blogs and platforms—and on national media sites, where writers upload photos and descriptions, videos and personal accounts, where they are both recipients and creators of our news. (4-5)

Yancey claims that in the 21st century students are constantly writing and that the writing is composed in digital spaces, although the range of venues may be more limited than Yancey suggests. With respect to digital literacy, the high percentage of students who reported using social media sites indicates a need to educate students on the benefits and consequences of composing online because they may not be aware of concerns about privacy and data collection,
or the way that filter bubbles and search algorithms manipulate access to information. Writing on social media sites is composing for a public audience, whether students are conscious of the implications of that practice or not.

Yancey’s thesis is that educators can and should tap into this seeming desire to write and translate this writing experience into our classroom practices. In order to do that, educators need to find out where and how students are writing outside the classroom and find ways to transfer those skills into an academic context. The results of the Macaulay survey also indicate the dominance of a few social media sites, despite the variety of options. The majority of respondents in this survey indicate that they have a Facebook account; Facebook is a social media site (founded in 2004) available to anyone over the age of thirteen who agrees to the terms and conditions. A 2011 Pew Internet & American Life Project indicates 93% of social media users ages 12 to 17 have an account with the social network company Facebook (Madden et al.). The Facebook interface asks users to create a profile page and prompts users to share what they feel and how they are doing every time they log in. The interface also provides a “timeline” that filters and organizes posts for all the users one is “friends” with on the site. Facebook posts typically contain a combination of media including text, images, videos, and links to outside sources. As boyd writes,

Social media plays a crucial role in the lives of networked teens. Although the specific technologies change, they collectively provide teens with a space to hangout and connect with friends. Teens’ mediated interactions sometimes complement or supplement their face-to-face encounters… It used to be the mall, but for the youth discussed in this book, social network sites like Facebook, Twitter, and Instagram are the cool places. (5)
The results of Question 4 in the survey indicated that Instagram is the second most popular social media platform among Macaulay freshman, followed by Tumblr.\textsuperscript{31} So in boyd’s terms, the “cool” places to be for Macaulay freshman in 2013-14 are Facebook, Instagram, and Tumblr. Both Instagram and Tumblr are image-driven platforms. Users of these sites typically share their original photographs and videos or “re-post” images shared by another user. The use of text on both of these sites is typically minimal, but the use of folksonomic elements such as tags is very common. Therefore, it is safe to assume students have a basic understanding of how and why tags are applied to digital content, which is crucial information for the textual analysis I present in Chapter 5. Further, the results indicate that the technological education Macaulay offers its students in composing in online open spaces using the ePortfolio system is building off of pre-existing exposure to and experience with not only text-based composition, but also other kinds of media, including audio, visual, and folksonomic elements like tags.

Question 5 probed deeper into social media use by Macaulay students. (See fig. 4.3)

\textsuperscript{31} Visualizations of this dominance, showing that only a few sites attracted most of the traffic on the Internet, were disseminated and discussed virally via social media, in the popular media, as well as in scholarship at the time (2013-15). Take for example this map made by Martin Vargic, an amateur cartographer and graphic design student in Slovakia, who based the design on old National Geographic maps and a version made by the popular web comic xkcd (http://xkcd.com/802/).
Based on your answer to the previous question, how often did you contribute content like posts, comments, responses, status updates, tweets, etc. on at least one these sites? Select one

- a. 1 or more times a day
- b. 1 or more times a week
- c. 1 or more times a month
- d. Occasionally throughout the year
- e. Other

1. Please explain…

Fig. 4.3. Question 5 of the survey distributed to Macaulay freshmen.

Since only three participants out of a total of 150 who took the Macaulay survey chose to respond to the question asking how frequently they posted content to social media, this research is inconclusive in regard to frequency, but the results show that students check their accounts frequently during the week. (See fig. 4.4.)

Based on your answer to the previous question, how often did you contribute content like posts, comments, responses, status updates, tweets, etc on at least one these sites? Select one.

![Frequency table](image)

<table>
<thead>
<tr>
<th>Choices</th>
<th>Absolute frequency</th>
<th>Relative frequency</th>
<th>Adjusted relative frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roughly once a day</td>
<td>1</td>
<td>0.97%</td>
<td>33.33%</td>
</tr>
<tr>
<td>1 or more times a week</td>
<td>2</td>
<td>1.94%</td>
<td>66.67%</td>
</tr>
<tr>
<td>Sum:</td>
<td>3</td>
<td>2.91%</td>
<td>100%</td>
</tr>
<tr>
<td>Not answered:</td>
<td>100</td>
<td>97.09%</td>
<td>-</td>
</tr>
</tbody>
</table>

Total answered: 3

Fig. 4.4. Results, both in histogram and frequency table, of Question 5 of the survey distributed to Macaulay freshmen.
It could be that Macaulay students did not want to report how often they check social media, perhaps because of a social stigma or perceived judgment based on this information. Also, referring back to the Wormald’s claims that “most agree that among students, ‘writing’ continues to be defined as assignments they are required to do for school, as opposed to textual expression they engage in on their own time” (“Part II: How Much, and What, Do Today’s Middle and High School Students Write?”), it may be that students do not consider the skills they learn writing in social media spaces to be applicable in an academic setting, and therefore downplay their use of and exposure to these spaces. However, research on teenage social media use suggests most check and post to social media sites frequently throughout the day (boyd; Donovan; Buck). By design, surveys do not often afford the kind of detailed engagement that would provide specific and individual information on how the students navigate and apply their knowledge of social media. The survey of Macaulay students did not ask students to articulate the reasons for having social media accounts nor did it leave space for students to explain how they used the sites. In fact, at this time there is a dearth of academic studies into the way students use social media sites as locations of writing (see discussion in Chapter 2). Yet, these results suggests that Macaulay freshman communicate and receive information through the most popular social media sites, which limits the both the amount and the type of information they are exposed to on a regular basis. As boyd explains, “[p]eople choose what to spread online, but the technologies that they use to do so are created to increase the visibility of content that will attract the most attention. Many social media tools are designed to encourage people to consume streams or feeds of updates” (146). That flow of media is filtered within these proprietary ecologies by conglomerates that exploit the digital labor of users to sell information to advertisers and third parties (Donovan). These features of social media are important for students to understand
considering the frequency with which they use these platforms. Furthermore, students need to understand that these skills they use to create and interact with texts on social media can be transferred to academic and professional writing, particularly: the creation of multimodal texts, the use of folksonomic elements to organize information, and the ability to comment on texts publically in productive, constructive ways.

**Questions 6-8: Blogging and Personal Websites**

The survey of Macaulay students identifies which social media sites the students had accounts for and asked how frequently they used the sites as a springboard for the more in depth questions about their use of blogging platforms. The use of social media sites serves as an entrance point to questions that specifically addressed the use of blogging platforms and the level of literacy students had with blogging technology. The next set of survey questions introduced the concept of a blog and asked if students maintained a personal website. (See figs. 4.5, 4.6, and 4.7)

Prior to entering Macaulay Honors College, did you ever read blogs?

*Note: for this purpose a blog is a website with short posts which are regularly updated and listed in chronological order. Blogs are often narrative, and the can address a wide range of subject matters, for example politics, food, fashion, sports, etc.*

a. Y/N  
b. How frequently? Select one  
   1. 1 or more times a day  
   2. 1 or more times a week  
   3. 1 or more times a month  
   4. Occasionally throughout the year  
   5. Other  
      a. Please Explain

Fig. 4.5. Question 6 of survey distributed to Macaulay students.
Prior to entering Macaulay Honors College, did you read blogs? Note: for this purpose a blog is a website with short posts which are regularly updated and listed in reverse chronological order. Blogs are often narrative, and they can address a wide range of subject matters, such as politics, food, fashion, sports, etc.

Fig. 4.6. Results, both histogram and frequency table, of Question 6 in the survey distributed to Macaulay freshmen.

The survey results indicate that only a little over half of respondents read blogs, but the answers to question 8 indicate that those who did read blogs accessed them more than once a day, suggesting the importance of being plugged into the Internet’s information pipeline. (See fig. 4.7)
Fig. 4.7. Results, both histogram and frequency table, of Question 8 in the survey distributed to Macaulay freshmen.

These numbers could indicate confusion about what counts as a blog, but the description in the question includes a list of popular topics, and at the time the respondents participated in this survey, they would have already learned to use the Macaulay blogging platform. Therefore, it is likely these results indicate that while almost all of the respondents use a variety of social media sites, about half do not read blogs. As Hossein Derakhshan, former journalist and popular blogger, writes in “The Web We Have to Save” self-published in Medium (a popular blogging site in 2015), this could be because the way users interact with the web has changed significantly over the past ten years. Before the dawn of social networking sites like Facebook, Myspace, Twitter, and Instagram (owned by Facebook), the web was made up of blogs comprised of hyperlinks that connect to other blogs or new sites, which created a network of information. Derakhshan argues that post-social media revolution, information is now filtered through the
user’s social media feed, which privileges native content such as pictures, videos, and text because these sites do not want users to leave—via a link—to engage with another platform: “[t]he consequence is that web pages outside social media are dying”. Macaulay students may encounter information from a blog but do not recognize it because it has been filtered through social media as a pull quote, screenshot, or link posted to sites like Instagram, Pinterest, or Reddit. These social media sites provide the summary of relevant information from a source without needing to follow the link to the full story. Therefore, Macaulay students may not be familiar with the typical format of a blog, such as the layout, the interface, or the interactive elements included in these spaces. This could be one reason why so few students had their own websites and instead preferred to rely on social media sites for personal use.

In fact, the survey results show that less than 20% of students who responded had personal websites prior to entering college. Question 7 was intended to investigate whether or not students hosted their own personal sites either on a web-publishing platform or by building their own using HTML. (See fig. 4.8) At Macaulay, students are given the option to create their own personal sites, and those that do are encouraged to submit them to the ePortfolio Expo (see Chapter 6 for more information on the Expo). Considering that only nine students submitted sites in 2015, I wondered how many students had enough instruction and experience with website creation in order to do make creating their own ePortfolio site seem possible and compelling. Only thirteen of the seventy-eight respondents to Question 7 answered that they did have experience creating personal websites before entering Macaulay. (See figs. 4.8 and 4.9)
Prior to entering Macaulay, did you maintain a personal website?
   a. Y/N

If you did maintain a personal website, please select all that apply:
   b. I hosted this site using a blogging platform such as Wordpress.com, Blogger, Wix, tumblr, or another free or paid for service.
   c. I hosted this site on a private server.
   d. I (or someone on your behalf) purchased a domain name for this site.
   e. I designed the interface (either using the elements provided by the blogging platform such as selecting themes and color schemes, or using my knowledge of markup languages).
   f. I wrote a programming language to design this site.

If yes, please indicate which platforms you used:

Fig. 4.8. Question 7 of the survey distributed to Macaulay students.

![Histogram showing the distribution of responses to the question.]

<table>
<thead>
<tr>
<th>Items</th>
<th>Absolute frequency</th>
<th>Relative frequency</th>
<th>Adjusted relative frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>13</td>
<td>12.62%</td>
<td>16.67%</td>
</tr>
<tr>
<td>No</td>
<td>65</td>
<td>63.11%</td>
<td>83.33%</td>
</tr>
<tr>
<td>Sum</td>
<td>78</td>
<td>75.73%</td>
<td>100%</td>
</tr>
<tr>
<td>Not answered:</td>
<td>25</td>
<td>24.27%</td>
<td>-</td>
</tr>
<tr>
<td>Total answered:</td>
<td>78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 4.9. Results, both histogram and frequency table, of question the first part of Question 7 in the survey distributed to Macaulay freshmen.
Since there are many ways to maintain a personal website, Question 7 was followed by a prompt that asked respondents to clarify how they hosted their personal website. (See fig. 4.10) Note that the participant could select more than one option if applicable:

![Image of histogram and frequency table]

**Fig. 4.10.** Results, both histogram and frequency table, of the third part of Question 7 in the survey distributed to Macaulay freshmen.
The responses indicates that only a small number of students are familiar with using blogging platforms for personal use before entering Macaulay, and even fewer have hosted their own website. Only one respondent hosted a personal website on a private server; only one purchased a domain name; and only one wrote code using a programming language to develop the site. Of the thirteen respondents, twelve used a blogging platform, and in the comments provided the names of the following web services: Wordpress, Blogger, LiveJournal, Tumblr, and Fatcow. The first three are blogging platforms, all of which are similar to WordPress, the platform used by Macaulay; Tumblr is a microblogging site, and Fatcow is a web hosting and domain registrar. This indicates that only a very small portion of incoming students are likely to be familiar with a blogging platform similar to the one they are asked to use in their four required Honors seminars at Macaulay, despite any pre-college exposure NYC’s evolving technology requirements may have provided. Therefore, the conventions of blogging, including content creation and backend development, are new to the majority of Macaulay students. This data is supported by the results of the interviews (Chapter 6) that indicate students learn the basic skills needed to create their own ePortfolio sites through their formal coursework, not through experience gained before entering college. The combination of the survey results and the interviews with students supports an argument for comprehensive instruction on the use of WordPress across the Macaulay curriculum.

The next question delved further into the area of person websites. (See fig. 4.11)
Fig. 4.11. Question 8 of the survey distributed to Macaulay freshmen.

If you did you maintain a personal website, how frequently did you post to this site? Select one

- a. 1 or more times a day
- b. 1 or more times a week
- c. 1 or more times a month
- d. Occasionally throughout the year
- e. Other

1. Please explain…

Fig 4.12. Histogram and frequency table showing how frequently students post to their personal sites.

Despite the small pool of respondents, this survey indicated that at the time of entering college, freshman students at Macaulay most likely do not have experience building and maintaining a website. This is extremely important background when considering the interviews with the ePortfolio Expo winners (Chapter 6), each of whom won based on a personal site developed
during their four years in the program. Their sites, in conjunction with the results of Question 8 showing limited pre-college experience, demonstrate a substantial growth in digital literacy skills during a brief period of time for the students I interviewed.

**Questions 9-10: Blogging for Educational and Professional Purposes**

Aside from using social media and blogging platforms for personal use, this study is explicitly interested in how students use these resources in an educational context. The most popular social media platforms offer the opportunity to compose text in online public spaces but privilege visual—image and other types of media—forms of communication. This contrasts the findings of the Pew survey, which reveals that educators privilege text-based assignments in a classroom setting (see Chapter 3). The Pew report indicates that high school and middle school teachers rarely give students writing assignments that include multimedia and computer programming (Wormald). Subconsciously, this divide between the self-sponsored writing done on social media and the “formal” writing done in the context of a classroom may train students to view multimodal writing as specifically not academic. Yet students engage with digital texts via social media regularly, in most cases daily, as a source for gathering and spreading information. The Pew report reveal that teachers at the secondary level do not consider blogging to be “‘writing’ in the traditional sense,” but do see value in this practice as a form of pre-writing:

While most AP and NWP teachers in the focus groups said they do not consider texting, blogging, or micro-blogging (posting on social network sites) “writing” in the traditional sense, they believe these digital formats do spur thinking and encourage communication among their students, which may lead to deeper thinking and self-expression. Several teachers characterized these shorter online
posts as “pre-writing” that may get a student engaged in a topic or discourse enough to want to write a longer piece about it or explore it further. (Wormald)

According to these survey results as reported by Wormald, teachers do find value in digital forms of communication, even if they believe their students do not consider this to be “formal” writing. Wormald finds that “among students, ‘writing’ continues to be defined as assignments they are required to do for school, as opposed to textual expression they engage in on their own time.” This could indicate that when Macaulay students are asked to blog as a form of “formal” writing, they may not understand that this requires an adjustment in their writing mode in order to meet the expectations of the instructor.

Question 10 of the Macaulay Honors College survey asked students to report any previous experience blogging for educational purposes. (See fig. 4.13)

Previous to entering Macaulay, has a teacher, tutor, or educator asked you to write in an online space for educational purposes—such as on blogs, ePortfolios, discussion forums, chat rooms, or in an online space that had an educational focus?
   a. Y/N

Please describe the site you posted on (relevant information would include the URL, purpose, and sponsor of the site:

How frequently did you compose on this site? Select one
   1. 1 or more times a day
   2. 1 or more times a week
   3. 1 or more times a month
   4. Occasionally throughout the year
   5. Other
      a. Please explain…

Fig 4.13 Question 10 from the survey of Macaulay freshmen.
Unfortunately, only 78 students responded, but of those 78, 42 reported that they had not used blogging in a classroom setting. The survey found that 42% of respondents report that they used blogs for educational purposes prior to entering Macaulay. (See fig. 4.14)

Fig. 4.14. Results, both histogram and frequency table, of the first part of Question 10 of the survey distributed to Macaulay freshmen.

This is a high number when compared to the results of the Pew survey of teachers who report seldom assigning digital work, and could be due to the new NYC DOE recommendations to incorporate blogging and multimodal assignments into the 9-12th grade language arts curriculum. The second part of Question 10 asked respondents to elaborate on the frequency of online writing assignments in classes where teachers assigned them. Nine respondents reported using the site one or more times a week; 10 reported using the site one or more times a month; and 15 reported using the site occasionally throughout the year. (See fig. 4.15) Thus, it appears
that the integration of these online writing assignments were not sustained over a long period of time, but rather used briefly, perhaps for one specific assignment.

Fig. 4.15. Results, both histogram and frequency table, of the second part of Question 10 of the survey distributed to Macaulay freshmen.

Within the portion of Macaulay freshman who responded affirmatively to Question 10, their most engaged exposure to blogging was through their humanities-based classes in high school. For example, in response to a follow-up to this survey question, nine students commented that they posted reading responses to a site that their English or History professors created. This would suggest that Macaulay students are most comfortable writing in a digital space in their humanities-based courses, as opposed to those in the social or hard sciences. The potential differences in comfort level provides context for the textual analysis of discipline-specific student composition in Chapter 5 and my comparison of how students write across the disciplines on the ePortfolio sites.
Of those who responded to Question 10, a few students commented that these sites were hosted on platforms such as Edmoto, Blogspot, Moodle, and Blogger. One student noted that they created a Tumblr site for an English project, but this was the only instance of the student creating a site. The two outliers who reported using online spaces for science-based classes reported that their teachers utilized a Google + site as a discussion forum and a wikispace as a space to construct shared knowledge, respectively. Although interesting, the number of students who provided evidence of engagement in online writing for educational purposes is too small to indicate larger patterns—only 20 respondents wrote substantive comments. This leads to questions concerning disciplinary use of educational technology, particularly for writing-based assignments, such as blogging.

Moore et al.’s extensive study of the composition habits of 1,366 students from seven colleges and universities, just published by a team of composition and rhetoric scholars in *Computers in Composition*, reports that students seldom compose on blogs compared to other mediums—only 600 of 5714 cases reported—but when they do use blogs, it is for entertainment or personal use, not for educational use (6). The researchers then asked the students to break down their usage by genre, and of the 600 reported cases of using blogs, only 7% were composed for an “academic paper” and 6% for a “research paper” (6). The results of this study extends the findings of the Pew survey that focused on K-12 students rather than college students and reflects the findings of the Macaulay survey in which only 33 of 78 participants report using a blog for educational purposes.

Question 11, the final question in the survey, asked students to report their experience blogging for extracurricular purposes in order to discover if students used these platforms for purposes that were neither self-sponsored nor for formal educational purposes, a determination
that frames this study in informative ways. A very small percentage (9%) of the 78 students who responded to this question reported writing in an online space for a “job or internship, or writing for a special interest or community group—such as a religious organization, team, or political group.” Of the seven students who provided corresponding comments, two of them commented that they used blogging sites for their school newspapers; one used an online site for a school-sponsored science club; one wrote in an online space for a school-related internship; and two contributed to online communities related to their personal interests. (See fig. 4.16)

Fig. 4.16. Results, both histogram and frequency table, of Question 11 of the survey distributed to Macaulay freshmen.

Most of the comments regarding extracurricular blogging suggest that this engagement was voluntary, albeit infrequent. Surprisingly, if students did contribute to blogging sites, it seems that most did so for school-related purposes. This indicates that incoming Macaulay students
would be prepared to write in an online space in an academic context, but perhaps they would not be prepared to be evaluated on this writing as “formal” academic writing.

Conclusions

Overall, these results only represent a small subset of the Macaulay first-year students. An incoming class contains around 500 students, and only 150 responded to this survey. Furthermore, even fewer students answered all of the questions. Despite the small response rate, the survey does provide some insight into how prepared Macaulay students are to work within the ePortfolio system. Almost all of the students have experience writing in social media spaces, but based on the Pew survey results reported by Wormald, and the results of the text analysis in Chapter 5, it is reasonable to assume that the students do not feel the skills gained by creating texts for social media transfer to an academic context. A few have engaged with blogs as readers or through extracurricular activities, but not nearly enough to warrant belief in the “digital native” myth, which perpetuates the idea that students have an innate ability to consume or create information in digital spaces. Less than half of Macaulay respondents have been exposed to digital writing spaces in an educational context, and those that have used blogs in a classroom environment did so primarily in a humanities-based context where their instructor created the space they read from or contributed to. Most students do not report working specifically with WordPress as a platform.

Consequently, it is unclear if a typical student entering Macaulay as a freshman would have the basic skills needed to post to the ePortfolio site. Furthermore, students may have a difficult time understanding the weight of their digital writing contributions in an academic context. Wormald’s findings indicate that both students and teachers at the high school level do not consider blog posts to be “formal” writing, so Macaulay students may not be cognizant of how and why their posts contribute to their grades and are considered a part of their formal
academic writing process in these courses. Also, writing on social media spaces does not necessarily correspond to a deep understanding of the possibilities and consequences these spaces offer, therefore, before students are asked to engage in content creation for a public space, they need to be educated on how these materials are disseminated, viewed, and archived. They also need to be instructed on how to incorporate multimedia when creating posts for their course site, which must include issues of copyright, fair-use, and privacy. Chapter 5 focuses on text analysis of student posts and finds that students do not use multimedia in their low-stakes writing unless specifically asked to do so. Such a broad unwillingness to engage with multimedia across their writing is unexpected considering the results of this survey, which reveal the dominance of image-driven social media sites that students use regularly.

Finally, most of the students are unfamiliar with designing their own digital spaces, either through plug-and-play platforms or at the code level. As educators, we must recognize this steep divide if we are to help students learn to create their own digital materials. For example, in Seminar 2 students must design their own sites in groups, and all Macaulay students are encouraged to create personal sites using the ePortfolio system. This survey suggests that students do not enter Macaulay with the skills needed to accomplish these tasks. Formal instruction on how to create a site is essential to the success of Macaulay students. Lack of instruction could explain why so few students create individual sites, and why even fewer submit sites to the ePortfolio Expo, which will be explored further in Chapter 6.
Chapter 5

Mode and Media: Textual Analysis of Student Writing in Online Open Course Sites

Overview

This chapter investigates how students compose in the online, open space of the Macaulay ePortfolio course sites. All Macaulay Honors College students are required to take four general education seminars: “The Arts in New York City” (Seminar 1), “The People of New York City” (Seminar 2), “Science and Technology in New York City” (Seminar 3), and “The Future of New York City” (Seminar 4). Each of these seminars utilizes the ePortfolio platform in a different way, ideally matching the technology with the official objectives of that course designed by Macaulay and implemented by the instructors. Over the past decade, Macaulay has maintained an archive of over 3000 course sites created through the Macaulay seminars across all eight campuses affiliated with the program. From this archive, I selected eight sites created during the 2013-14 school year, two per seminar. The eight sites I chose to analyze originated in writing intensive courses and included both low-stakes and high stakes writing assignments as defined in chapters 2 and 3. In addition, I required assignment information provided by the instructor to be located on the course sites so I might consider two interrelated factors: first, whether the assignment was low or high stakes and second, as a linguistic point of comparison between the instructor’s directions and the student compositions. The goal of this process was to identify the mode of writing students engage in when composing for the course site, to determine if the students integrated multimedia into their posts, and to understand how students use folksonomic elements when composing in a digital space.

In order to accomplish this goal, I extracted low and high stakes writing samples from a randomized selection of students and coded each sample to indicate the writing mode,
multimedia usage, and folksonomic elements of digital composition. The coding schema breaks down these three elements into nuanced sub-categories that further enable any researcher to replicate this process for a similar data set (see Appendix 5). To code each text and create a database, I separated the writing samples based upon the following criteria: by course, then by student, and finally, by assignment indicating low-stakes or high stakes. I designated the textual elements of those samples as either extensive or reflexive based on my modified definitions of Emig’s original terms. This enabled me to compare how students write across the disciplines and across different kinds of assignments. Once I determined the mode of student writing—extensive or reflexive—I marked posts that contained multimodal elements then further distinguished multimodality by the type—video, image, or infographic—and indicated whether the students created the media themselves or imported it from an outside source. The posts were also coded for folksonomic elements divided into categories, tags, and comments, which enabled me to determine if the students applied key terms to their writing and if their instructor, classmates, or the larger community engaged in an asynchronous discussion about the posts. Evidence of both the inclusion of media and the use of folksonomic elements such as tagging and commenting help me detect whether students are transferring the digital literacies cultivated through the use of social media into their academic work. Coding for multimodal and folksonomic elements allows me to establish how students are utilizing the affordances of the digital space, and what digital literacies students develop by using the ePortfolio platform.

**Humanities Courses**

Of the four required seminars at Macaulay Honors College, Seminar 1: “The Arts in New York City” represents humanistic inquiry and is intended to provide students with a foundational knowledge in art, literature, music, and theater. Since the course takes place in in New York
City, Macaulay uses this opportunity to make Seminar 1 immersive, and the school has cultivated relationships with many cultural institutions that give discounted tickets or free admission to Macaulay students. Each class attends the “Night at the Museum” event at the Brooklyn Museum as well as an opera at the Metropolitan Opera House. In addition, every student has a “Cultural Passport” that acts as a student discount pass to many of the city’s museums. It is up to each instructor to plan additional immersion trips and to design a syllabus with a variety of readings and research assignments that augment the cultural experiences. The hope is that students will become life-long patrons of, and contributors to, the arts.

The official learning objectives of Seminar 1 according to Macaulay are the following:

1. Explain the role of the artists, the arts, and artistic institutions in the lives of New York’s diverse citizens and the city itself.

2. Identify the key features of the different artistic forms studied in the class.

3. Construct clearly written and well-reasoned analyses of these art forms for multiple audiences (e.g., reviews, arguments, summaries, personal responses, blogs, etc.).

4. Analyze artistic forms for their formal qualities.

5. Formulate their own individual aesthetic values after having studied the City’s wide range of artistic expressions. (Ugoretz, “Basic Information”)

Since professors of English, Art History, Theater, Fine Arts, and History across eight campuses teach this course, the objectives are broad guidelines meant to give instructors freedom to design their syllabi based on their expertise. However, the guidelines emphasize writing, observation, and analysis. Therefore, when gathering data to code for Seminar 1, I hypothesized that I would find a mix of reflexive and extensive writing as student blogs moved from reviews of cultural
experiences to the analysis of specific works of art. Further, I expected students to include a great deal of multimedia in their compositions, based on my personal experience of attending events with Macaulay students. As an ITF, I had attended three “Night at the Museum” events and knew that students were required to create audio and video clips mimicking the Smart History section of the Khan Academy project. ITFs teach students how to record conversations, use their own photos or find fair use photos of the exhibits they attend, and combine the two into informative projects. Consequently, I knew that students had mobile devices with them when they took field trips and therefore could easily have included pictures and videos in their posts on these events.

As an initial test of these hypotheses, I uploaded the text from posts composed by a class of eighteen students in one Seminar 1 taught by Sondra Perl into a program called Gephi, which visualizes the text. I chose the term “art” as the center point of the visualization—based on the title of the course and the official course objectives that focus on this term—to see what words students used in relation to this central term. (See fig 5.1)
Fig 5.1. A Data Visualization of Student Writing Produced in the Arts in New York City Seminar.

This visualization displays the result of my topic modeling experiment. The cloud contains words that appear in proximity to the word Art in the students’ posts. The nodes beneath the words are colored according to proximity with other words; the size of the word represents how many times it appears in the student posts; and the thickness of the line denotes the strength of the connection between the node and the central word. The cloud surrounding the word “art” shows that students are writing experientially about art because of the dominance of active, operational verbs such as “walking,” “watching,” and “sharing.” The prominence of these verbs, as well as words such as “experience,” “public,” and “identity,” indicates that students are
writing in the reflexive mode about the art they have encountered because such words connote observation and reflection.

While the word cloud provides valuable information about student compositions, the visualization of one assignment for one course produces an overwhelming amount of data. Consequently, I needed to limit and define a smaller subset of the 3000 course sites in Macaulay’s archive to produce a manageable dataset to code. I choose two Seminar 1 course sites produced during Fall 2013 to correlate with the year I administered the surveys (Chapter 4). I then asked my fellow ITFs to recommend writing intensive courses that incorporated low and high stakes assignments. From six finalists, I identified two that were public, featured the language of the assignment provided by the instructor or ITF, and contained multiple posts from each student over the course of the semester. I used the same process to select the other three seminars as well.

As explained in Chapter 3, I built a spreadsheet to sort and code the student compositions contained in each site. As a content management platform, Wordpress separates data into categories already, including: ID, content post, categories, tags, and comments. However, for a database this large, it was almost impossible to extract only the columns of information I needed for this study from the Wordpress platform. Therefore, I created a separate spreadsheet to sift through the course content according to the goals of this research project. The spreadsheet I constructed broke the content down by course, student, and assignment, and then provided coding columns for each assignment post. These columns correspond to my research questions but are designed to be reusable by any researcher interested in this work. (See Appendix 6) The first column of the database identifies the mode of writing—reflexive or extensive—and each column provides the answer to a true/false question that asks: (1) whether the post contains
multimedia created by the student or found externally, (2) if the student has used folksonomic elements such as categories or tags, and (3) whether the post contains comments from the instructor or the community. I then tallied the results from these columns to deliver an overview of all the posts I collected and coded, a process that shed valuable light on the complexities of each course and the student compositions produced in it.

To code the type of assignment, I randomly selected six out of a possible twenty-two students from each seminar and then examined a low and high stakes assignment from each course site. For each seminar, I chose a low stakes assignment that was worth 20% or less of the course total and was completed early in the semester and a high stakes assignment worth more than 20% and ideally part of the final course project. This allowed me to compare the growth of digital literacy skills over the course of a semester. The analysis illuminated the structure of the course sites, the kind of events students attended, the role of the ITF and instructor, and the class’s community engagement. Had I extracted the content from the WordPress database without examining the context of each site, I would not have gained this insight because the language of the assignment, the resources provided by the ITF and instructor, and the nature of the engagement that produced the post all factored into my understanding of the composition and is not provided by the WordPress database.

Professor Esther Allen’s Seminar 1 course site from Fall 2013, taught at Baruch College, asked students to compose blog posts based on nine prompts that mostly emphasized cultural immersion experiences. The ITFs gave students instructions on how to categorize those posts, which ensured that each composition was posted to the correct section of the site and created a useful drop down menu of the post categories. (See fig. 5.2)
The drop down menu contains all the categories used to sort the student posts by assignment, making the site easier to navigate, and showing the students how adding categories can translate into a more intuitive user experience. Even though these categories were most likely supplied by the ITF or instructor, understanding how these keywords affect the information architecture of the site is an important digital literacy skill. The final project, a high stakes assignment, for this course included an in-class presentation that was not captured on the site, but the materials for the final project were posted by individual students.

The second Seminar 1 site coded for this study is similar in structure. In “Arts in New York City” taught by Dr. Joseph Ugortez at Brooklyn College, students posted reflections on field trips taken together as a class and individually. These posts are also arranged by category, and content can be searched by content category or by author through the right side menu. (See fig. 5.3)
In this section of Seminar 1, students created final projects in groups, and all of them were short videos that were posted to the course site under the category “final projects.” Therefore, in both sections I had a range of low stakes material to choose from and at least one high stakes assignment for each student who completed the course.

**Mode**

I coded each of the posts collected from the course sites as either reflexive or extensive as determined by my updated version of Janet Emig’s definitions, which I explained in chapter 3. The reflexive mode is personal, introspective, and experiential. The extensive mode is analytical, objective, and informative. This system of coding enables me to compare the modes in which students write in the digital space across assignments within one course, across different sections of the same course, and across the disciplines.
Low Stakes Assignments

For the first sample of student work from Professor Esther Allen’s Seminar 1, I choose the first low stakes post filed under the category “Transcultural Moment.” The language of the assignment states:

Blog posts: 20%. Each of you will write a minimum of eight 600-800 word blog posts over the course of the semester on topics assigned by the professor, as well as other topics of your own choosing. MHC issues you a Cultural Passport that offers free or reduced admission to a number of museums and other cultural centers, and there is always a wealth of free cultural activities across the city each week listed in the New York Times and Time Out. Your blog posts will describe, analyze, contextualize and evaluate the art, performances and readings you seek out and experience. (“Assignments”)

Although the rhetoric in this assignment suggests students could write in either the reflexive—“describe” and “experience”—or the extensive—“analyze” and “evaluate”—individual prompts led students to default to the reflexive mode. All of the posts under “Transcultural Experience” used the first person singular to describe a moment in the student’s personal history and reflect on that based on the class discussions and readings on the topic. All six posts coded under this assignment prompt were written in the reflexive mode. Most were very personal, describing familial relationships, cultural traditions, and emotional reactions to periods of acclimation. For example, this excerpt demonstrates the type of reflexive writing composed in response to this assignment:

My birth was a transcultural moment and every moment that has followed has been a blend of cultures. My mother is an Ashkenazi Jew from Long Island and
my father is Puerto Rican from the South Bronx. My whole life the mixings of
cultures seemed normal to me. I was raised on rice and beans and matzo ball
soup. The sounds of my father’s Spanish and my mother’s Yiddish accent mixed
together in my head like music. It was not until I got older that I began to see the
how people of different cultures separate themselves from each other, and when
cultures combine it is a special moment. (“Transcultural Experience”)32

This post is deeply personal, reflective, and experiential: all the hallmarks of reflexive writing. Posts like these help to form a community within the class by creating bonds and connections between students. Through this form of personal writing, students encounter diversity at a personal level that can make abstract concepts concrete. Asking student to reflect on course content through personal experience in a public forum concretizes the theoretical concepts introduced by the professor or through course readings—in this case a “transcultural moment”—through a variety of perspectives.

Similarly, the low-stakes posts collected and coded from the section taught by Dr. Joseph Ugoretz were also written in the reflexive mode. For this course, I choose to code posts from an excursion trip to the 9/11 and Vietnam Memorials in New York City because it was an assignment given early in the semester—all of the posts in this category were published in late October or early November of 2013—as part of a collection of posts on field trips taken together as a class. Like the posts on Professor Allen’s site, the student responses were emotionally charged and opinionated. In fact, 18 of the 24 total posts in the humanities course coded for this study were written in the reflective, rather than the extensive, mode. The low-stakes posts on both

32 The text of all posts is presented without alteration. Any errors are intentionally included, as Peter Elbow’s argument that student writing is just as critically valid as any academic writing and should be approached from a respectful place is a foundation of this dissertation’s approach to student compositions (see chapter 6 for full discussion of Elbow’s work).
sites read as if the students were writing a personal letter or an entry in a journal rather than an assignment for class. In one post, the student connects a previous experience visiting the Memorial in high school with the class trip for her Seminar I at Macaulay, noting the emotionally similar response she felt:

When I went to visit the 9/11 Memorial last year with my senior class, we were each assigned the name of a victim to research so that we could all feel more personally connected to our surroundings. One by one, we all read several short lines for each victim that will forever be the legacy of those who perished in the brutal terrorist attack a few short years ago. The memorial’s vastness made me feel tiny and helpless in comparison. The rushing water drowned out my senses and all I could hear was static all around me. I remember feeling upset, confused, and overwhelmed. Contrary to what I was expecting, I felt similar emotions when we visited the Vietnam Memorial last Thursday. Having no personal connection to Vietnam whatsoever, I thought all we would be seeing were some gruesome pictures and memorabilia from the war. I thought wrong. (“The Memorials”)

The language is not typical of a formal, graded, academic assignment where the student objectively analyzes the architecture or cultural significance of the 9/11 and Vietnam Memorials. Instead, her language conveys her personal observations and initial reactions, both of which are hallmarks of the reflexive mode of writing. Furthermore, by focusing on a collective experience, students can appreciate the difference each brings to a physical and emotional encounter with history, art, and architecture, thereby satisfying one of the course objectives expressed by the Macaulay guidelines.
In the survey (Chapter 4) I administered to Macaulay students, the majority of those who reported using a blogging site for academic purposes did so in humanities-based classes. The reflexive mode demonstrated in the posts written in both Allen and Ugoretz’s seminars could be due to their previous experience posting content in their high school English and History courses. However, results of the Pew Research Report “Part II: How Much, and What, Do Today’s Middle and High School Students Write?” found that both students and teachers had difficulty seeing blog posts as academic writing, and therefore, despite the fact that students are informed that these posts are evaluated as part of their grade, they may not understand that online composition is a form of academic engagement. Since the assignments posted to the course sites provide only minimal or no explicit instruction on the formality of these low-stakes assignments, the students may default to the kind of rhetoric they use on social media. Or the students could simply find it easier to speak from personal experience and convey an emotional reaction since more subjective writing can be more difficult to grade. However, the students participating in the honors seminars arrive at Macaulay with high test scores and excellent academic preparation; consequently, I find it unlikely that they are avoiding formal academic engagement by writing in the reflexive mode. My experience working as an ITF with seminar students taught me that honors students are, in fact, more comfortable with formal, impersonal writing that follows strict guidelines if they know the writing will be evaluated. Therefore, this type of personal, reflective engagement with the subject on a public forum that will be read by their classmates and their instructor is a form of risk-taking, typically reserved for private writing spaces and unshared or unevaluated pre-writing activities.

*High Stakes Assignments*
The high-stakes assignments for both of Allen and Ugoretz’s Seminar 1 courses primarily used non-textual media. Posts contained videos, images, and sound, but very little text. In both courses, the final, high stakes assignment included an in-class presentation that was not captured on the site, which made it difficult to code the writing mode of the students’ compositions. A number of the posts produced to satisfy the “Final Presentation” assignment in Professor Allen’s course contained a brief description of the project, all of which were all written in the extensive mode. The students’ posts focused on framing their projects and showcasing their conclusions. Written in a formal, academic tone, the descriptions were clearly aimed at an external audience. Many posts also incorporate research from outside sources. For example, one student’s final presentation post integrates outside research to define terms and support analysis of the audio clips presented in the post. This student writes:

The most fundamental of the seven main maqāmat is Rast. Maqām Rast maintains a constant pace throughout and rarely makes dramatic changes in pitch like some of the other maqāmat. Although it may not have a distinctive quality to it, maqām Rast gives off feelings of pride, proudness, and power (Touma). The very word “Rast” is seen as being similar to the Hebrew word “Rosh” which means “head” or “beginning.” It is believed that this is the reason why Rast is used whenever a new weekly Torah book is to begin that week (Blanco). (“Final Presentation”)

This post has all the hallmarks of the extensive mode: it is informative, analytical, and directed toward an external audience. Aside from presenting his research, the student utilizes written text to explicate the significance of the audio clips he has included and to provide an interpretation for his audience. In doing so, the student demonstrates the ability to compose in a formal writing style while effectively incorporating media.
In other final presentations, students in Professor Allen’s Seminar 1 demonstrate their use of the extensive mode orally through video or audio clips posted on the course site. Additionally, Professor Allen remarked on the student presentations in the comment section, which provided information about the level of research and professionalism delivered during the in-class presentation. I considered these materials when I determined which posts were extensive and which were reflexive. All of the high stakes posts in Professor Allen’s course were written in the extensive mode except two: one that contained mostly images and another that I could not code because of a broken video link. Arriving at Macaulay with greater academic preparation and knowledge than the average CUNY student, including past experience with blogging for academic purposes, the honors students in Professor Allen’s Seminar 1 strove to meet the more formal and analytical standards of scholarly writing by composing in the extensive mode in response to a high stakes assignment that would greatly affect their final grade.

In the other section of Seminar 1 taught by Dr. Joseph Ugoretz, all of the final projects were videos produced by more than one student in groups. After listening to each video, I coded the content as reflexive or extensive based on the discourse used by the students in the videos. In contrast to Professor Allen’s course, all of the final projects coded for this section were presented in the reflexive mode. Students shared their opinions and debated verbally in these videos. They based a large majority of their claims on personal experience, although they occasionally mentioned resources from the course content to support their opinions. The video posts did analyze the works presented, but in the superficial, surface-level manner of a novice observer, not of a well-researched expert. Because Seminar 1 is an introductory level course, in which the official course objectives emphasize how students relate to and experience art, this final project and level of discourse is appropriate. Students consider the role of the art and artist, identify key
features of artistic production, and evaluate the ascetic value of cultural objects in these videos. As a researcher, I expected the final projects to be composed in the extensive mode because it is characterized as being more analytical and informative, which is typical of a final research project. Yet, these reflexive videos do meet the requirements of the course by allowing student to use close observation and conversation with their peers to formulate their own opinions. One explanation for the divergence from both my expectations and my experience coding the final assignments produced in Professor Allen’s course is the medium’s influence on student work. It is possible that because the students, working in groups, created videos and not text, they adopted a more reflexive tone to mimic what they perceived as a more informal assignment and working environment. However, a similar assignment coded for Dr. Kelly O’Donnell’s science-based Seminar 3 course also required students to produce group videos, which were all executed in the extensive mode. Therefore, the reflexive tone used by the students in Dr. Ugoretz’s Seminar 1 is likely a result of the instructor’s encouragement and expectations of this humanities-based course.

Overall, 18 of the 24 posts I analyzed were composed in the reflexive mode, and I coded only 4 as extensive. The question remains if this tendency toward reflexive writing is shaped by the medium or the course content. The “Arts in New York City” Seminar certainly focuses on observation and reflection, but the course objectives also highlight analysis. Both Allen and Ugoretz emphasize analysis in their syllabi and assignment descriptions, yet the results show less “well-reasoned analyses” and more personal insights based on experiential knowledge. This discrepancy could be the result of the way the medium influences the analytical nature of student composition: paper versus a Microsoft Word document versus videos. The academic discipline, whether students are working in a humanities or science class, may also have some effect on the
mode of student composition. Finally, the language of the assignment itself and the instructor’s explanation of it can be one element of the calculus students use to determine whether they need to adopt a formal, academic tone—the extensive mode—or a personal, experiential tone—the reflexive mode.

**Media**

The process of coding for the inclusion of various media and folksonomic elements reveals whether the students use the affordances of the digital space when completing their course work or not. By coding for the use of media, categories, tags, and comments, I am seeking to learn more about the digital literacy practice at work through the use of the ePortfolio platform, or as Daer and Potts write in 2014, “literacy practices that are embedded in contexts of use” (25). Choosing a post from early in the semester and comparing it to the final assignment from each student gave me the opportunity to note any development or growth in the student’s digital literacy practice over the course of the semester and to compare the use of media and folksonomic elements across low and high stakes assignment. Most of the low stakes posts did not contain multimedia, and very few included tags or comments; however, all of the posts included categories. The use of categories is likely due to instructions from the ITF to ensure the posts were accessible in the menus and findable on the backend of the site for purposes of evaluation, but I am surprised by the lack of tags, media, and comments. Students consistently used more media in their final projects than in their low stakes posts, but again the higher rate of use excludes tags and comments. This could be due to a lack of time or effort put into assignments that carried less weight and were due more frequently, but adding media does not require advanced WordPress skills. Furthermore, I would not characterize the low stakes posts as lacking effort. Many are very thoughtful and well written. Additionally, the students should be
familiar with tagging and commenting from their participation in social media. This leads me to conclude that most students do not engage with the media and folksonomic aspects of the platform unless specifically required to add multimedia, tags, or comments by the instructor, even if they have the skills to do so. Building off the definition of a “literacy practice” (Graff; Daer and Potts), which is based on the student’s ability to read contextual cues, like the medium and audience, to determine when to use specific writing conventions, students are not applying their digital literacy skills fully in their posts on this platform.

**Low Stakes Assignments**

Neither of the low-stakes assignments in either section of Seminar 1 coded for this study contained language that specifically requested the use of multimedia. However, ITFs instructed the students on how to create and integrate media into posts during the mandatory first common event. The ability to create and upload media such as images and videos is also a skill student should be familiar with though their use of social media sites like Facebook, Instagram, and Snapchat. Findings from the response to question 4 in the survey administered to Macaulay students as part of this dissertation (chapter 4) show that 90% of incoming freshman have social media accounts, and sharing media is a common practice across social media platforms. Even though the vast majority of students who participate in Seminar 1 know how to share media because of their personal social media participation and are further taught how to use multimedia in an academic setting by their ITFs, students’ low stakes posts do not indicate the transfer of these digital literacies related to media; only five posts included multimedia like images, videos, or links or the use of folksonomic elements like tags and comments. (See fig. 5.4)
Fig. 5.4 Summary of Totals from the Coding Spreadsheet Showing How Often Students Use Multimedia and Folksonomic Elements in their Compositions.

The spreadsheet shows that only three of the low stakes posts across both Allen’s and Ugoretz’s courses contained student-created images, and only one included an external image; further, only one post contained a video. This surprised me because these low stakes posts are about the students’ personal experiences in New York City. This presents the perfect opportunity to add images or videos taken at these locations. It is likely most of them did take photographs and videos using their mobile devices during these trips, as they were encouraged to do at the required “Night at the Museum” and “Snapshot Day” events. Yet, if they did capture photos or videos on these class excursions, they not include this media in their posts on the course site. In Professor Allen’s class, the lack of media in the low stakes posts may be explained by the corresponding “Scrapbook” assignment that asked students to collect their pictures under that category, but no equivalent reason exists for the course taught by Dr. Ugoretz. The “Scrapbook” section of the site appears to be a place for students to collect media from their journey through the seminar, but if this discourages the integration of media and text then I question the pedagogical efficacy of this approach. Similarly, none of the posts contained tags, despite the fact that students should be familiar with the practice of tagging through the prevalence of this convention on social media. The sites would be easier to search, and it would be easier to
identify recurring themes in their posts if they would have utilized this feature of the WordPress platform. While, I do not have direct evidence to prove that this specific group of students is familiar with using tags on social media, since tagging is not required to use social media sites, anyone familiar with Instagram, Twitter, Tumblr, and Facebook can attest to the overwhelming frequency of tagging on these sites.

While many posts did not utilize categories, nine out of the twelve low-stakes assignments did, which were most likely provided by their ITFs or instructors in order to structure the site content. Typically, the ITFs and instructors collaborate to decide how the site should be organized before the course begins and then to designate what categories each assignment should fall under. Ideally, the way to use the features of WordPress in order to build intuitive information architecture is explained to students. Otherwise, it is not obvious to students that categories can be menu items and that these decisions are deliberate and have a significant impact on the user experience of a WordPress site. In the interview portion of this research study, the participants expressed that they did not know how categories functioned within WordPress when creating their own sites, so the prevalence of categories on the Seminar 1 posts may not be evidence that students understand why they are using categories in their coursework.

Additionally, WordPress themes often default to include comments sections, which need to be turned off manually if the creator prefers not to have a commenting space. Both of the Seminar 1 course sites contained commenting functions on all posts, yet none of the posts included comments by the community of students or outside readers, and only two included responses from the instructors. These commenting spaces provide an opportunity for students to respond to each other asynchronously, continuing discussions outside of structured instructional time, and extend the possibility for outside readers to join the conversation as well. Arguably, commenting
features constitute one of the primary goals of prompting students to write in a public, open online space: the ability to share, read, and comment on each other’s work outside of class time. Without that interaction—and the inclusion of media and tags—the students might as well write individual papers turned into the professor alone. Like tagging and including multimedia, commenting is also a digital literacy that can be cultivated through the use of social media; the practice of commenting or responding to a post is a common occurrence across all social media platforms. In fact, the comments section on social media can be a contested and volatile space that is abused by participants, and teaching students how to comment productively through course work could lead to more thoughtful, constructive digital citizenship. In order to increase the use of commenting on the course sites, I would suggest instructors and ITFs model this practice by commenting on posts, and then require students to comment on a set number of posts as well. Interaction is a key objective in integrating the blogging platform into the Macaulay curriculum. The students interviewed in chapter 6 of this dissertation all stated that community engagement was a goal of their ePortfolio projects. They perceived engagement with the site by an outside audience as pivotal to the success of their projects. It would strengthen the students’ ability to create dynamic, engaging sites to practice these skills throughout their course work at Macaulay.

High Stakes Assignments

The requirement to use multimedia in the high stakes assignments was explicit in the language of both course sites. Allen titled the end of semester assignment, “final multimedia research project” and Ugoretz had students build off the initial Smart History project from the “Night at the Museum” event to create videos that combined audio and visuals to highlight student conversations about an artistic object. In the posts composed for high stakes assignments,
eight contain student images, ten contain external images, five include student videos, seven include external videos, seven integrate student audio, and seven include external audio. This marks a significant shift from the low stakes post, which indicates that the language of the assignment has a meaningful impact on student work. The posts from Professor Allen’s class also demonstrate the use of a wide variety of media when no specific tools were required, whereas all of the high stakes assignments from Dr. Ugoretz’s seminar contained videos. It is worthwhile to note that these videos all contained multiple mediums, such as images, music clips, voiceovers, as well as showcasing video editing techniques. That the student-produced videos include many different types of media means the students are applying the skills learned in the common events to their coursework. Furthermore, four of these posts included tags, six had instructor comments, and one had a comment from a classmate. While only a minor shift, over the course of the semester the students and instructor increasingly utilized the functions of this particular platform. The final projects on both sites showcased products that fit the medium; the final projects are multimodal, interactive, and cumulative.

Science Courses

Macaulay Honors College general curriculum also requires students to take a science-based seminar in the fall of their sophomore year. “Science and Technology in New York City” is designed to train students in the basic skills of scientific observation and analysis, with an added emphasis on the use of interactive technology. The official objectives of this course are:

1. To improve critical thinking, reading and writing skills (through class discussions and writing assignments).

2. To observe and engage in informal science learning experiences in order to learn more about self and others as science learners.
3. To use multiple valid sources in gathering and interpreting scientific information.
4. To develop scientific research and communication skills.
5. To encourage respect for and appreciation of intellectual, cultural and scientific diversity. (Adams, “Course Objectives”)

Although these courses are taught by faculty with different academic specializations at different CUNY campuses, the seminars all fall within the realm of the hard sciences and technology; there are two requirements all Seminar 3 courses must include: the BioBlitz event and the final conference presentations. Just as the “Night at the Museum” event the kicks-off Seminar 1, all sophomores begin the fall semester collecting data at the BioBlitz. This event occurs at a city park that rotates based on availability, and at that location, event leaders divide students into groups based on species type. Each group collects data about their given species of plant, animal, or insect with an expert in the field as their guide. This data is then given to the park and city to update their records and is integrated into Seminar 3 courses as real data for the students to analyze and utilize in their class projects. Students and official audiovisual professionals employed by Macaulay also collect images, videos, and other interactive media at the BioBlitz.

All Seminar 3 students are expected to present their final projects at a Macaulay-wide conference organized to showcase the work of students across all eight campuses in a two day long common event. In prior years, all student presentations took the form of poster sessions, but this requirement was expanded to include interactive presentations of various types to match the growing prominence of multimedia at professional conferences in the sciences in 2013.

Mode

Considering the data-driven start to Seminar 3, and the traditional style of professional science publications, I expected the work done on these course sites to be composed in the
extensive mode. However, even more than the Seminar 1 course objectives, the guidelines for Seminar 3 stress informal self-discovery, which suggests the reflexive mode. Therefore, the coding process helped remove my disciplinary bias to judge the writing based on the indicators established through the definitions of extensive and reflexive writing.

Low Stakes Assignments

The first set of compositions coded for Seminar 3 were collected from Dr. Kelly O’Donnell’s “Science Forward 2014” offered in Fall 2014 at the Macaulay campus. This robust course site included a number of web-based assignments with extensive assignment descriptions, which proved particularly helpful as I determined which posts to code. One of the low stakes assignments worth 10% of the overall grade in this course required students to select peer-reviewed scientific journal articles to summarize and report on in 400-500 word posts. The assignment did not, however, require the use of multimedia. These posts were aggregated into the “Science Forward Times,” a section of the course site that was published using the online newspaper theme in WordPress. (See fig. 5.5)
Fig. 5.5. The *Science Forward Times* from Dr. O’Donnell’s Seminar 3 Course Site.

The technical effects of this newspaper were most likely achieved by the two ITFs assigned to this ambitious course, in collaboration with the professor. This particular section of this course was designed as a pilot for future Seminar 3 courses after Macaulay changed the course description in spring 2013. Based on the coding of six entries, I determined that the content for this assignment was composed entirely in the extensive mode using a journalistic style appropriate for the prompt. For example, the language a student used to respond to the assignment’s requirements summarizes the main ideas of the article she read and cites the appropriate sources:
One of the main flavor-stimulating ingredients in many cuisines is salt, especially in fast foods. Salt makes our foods taste great and is in our daily diet. About thirty percent of the people in the United States suffer from hypertension, high blood pressure, and it is also nicknamed the most prevalent chronic disease in the world. Many of the past researches tied the string between salt and the rise of blood pressure; however, a recent study conducted by Graudal, Graudal, and Jürgens claims otherwise. The recent research shows that the amount sodium intake has no correlation to higher blood pressure in many of us and either high or low sodium diet will not affect patients with hypertension at all. (“Sodium Has No Effects on Blood Pressure”)

The low stakes post this student composed reported on the content of the article critically with the intention of reaching an external audience. The academic approach, a fundamental element of extensive writing, was common throughout the low stakes posts composed in O’Donnell’s Seminar 3. Unlike the low stakes assignments coded for Seminar 1, these posts do not use the first person perspective nor do they rely on observation or emotional reactions. Although the posts may include experiential knowledge—such as the acknowledgement of the prevalence of salt in our diets—the majority of the content summarizes the source material. This course is an outlier; most of the low stakes content coded for this study, in both the humanities and the sciences, was written in the reflexive mode, a fact that undermines the assumption (see chapter 2) that students write reflexively in short blog posts because the medium shapes their engagement with the writing space.
The low stakes assignment prompt in the section taught by Jennifer Adams implicitly suggests students write reflexively, hewing more closely to the standard mode of student composition in low stakes assignments:

It is also important that you bring your perspectives about the readings to bear in the reflections and course discussions. It is equally important to discuss your science learning and participation and reflections on those experiences. Remember the primary goal: to improve your critical reading, thinking, research, and writing skills and the secondary goal to learn more about yourself and others as science learners. (“Welcome”)

In this assignment students were asked to reflect on a specific reading provided by the instructor each week. The attention on reflection and community building leads me to expect that the responses would be in composed in the reflexive mode. In fact, through the coding process I found that all six samples were written in the reflexive mode, which differs from the low stakes posts produced in O’Donnell’s section of Seminar 3. For instance, writing in response to Jennifer Adam’s prompt, the student focuses on the article they reviewed through the lens of personal experience:

In "The 95 Percent Solution", John H. Falk and Lynn D. Dierking point out that knowledge and learning is not limited to only the classroom. They believe that "School is not where most Americans learn most of their science" (486). The authors think that free-choice science learning through external resources such as parks, libraries, or museums exposes students to a stronger learning experience. I completely agree with what the authors had to say in the article. Science should be learned through doing, not just reading and sitting in a classroom. As I child, I
believed that if I crammed, memorized, and studied different scientific topics that I would truly grasp them. I learned that through that method, I would forget all the topics I learned within a few months. Exposing myself to a more practical method of learning that was more hands on allowed me to form a stronger long term memory of each topic. (“The 95 Percent Solution Reflection”)

Although this student directly engages, and quotes from, the source material just as students did while composing posts for O’Donnell’s section of Seminar 3, this posts relies on experiential knowledge not research. The posts coded for the section of Seminar 3 taught by Adams are far more personal in nature and typical of the reflexive writing mode. This indicates that the wording of the assignment prompt impacts the results despite potential perceptions about disciplinary tradition or how much an assignment will affect the final course grade.

*High Stakes Assignments*

In O’Donnell’s Seminar 3 course, the final project, a group presentation, consisted of many smaller, scaffolded projects leading up to the common event. As I was unable to code these group presentations, I focused on the “Video Essay” as the next best option for me to code a high stakes assignment. This assignment was the precursor to the final presentation made by the same groups on the same topic. According to the assignment sheet, “the goal is to produce a 2-3 minute video presenting scientific concepts for a public audience.” Therefore, I again expected that the videos would be composed using the extensive mode. Indeed, that expectation was met; all of the videos I coded for this assignment were composed in the extensive mode in informative and analytical nature Although the students spoke about their own experience as researchers, the videos explicitly addressed an external audience with the intention to provide reliable information about a scientific observation. At least two of the videos included interviews with
experts in the field, and all of them contained an introductory level of data analysis at minimum. The videos created in Dr. O’Donnell’s Seminar 3 contrast with the final projects created in the Seminar 1 section taught by Dr. Ugoretz, which focused on the experience and opinions of the students involved and seemed to be addressed to their classmates and professor. The projects produced in humanities seminars were opinion-based and argumentative, whereas the science-based videos were informative and data driven. This may be a fundamental difference between the two academic disciplines and the expectations of practitioners in these fields: generally speaking, the humanities value personal experience and opinion-based arguments, whereas the sciences value data. However, I see this distinction shifting both with the rise of the digital humanities, which introduces a focus on data to the humanities, and with the increased emphasis on writing across the curriculum, which encourages instructors to incorporate more low stakes assignments into science-based courses. Both of these changes affect how instructors teach and design writing assignments across the disciplines. The subset of data collected from the Macaulay ePortfolio archive provides evidence of the shift as compositions produced in science classes combine the reflexive mode of writing with the data driven methods introduced at the level of general education.

The section of Seminar 3 taught by Adams required a final website project. Students worked in small groups to create their own websites that contained their research blogs, related media, and final research paper. Each site is very distinct from the others: the students choose their own themes, layouts, research topics, and content. This project allowed students to display a wide range of digital literacy skills, specifically concerning the use of WordPress. In order to execute this assignment, the students needed to understand how to build a basic WordPress site, customize the site to meet their needs, and add a variety of content to the site using an organized
structure. Many of these skills were developed in the mandatory final website project in every Seminar 2 course (“The People of New York City”), but the products created in response to Adam’s assignment show that students can transfer what they learned in previous courses and apply it to across academic disciplines.

The sites created for the final project in Adam’s section of Seminar 3 are difficult to code since they are highly multifaceted, including many pages of text, so I focused on the research essay in order to determine the mode of composition. The description of this assignment on the course site states: “For our final project, students unite what they’ve learned about informal science in the classroom with an informal science project in the city. Each group is responsible for creating a digital artifact, a co-authored paper, and a website that documents the project’s process” (“Final Project”). The key word in terms of predicting the writing mode is “informal,” which would indicate the responses could be composed in the reflexive mode. However, formal research papers almost always infer extensive writing. Perhaps it is the intuition, conditioning, or training of a typical Macaulay Honors Student, but all of these co-authored research papers were composed in the extensive mode. This confirms that disciplinary expectations affect student composition style, but conflicts with evidence that the language of the assignment matters more in regards to how students formulate responses. It may be that the phrase “research paper” carries a great deal of weight in terms of connoting formal, academic writing, such that even a suggestion that the tone be informal cannot break this conditioning, especially with honors students.

Media

Students have to complete both Seminar 1 and 2 before taking this science-based Seminar 3 course; therefore, they should be very familiar with the Macaulay ePortfolio platform. At the
point in the structure of Macaulay’s curriculum when students enter Seminar 3, all of the students should be able to incorporate media and use folksonomic elements effectively because they have been exposed to and taught to utilize both in their previous two required seminars. In Seminar 1 students learn how to upload and post media of various kinds through the common events and in most final projects required for the course. In Seminar 2, students create complete websites in groups, which require students to learn how the basic information architecture of a WordPress site functions. A more sophisticated understanding of categories and tags is introduced at this point, and the integration of multimedia to create interactivity is stressed in Seminar 2. Therefore, it is reasonable to expect students to utilize these features when appropriate in their third seminar at Macaulay.

Low Stakes Assignments

Despite students’ previous experience, none of the low stakes posts for the “News Essay” assignment in O’Donnell’s Seminar 3 course contained media, categories, tags, or comments. In fact, none of the low stakes assignment across either section of Seminar 3 coded for this dissertation contain any multimedia. Again, this is likely because it was neither suggested nor required in the assignment prompt. The Science Forward Times would have been much more effective with visuals, such as images, infographics, and videos, to mimic typical online newspapers. Furthermore, the use of categories and tags would have made it easier for the ITFs to aggregate and organize the posts by topic. Then, the newspaper could have been separated into logical sections similar to the typical structure of most newspapers. This seems like a missed opportunity, especially considering that the students all had ample practice incorporating media into WordPress posts in their freshman seminars. These short posts could exist in any medium—they do not have any distinguishing digital features. The same can be said for the responses to
low stakes assignments in the section taught by Adams. The prompt states that students should use this opportunity to “learn more about yourself and others,” indicating an openness and flexibility in the expectations of the instructor and an opportunity for the students to be creative and unique. Yet, because these responses are based on readings, it is reasonable that students focused on comprehension and correctness rather than creativity. The language of the responses coded show that students did use very personal language to describe their experience, which again presents a missed opportunity to incorporate images of their experience to enhance their work.

Despite the fact that students know how to incorporate media and folksonomic elements into their posts, the singularly text-based compositions produced in both O’Donnell’s and Adam’s courses illustrate a disconnect between the digital literacy skills of the students and their willingness or ability to implement the skills unless specifically directed to do so. Therefore, if instructors want students to exercise these skills they need to make it explicitly clear that student can and should include media when appropriate to the assignment. This requires a discussion of when and how to incorporate media in a way that enhances the written text, which is neither a simple task nor a skill that all instructors possess. One solution is to encourage students to experiment with multimodal composition and then discuss the effectiveness of these attempts when evaluating low stakes assignments.

**High Stakes Assignments**

All of the students in O’Donnell’s Seminar 3 filmed videos with their own original audio as part of their final project preparation. A video essay is a multimedia project by definition, and this assignment specifically required student-created footage and audio. Additionally, all six of the videos coded for this class included external images, and four of the six contained external
audio as well. The combination of original and external media requires the students to edit their videos using more advanced skills than just cutting out errors or unwanted scenes. The fact that these Macaulay students were able to accomplish this editing work for this project is not surprising because they all have experience using iMovie on their MacBook’s from the Tech Fair event held in the first week of freshman year. As seen in the Seminar 1 sites coded for this dissertation, these video creation skills are also often employed in the humanities-based seminars at Macaulay. Still their ability to implement these skills in more than one course for a variety of purposes does show evidence of transfer but only in these high stakes assignments. Students draw from the lessons learned through their freshman seminars in which they are given ample instruction in the basics of WordPress from their ITFs and instructors and apply those skills to their sophomore seminars where the instructor may assume students are comfortable with the technology. Considering the evidence that students are exploring the use of multimodal elements primarily in their high stakes assignments, this indicates that both the requirements of the assignment and the time given to complete the assignment are significant factors in determining how and why students use media in their digital writing. Unfortunately, the use of folksonomic elements remains underdeveloped; the video posts for O’Donnell’s Seminar 3 projects were all marked with the same category, but none of them included tags or comments. A tag cloud would make this site easier to search, and the comment feature could have been used to increase discussion among the students, ITFs, instructor, or members of other sections of Seminar 3 across Macaulay. Knowing that this course had two ITFs, I wonder if these options were suggested or if the ideas were discussed and willfully ignored or voted down.

The final assignment for the section taught by Adams specifically required a “digital artifact.” The ITF for this course posted a variety of options including examples for the students
to draw from, and offered to help students create these resources. The final websites demonstrate the ability to construct a basic website and to display research in a variety of modes. All of the sites featured media of some type, but the media included was perhaps not as varied as the suggestions on the resources list provided by the ITF, which included: a documentary, a rap video, an animation, a play, a podcast, a podwalk, a cartoon, a graphic novel, or a Google Map overlay. Each of these suggestions came with examples and instructions (“Final Project Resources”). Two of the three final group projects contained student created videos and images, and one contained external videos. None of the groups ventured to create some of the more creative suggestions, such as a cartoon, rap video, or animation, most likely because these are not skills learned in the previous seminars. However, many of the Seminar 2 courses include lessons on making interactive maps in the form of podwalks or Google map overlays; yet none of the students in this class chose to incorporate either option for this project. This could be because making videos is perceived as easier, more familiar, or less time consuming, or it could have been a preference expressed by the instructor in class. Nevertheless, the uniformity in the use of media is remarkable, especially considering the sites created by these groups display variety in other ways, such as in the themes, color schemes, content layout, and other design choices. Only one group site utilized categories and tags, and none of the sites had comments from the instructor or the community. This does not mean the projects failed to meet the requirements of the assignment or the expectations of the instructor: to accomplish the goal of conveying “everyday science” to the general public. However, in terms of maximizing the potential of the platform, these sites fall short.

Conclusions
Quantitatively, the humanities sites contained more reflexive writing: 18 of the 24 posts coded for the humanities-based Seminar 1 sites were composed in the reflexive mode, compared to 4 in the science-based Seminar 3 sites. This conveys a strong disciplinary divide that remains true in both low and high stakes assignments. With data collected from more sites coded in this same manner, this difference could provide evidence that writing expectations vary greatly across the disciplines. As expected, the “Arts in New York City” seminars produced experiential, personal writing about the immersion experiences featured in this course. Yet, contrary to expectation, this reflexive tone continued from the low stakes posts through the high stakes projects. The persistent use of the reflexive tone throughout Seminar 1 indicates that students feel comfortable writing in an informal, personal style in their humanities-based classes, but do not feel this is appropriate in their science-based courses. However, it is unknown whether the language of the assignment prompts provided by the instructor drives this divide. Even in cases where the instructor encourages informal writing in the science-based seminars, the students produced extensive writing. This leaves me to question where the impetus for formal writing comes from for students composing for science courses. It appears that this tendency has been conditioned over time, and that the transition to the digital space does not break that conditioning. This is especially true for this population of honors students who have displayed the ability to follow directions and earn high academic marks in order to be admitted to Macaulay, an elite program. If instructors wish to support informal, reflexive writing in the sciences, such a desire must be explicit in the written and verbal instructions and should be practiced throughout the course.

The same is true for the inclusion of multimedia and folksonomic elements in digital writing: if digital literacy skills are emphasized as an objective of a program, then these elements
must be explicitly required and practiced across the curriculum. The results of this study show that students are more likely to incorporate multimedia in humanities-based classes than in science-based courses. I expected that the “Arts in New York City” course would produce media-rich posts due to the attention to media artifacts and cultural immersion experiences. Yet, even with a course designed to encourage students to grapple with media, the majority of students only included multimodal elements in their posts when explicitly directed to do so. This widespread unwillingness remains true in science classes that include field-based learning where students are encouraged to take photographs and videos. Students do not include these multimodal elements in posts to the course site unless explicitly asked to do so by the instructor. The effect directions given by the instruction has on student compositions is demonstrated by the fact that in both humanities and science courses, the use of multimedia increases when instructors make it a requirement for high stakes assignments. This is logically due to the students’ desire to receive a high grade by meeting the expectations set forth by the instructor in the assignment prompt. It is not clear from this study if students possess an understanding of how folksonomic elements work or if they have the ability to implement categories and tags correctly. This is an area of the Macaulay curriculum that could be strengthened across all courses. Although categories are used to organize information on a few of the course sites, it is only carried through to one of the student sites, which indicates that this was a technical consideration implemented by the ITF and instructor and executed by the students as requested. The minimal use of categories to organize student sites does not provide evidence that the students understand why they are using categories, and the results of the interviews (chapter 6) confirm this suspicion. If the ITFs are suggesting the use of tags or comments, the students are not executing these suggestions. In cases where the instructor utilizes the commenting feature to respond to
student writing, the students do not follow this model and add to the conversation. Commenting is such a vital part of the digital communication economy and one that students are familiar with before participating in the honors seminars because of the widespread use of social media. Developing the skill in an academic environment is a missed opportunity to cultivate active digital citizens.
Chapter 6

Transfer and Life-Long Learning: Interviews and Close Readings of the ePortfolio Expo Finalists

Overview

This chapter takes a two-pronged approach: it uses three in-depth interviews with students who submitted their personal ePortfolios to the yearly ePortfolio Expo competition in 2015 in conjunction with a close reading of their submitted ePortfolio sites in order to uncover evidence of life-long learning and the transfer of digital literacy practices across student work. In their presentations at the Expo, the students expressed the results of a reflective process that helped them understand the purpose, audience, and context of the sites they submitted. In turn, the presentations prepared students to speak with me one-on-one about these same concepts in the interviews, preparation that made these discussions particularly fruitful. The qualitative methods employed identify what the students learned by using the ePortfolio system over their college career, and how they were able to apply those skills to their own self-directed sites. I conducted the interviews to identify elements of transfer that indicate life-long knowledge the students could transfer from the classroom to their personal and professional lives after Macaulay.

This process was deeply informed by Peter Elbow’s theory of the “believing game.” Elbow has written extensively on this concept, arguing that scholars are trained to doubt, or use critical thinking skills that aim to tear down an argument and find flaws in a text (16). Furthermore, Elbow, building off the work of scholars such as Linda Flower, Pat Belanoff, Gerald Graff, and Mina Shaughnessy, claims that the kind of close reading scholars use to analyze literary texts is rarely applied to student work. I agree with Elbow that student work deserves attention, and that the practice of doubting is especially harmful when applied to
student writing. If instructors use their skills as critical scholars to dismantle student work, they are focusing on error—often motivated by the need to assess work for a grade—rather than focusing on the effort, process, or progress the students are making in their writing. In the seminal text *Writing Without Teachers* (1973), Elbow applies this to teaching students to discuss, write, and peer review constructively. I adopted this approach to read the work created by these Macaulay students “to scrutinize not for flaws but to find hidden virtues” (Elbow 16). I hoped to see evidence of a life-long digital literacy practice: in other words, evidence that the Macaulay program had succeeded in providing these students with both tangible skills as well as the ability to reflect on this process in a way that demonstrated sophisticated knowledge-making. As Elbow writes in *Writing Without Teachers*:

> I believe in order to understand. We are trying to find not errors but truths, and for this it helps to believe. [...] To do this requires great energy, attention, and even a kind of inner commitment. It helps to think of it as trying to get inside the head of someone who saw things this way. Perhaps even constructing such a person for yourself. (149)

In this chapter, I re-construct the experience of these students. This is purposeful: I am playing the believing game. I am also privileging student composition by treating it as a text that deserves close reading and analysis. As Elbow writes in “Bringing the Rhetoric of Assent and the Believing Game Together - and Into the Classroom” (2005), this is a “risk” because this approach can be interpreted an standing in opposition to the scholarly tradition of criticism, but it is a risk worth taking in this case, especially considering the hard work and thoughtful reflection demonstrated by these students.
The chapter begins with a brief description of the interview questions in order to define the elements of coursework related to the ePortfolio system that students found useful. Next, I describe the interviews and analyze the exchanges, paying particular attention to matters of access, community-building, previous experience, design, reflection, and the students’ intentions for the future. Finally, to contextualize the interviews, I provide close-readings and analysis of the websites as they stood at the time of the interviews, with the goal of identifying the elements of production students engaged with throughout this process, including, but not limited to, design, rhetoric, multimedia, and audience-awareness.

**Interview Questions**

To identify the transfer of life long learning skills, I designed the interview questions to be open-ended points of departure that would allow the interviewee to extrapolate as desired. I did not want to direct their responses toward any particular elements of constructing their personal sites but rather to learn from them which parts of the process had been important and why. The questions, along with a consent form, were distributed to the students one week before the interviews took place so that they had time to review the information before proceeding (See Appendices 3 and 4 for full interview forms). All of the students interviewed agreed to be included in this dissertation when signing the consent form; however, I refrained from using their last names in the reporting of these results to protect their anonymity as students. All the sites included were public and accessible through the Macaulay ePortfolio system at the time of this study.

As DePew argues in “Through the Eyes of Researchers, Rhetors, and Audiences: Triangulating Data from the Digital Writing Situation,” “if we do not bring the individuals who inhabit and visit these spaces into the epistemological process, researchers become the single
The interviews are structured in a way that allowed the students to talk freely and ask me questions as well. I wanted them to be honest and comfortable, despite the presence of the video camera. These upper-level students were familiar with my position as an Instructional Technology Fellow, a position that did not include evaluating their projects or efforts for assessment or grade. The questions were as follows:

1. Why did you create this ePortfolio site?
2. Who do you imagine as your audience for this site?
3. What was your experience blogging before creating this site?
4. What did you learn from using the ePortfolio system in your seminars that helped you create this site?
5. Where do you see this site in 5 years? What do you hope to be doing then?

Essentially, these questions prompted the students to perform a rhetorical analysis of their own work. By answering these prompts, they each identified the purpose, context, audience, and genre conventions they used when creating their site. These questions also connected this data to the results of the surveys and textual analysis of the course sites. In discussing their previous experience blogging, the participants affirmed the results of the survey questions discussed in Chapter 4, which asked the students to identify their experience composing in digital spaces prior to entering Macaulay. These interviews also led to a better understanding of the findings in Chapter 5, which showcased how students used the ePortfolios sites in their formal coursework.

Overall, the interviews allowed me to identify which skills and knowledge students gained through their use of the Macaulay ePortfolio platform and helped me to ascertain how those skills might transfer outside of the college experience.
The codes that are relevant to this report are those that indicated patterns across all three interviews, and the outliers will be discussed separately under the analysis of each participant. The patterns I will discuss are as follows: access, community-building, previous experience, design, future-oriented, and reflection. Each of these terms identifies a subject that was generated from coding the transcripts, and the terms are used to connect the three interviews into parallel topics of discussion.

**Research Participants**

All three sites featured in this chapter represent above average work. The students are all advanced in their coursework in an honors program, and they each self-nominated their sites to be eligible for the ePortfolio Expo award. Additionally, the creation of these sites is completely voluntary, so these students all chose to do extra work, above and beyond their required course work. They volunteered to be a part of this dissertation project by participating in these interviews as well. It is also important to note than in two of the three cases, the students received ample guidance from faculty and ITFs when constructing their sites, which does not detract from the digital literacy practices displayed by the students, but rather shows how sites created within a program that provides these resources can be particularly successful. Although there is certainly room for improvement in all three cases, these students clearly devoted a considerable amount of time and effort to achieve their results. All three of the students interviewed expressed a lack of confidence using blogging technology before embarking on their ePortfolio Expo submissions, and all three were able to produce effective and compelling sites through the skills they gained throughout the Macaulay program. It is important to frame this analysis as a study of exemplary work by dedicated students because although it may not be
representative of typical or average work by students using the ePortfolio system, it demonstrates the potential of the program.

Victoria: The Researcher

Victoria was a senior at Brooklyn College, majoring in Art History and French, who was participating in a “Springboard” course to facilitate the completion of her senior project. The Springboard course supports students as they create their personal ePortfolio sites, offering a space to consult and reflect with faculty, ITFs, and fellow students during the process. Both the course and the option of creating an ePortfolio are voluntary. According to the program website, The Springboard Experience, as a course and as a project, aims to: “build on a student’s earlier work” and “include multimedia facets, utilizing appropriate tools and presentation techniques to present extra-textual resource,” with an emphasis on personal reflection and the intention of being presented to a wide, public audience (“Description”). This program did not exist when I designed this study; in fact, it was a pilot program in spring 2015 when I conducted my interviews that was intended to rebrand the senior “capstone” project, which connotes the end of process, remaking it into a “springboard,” which infers the beginning. Serendipitously, the objectives of the Springboard program matched the objectives that informed my original research questions for the interviews: I was interested in elements of transfer from earlier coursework, purpose and audience awareness, intentional design and multimedia incorporation, challenges and successes of creating independent sites, and personal reflection articulated by the students. Two of the three students I interviewed participated in the Springboard course, which was an advantage to me as a researcher. The course prepared them to build robust ePortfolio sites and paved the way for their thoughtful responses to my interview questions. A student’s “Springboard site” is separate from their ePortfolio Expo submission: it is a course site for the
optional Springboard class on which they posted updates on their progress toward completing their personal ePortfolio sites. Victoria chose to link her Springboard course site to her personal ePortfolio site via a tab on the top navigation bar on her Expo site, so the work she did as a part of the Springboard course is integrated in her personal site through this link.

Victoria’s ePortfolio Expo site focused on the relationship between place and identity within the population of French immigrants in New York City. The project was formulated during a semester abroad in France and then transformed into an ethnographic study of French natives living in New York City (NYC) when Victoria returned to the United States. Victoria articulated her use of the ePortfolio platform as an accompaniment to her research project, and much of this research was done through the facilitation of the voluntary Springboard course she was enrolled in at the time. (See fig. 6.1)
The French community is one of the most influential foreign cultures in New York City. This project is a collection of personal accounts from members of the French community living in NYC. On this website, you can read individual stories about their experiences living abroad in this Francophile city and understand the connections between place and identity.

I created the website in order to function—to feature—an interactive way into my senior thesis research project, which was creating a map that locates the different
pivotal points of different people that I interviewed and how their identity is influenced by those places. And you can see it right in front of you as opposed to reading and imagining it. (Personal Interview)

In order to achieve the goal of showcasing relevant, interactive information, Victoria conducted five interviews, analyzed those interviews for patterns and themes, and supported findings with outside research. The resulting site includes a literature review, research methodology, a synopsis of each interview, an analysis of six themes identified by Victoria, and a map of French places in New York City. The site also contains a space for visitors to contribute their stories or to contact Victoria about this project.

Victoria’s articulate description of her site highlights one theme found in all the interviews: access. By rendering her research results in various modes including text, images, and maps, Victoria provides multiple access points into her work. This multimodality offers entry points that appeal to a wide range of potential audiences with different interests and ability levels, including fellow researchers, such as ethnographers or those in the Macaulay community with interest in the process of creating the portfolio, as well as the broader range of “outsiders,” such as members of the French immigrant population or tourists seeking a Francophile experience in New York City.

In her interview, Victoria was able to identify the many potential audiences for her site:

Hopefully, I would imagine – it’s kind of broad and whoever stumbles upon it might be interested. But I think that people who are really interested in sociological studies, especially about the different immigrant populations in New York City […] So anyone who’s interested in Francophile studies or how French culture plays a part in New York City. (Personal Interview)
Victoria’s ability to identify an audience and context for her work is a rhetorical skill that translates into written and visual elements of the site. Victoria uses both text-based content and visual content to present information to multiple audiences in multiple modes, which demonstrates the ability to apply advanced technical skills to solve a problem: how to reach her audience.

Victoria further defines her intentional design process in the “Topic Proposal” section of the accompanying Springboard site writing, “As opposed to more academic work, my project takes a broader, more general audience. From my research, I hope to also engage anyone with an interest in public events and personal interactions. I would like my project to serve as a starting point in taking the big aspects of a city and making them feel a bit smaller in scale” (“Victoria’s Springboard”). The Springboard site was intended for her classmates, ITF, and faculty mentor to read, and underwent revision before being posted publicly, but I still find the level of sophistication in her writing to be remarkable because Victoria is able to articulate her intentions clearly and with a welcoming tone. Victoria has identified her audience and adjusts her writing style to meet this rhetorical situation. Also, the way Victoria organized the information on the site through menu items in a top navigation bar appeals to various audiences. For the general audience seeking French food in NYC, Victoria provided a link directly to a map that highlights that information. For the academic audience, the “About” tab has a sub-menu item titled “Project Narrative” that explains the research methodology, outlines the research questions, and provides a literature review. The choices Victoria makes concerning the content of each section is evidence of audience awareness. In the “Project Narrative” section, Victoria employs academic discourse to attract a scholarly audience to her work; this information is broken into sections that are common in an academic publication, such as “Research Methodology” and “Statistical
Research.” Further emphasizing the academic elements of the site, the “Project Narrative” section also provides information graphics such as charts and graphs that require background in the subject to decipher. (See fig. 6.2)

Fig. 6.2. The “Project Narrative” section of Victoria’s ePortfolio.

Just as Victoria’s site does not privilege text over images, it does not over-emphasize the academic audience either. Instead, Victoria created sections that blur the distinction between an
academic and a general audience. The “Themes” section appeals to both the scholarly community interested in ethnography by addressing a topic like “Expat vs. Immigrant” and through the “Comparison” section, where Victoria synthesizes what she learned through the interview process. However, the “Themes” section also explores topics such as “Friendship,” “Food,” and “Why NYC?” that appeal to a more general audience. (See fig. 6.3)

Fig. 6.3. The “Themes” section of Victoria’s ePortfolio site.

In the section on “Food,” Victoria targets a more general audience of people by using the first-person and making references to American stores that would be familiar to people visiting New York City. Throughout the site, Victoria is code-switching, a term adopted by writing studies from education and linguistics scholarship in order to describe how students address different
discourse communities in their writing. Min-Zhan Lu and Bruce Horner define code-switching as “commonly understood to represent submission to the norms of specific codes,” as opposed to code-meshing which “is seen as deviating from these norms through (unauthorized) mixing or meshing of them” (600). Victoria code-switches by writing in both an academic and a general context to address different perceived audiences, specifically an academic audience versus an audience of Francophiles visiting or living in NYC.

Victoria also appeals to her audience through the design of the site. By creating a public facing site, Victoria consciously built a venue through which many different perceived audiences could access relevant information. In this case, access can be understood more broadly to mean open or available to view, by way of technological affordance. In the interview Victoria said, “I think it’s really cool that my senior thesis is out in public instead of just being kept away…” (Personal Interview). Rather than a project bound in paper distributed to a small number of people, building an ePortfolio on Macaulay’s system enables access to anyone searching the Internet for these topics.

Victoria builds in another layer of access by opening the site to contributions from the community she sees this site as serving; as she writes on the “About” page of the site, “It is also a platform on which people can share their own stories with the public.” It is clear that Victoria views this project as a tool for community building. When I asked who might contribute to the site, Victoria said, “anyone who might want to share their experiences whether they are Francophile or French person. I created a form on the website that they could submit it and then I can start monitoring and putting it up and it could be community site” (Personal Interview). Victoria shares a sense that part of the site’s purpose is to foster awareness and forge bonds between French immigrants living in NYC, but also that the work she has done to this point by
interviewing a small subset of this population is only the beginning of what could be an extended research project. She sees this project as addressing a “missed opportunity,” in the language of the Springboard course objectives, to research the French population in NYC. In response to a question about the purpose of this site, Victoria says, “the immigrant populations of underprivileged groups are important, but there’s not that much about the French communities from what I’ve seen,” and also “that there’s a lot of research on Americans going to France but not French people going to America so I think this would contribute to those resources” (Personal Interview). Victoria’s statement of intent illustrates how she connects her personal experiences as both an American student who studied abroad in France with those of being a child of immigrant parents living in America. This research project is an interesting amalgamation of Victoria’s personal and academic identities. The work Victoria does to connect her academic, personal, and professional interests in this site shows the ability to transfer the skills learned at Macaulay to other contexts.

The design of the site reinforces Victoria’s intention to connect her scholarship and coursework to her personal interests. The clear, minimal aesthetic hides even the navigation menu, directing the user to first interact with a map generated from the interviews with French immigrants living in NYC that features both places specific to the research subjects and cultural attractions with broad appeal, such as restaurants, grocery stores, parks, and libraries. However, in order to understand how the markers were identified, the user must consult the other sections of the site. This choice seems to lead the audience to engage with her work at a deeper level, which displays a sophisticated understanding of the user experience. The hidden menu consists of an easy-to-navigate set of resources, including the interviews Victoria conducted, themes identified by analyzing those interviews, another map (this one displaying a wide array of French
cultural attractions in NYC), and a link to Victoria’s Springboard site, which features her research journal. One of the revelations Victoria shared in her Expo presentation was that her research drove the design process. For instance, Victoria did not originally intend to have a section on friendship under “Themes;” however, the interviews she conducted revealed a significant pattern in the way “expats,” by her definition, articulated this concept. Victoria explains this in the “Friendship” section of the website writing: “According to my interviewees and my experience living in France for a year, in France, there are different terms for what Americans simply call ‘friend.’” Victoria used her personal experience as a way to verify her research findings, as reflected in the project description, and on the “Springboard Site” Victoria frames this connection through a dedication to narrative:

I want to ground my research more on personal narratives as I am basing the project on how the stories of individuals come together to create a bigger picture. […] Rather than focusing on hard statistics and pure fact, I want to collect the personal stories, experiences, and opinions of the community. This will help bring about the personal side of the community and make my research more relatable on an individual scale. Instead of making grand assumptions about the community, I want to showcase the nuances within it. (“Victoria’s Springboard”)

Each section of the website offers similar insight into Victoria’s process. It is clear that Victoria’s reflection was recursive, happening throughout each stage of the project.

For instance, part of Victoria’s process not evident on the site was how Victoria learned to create such a technically sophisticated, well-designed, and purposefully constructed blog. Knowing that Victoria studied with Joseph Ugoretz, and having served as an ITF at Brooklyn College where Victoria went to school, I was fairly certain she developed many of these skills in
her coursework. When asked directly about her prior experience with the ePortfolio system, Victoria struggled, but ultimately was able recall elements of digital literacy she learned that were necessary to complete this project. Victoria reflected on her experience as a contributor to a course blog as a place to interact with and discern features of the platform:

> When I took the seminars we’re using all these different kinds of plug-ins, like [a] map plug-in and contact form plug-in and timeline plug-ins and all these different apps that come from outside sources as well. I never knew they existed before and I thought they were really interesting. Some of those I’ve used in the ePortfolio I have now. (Personal Interview)

In order to implement these elements she identified on her own site, she consulted with her faculty mentor directly. Victoria explained, “I do remember that when I was using my own ePortfolio I talked to Joe Ugoretz and he helped explain the different features and that helped me create how my website looks, such as the menus, and implementing a map because that’s something that I’ve talked about before” (Personal Interview). In Victoria’s interview, a balance between self-directed learning and assisted learning exists. She allowed her own interests and expertise to guide her project, but also sought the help of her faculty mentor and ITF. As Victoria worked to implement the skills acquired through coursework, as well as develop new expertise, she was able to identify her own weaknesses and ask for help.

This process is documented in Victoria’s research journal, which was composed on her Springboard site, and consists of a series of narrative posts and timeline. These materials provide evidence of thoughtful construction. For instance, there is a post dedicated to dealing with failure, another describing success, as well as several that evaluate sources and describe the difficulty in tracking down relevant information (“Victoria’s Springboard”). Victoria also
chronicles the technical development of *Building a France in New York City*. In the post titled “Mapmaking,” Victoria displays a draft on the interactive map at a point when it is not up to her standards.

![Image](image.jpg)

Fig. 6.4. A post on “Mapmaking” on Victoria’s Springboard site.

The development and inclusion of this interactive map also suggests that Victoria was able to apply the techniques learned in the required Macaulay seminars, especially Seminar 2: The People of New York City, to achieve the self-identified objectives of this research project. In Seminar 2, students research ethnic enclaves in New York City and frequently create interactive maps with the help of their ITF. Similarly, in a post titled “Effective Website” Victoria analyzes a site called “Photoville” for features she feels are successful. “The website also does a good job of laying out different pieces of information in appropriate formats,” writes Victoria, “[t]he page for exhibitions is displayed as a photo gallery while the schedule is displayed as a list with columns to make the information more accessible. Most pages are accompanied by photos, which make the pages more visually appealing, and by links, which make accessing related
pages easier” (“Victoria’s Springboard”). Through this analysis, Victoria identifies features of professional sites she wishes to imitate in her own work—a process called reverse engineering. All Macaulay students complete a reverse engineering assignment with a group of ITFs and students at the “Tech Fair” event. At this event, ITFs ask students to critique previous Seminar 2 sites as an exercise in preparing to create their own final group projects. The ITFs want students to identify which features of the example sites they would like to incorporate into their final projects, and then work with the students throughout the course to achieve these goals. Victoria, working on her own, replicated this process when she created the ePortfolio Expo submission; this is evidence of transfer.

Not only was Victoria able to apply what she had learned in her seminar work when she created *Building a New France*, she was also able to envision the future of the site. While self-admittedly “proud” of the site at the stage of completion she presented at the Expo, Victoria lamented what she had not accomplished, saying:

> I think what I would like to have worked on more, if there was more time, would be making it more multi-media. Right now, it’s a lot of text and a map and a lot of links eventually, but I would really like to incorporate – I wanted in the beginning to incorporate videos and pictures, I just ran out of time. But that could be something I would do in the future and I could link it to my – could link it to my other blogs that I plan to have in the future. (Personal Interview)

Victoria views this project as a starting point, not a completed work. Victoria can see how this project extends beyond the Macaulay experience, and will provide a platform upon which she can continue to build, experiment, and adapt after she graduates. The fact that Victoria intended to create new sites shows that she believes the digital literacy skills gained through this
experience will transfer into her personal and professional life. Moreover, those skills have value beyond and outside the educational environment.

In the interview, Victoria explained that she would continue to maintain the site as outside users submit new information or comments. Victoria indicated that “If I encounter more people who are within the French community, I might add what they’ve said onto the website and just so that it doesn’t really die down” (Personal Interview) and notes that this is what happened on her past travel blog (also hosted on Macaulay’s site). The rhetoric of death is repeated in both explanations, conveying a feeling of loss. Her words expressed an attachment to this work and appeared to mourn the loss at the conclusion of the project. However, note that Victoria specifically mentions the creation of new sites in the future, which indicates a different level of success. Victoria was not only able to understand and implement the digital literacy skills she learned through her coursework and ePortfolio project, but also plans to integrate these skills into her life after college ends.

**Christina: The Playwright**

Christina was a senior at Brooklyn College majoring in Speech Pathology and minoring in Theater. Like Victoria, Christina participated in the “Springboard” course to facilitate the completion of her senior capstone project. Christina’s ePortfolio submission, called *Storytelling and Sign Language*, is an exemplary use of the Macaulay ePortfolio platform in both form and function. (See fig. 6.5) In fact, this site won the Expo, and therefore it must be noted that this is above average work.
Christina identifies as a storyteller and playwright, but is also a confident researcher in the area of speech pathology. Christina uses this site to showcase the connection between her creative and analytical work: the site presents interviews she conducted with members of the deaf community and her original screenplay that utilizes her research to tell their stories. Almost every post is interactive with multimedia incorporated effectively to enhance the content, including interviews, play scripts, timelines, and literature reviews. Organized with the user in mind, Christina separates information through a top navigation menu with clear categories such as “The Research Process,” “Storyboard,” and “The Play.” She arranged the categories chronologically, from left to right, following the stages of development, ending with the “Bibliography.” Furthermore, Christina tagged posts and enabled a WordPress plug-in that
creates a tag cloud that allows users to search for information by the tags or terms. Therefore, Christina implements folksonomic elements in at least two advanced ways, using tags and creating a tag cloud, which demonstrates a sophisticated understanding of information architecture and makes the site easier to use. This structure gives Christina a way to showcase her diverse interests and talents to multiple audiences in one space.

My interview with Christina revealed that she positioned this site as an entrance into her future as a speech pathologist and documentary play writer. Rather than a culmination of the work Christina did in college, her site was a projection of her forthcoming career, which was perhaps influenced by the fact that Christina had already been accepted into a graduate program in the field of speech pathology. This connects to the goal of the “Springboard” course as defined earlier as purposely contrasting the rhetoric of a capstone project. Perhaps Christina’s participation in this course helped her craft this project with the goal of being forward-thinking.

With the future in mind, Christina envisioned multiple audiences for her ePortfolio site:

I had a few different target audiences for this site. One would be people who are interested in theatre and the theatre-making process, especially as it comes to documentary theatre how to collect those sources and compile them into a show. Also people interested in the elements of storytelling and narrative. There’s a lot of information and resources about what makes a story, who tells stories, how they tell them, and how those specifically relate to identity. (Personal Interview)

Christina not only adopted a formal, academic tone when articulating the purpose of her site, she also identified as a member of the scholarly communities she saw as her audience. In our interview, Christina said, “I imagine that people interested in deaf culture and the speech pathology community that I’m a part of would also be interested in seeing some more of the
science” (Personal Interview, emphasis added). This marks a significant achievement that college-level educators strive for: Christina views herself as a part of a professional community.

Christina is simultaneously establishing her connection to a scholarly community—speech pathology—while also encouraging members of a community-in-need—deaf individuals who use American Sign Language (ASL)—to connect through her work. Access has yet another layer of meaning when one considers the deaf community’s particular needs in terms of technology. Creating a site accessible to the hearing impaired requires the integration of text descriptions for images, captioning for videos, and in this case, the capturing and interpretation of American Sign Language. Christina discussed this consideration in her Expo presentation with a mixture of thoughtful reflection on what she set out to do with the site and those objectives she was unable to meet. In the “Project Narrative” section of her site, Christina writes, “it was important that these stories and experiences be portrayed in a way that is accessible to people of both the hearing and Deaf community, but still retain the accuracy and integrity of the stories being shared.” This attention to access helps Christina articulate the function of this site in relation to community-building. In the interview Christina articulated this connection: “Since the project was about storytelling and identity, there’s this interactive component where anyone can come and submit a story anonymously or attach their name to it. And they can do it through a video or an image or a document or words” (Personal Interview). This statement expresses an intention to create multiple access points through a variety of media depending on the contributor or user’s technical and physical capabilities, which is indicative of an advanced digital literacy practice.

The site at the time of the interview, as well as Christina’s description of building the site, exemplifies her attention to design. In fact, Christina dedicates a post on her Springboard site
entitled “Site Critique” to redesigning her original site and explaining why she makes each change. Christina attended to the needs of her multiple audiences by presenting the information found on the site in several ways. As previously noted, the organization of the information into categories and tags is one way Christina demonstrates that she can use technical tools to meet the needs of a complex research problem. Although there is some inconsistency in the layout—not all menu items have sub-menus, and some sub menus are not clearly different from the others—it does provide a logical navigation system. Speaking of her design, Christina explained: “So all the research is under one tab on the website, but there are tags on the sides that you can sort of sift through, if you will.[…]You can click on that and see all the posts and information directly related to that” (Personal Interview). In the interview, Christina described two ways of using the tag cloud feature of the site: first, her audience might use the tags as a way to find information of interest, and second, to aide her in the process of gathering, analyzing, and reflecting on her research. As a reader I can see this intention at work – the tag “writing” generates a list of posts related to Christina’s writing process, and showcases the different styles and genres she is engaging with throughout this project. Although elements of the play script and elements of the research paper may seem unconnected, the technology allows Christina to link them. (See fig. 6.6)
The ability to apply tags and categories to posts may seem like a basic level of technical competency to a more advanced web developer. However, as in Chapter 5, most of the course sites coded for this dissertation project did not make use of tags. Therefore, the fact that tags are not only used but also implemented in sophisticated ways in this site demonstrates that Christina has advanced beyond the basic skills she learned through her course work and personal experience.
Before embarking on this project Christina had been an avid reader and occasional contributor to blogs. Christina professed that she spends significant time on Tumblr and was inspired by other blogs when creating this site. She also explained that despite this experience, and the work she did contributing to collaborative sites in her required seminars, she did not know how to build a site of her own. Christina expressed this in her interview: “using it in the coursework was really helpful, to have this sort of understanding of what was behind the scene(s) of the EPortfolios and what’s behind a blog. I think a lot of people my age read blogs all the time, but you don’t really get to see the dashboard, as they call it, and all those sort of inner workings” (Personal Interview). Here, Christina debunks the digital native myth: just because she had come in contact with blogs prior to entering Macaulay did not mean she could be expected to create one without help and guidance. The point she makes about her peers’ relationship to web publishing matches the survey findings with respect to how few students read blogs or build personal blogging sites, and supports the scholarship discrediting the myth of the digital native. Instead of assuming people her age know how to publish on the web using blogging technology, Christina believes her peers to only have a shallow understanding of digital writing technology and considers her experience creating this site to have moved her from a shallow to a deeper level of comprehension. Christina elaborates:

This website was a lot more starting from scratch, if you would say, and learning the technicalities of, like, what’s a category versus a page? And what should you use for what? And should it be static or should it be rolling? And all these different things which was a lot more of a learning process as I went through it. […] So I’ve learned a lot that I also think would be helpful in the future for
creating sites as well. I’m not a very technologically savvy person, but I feel like I could say I’m a little more savvy after this year. (Personal Interview)

Christina attempts to use the terminology of WordPress and web development somewhat hesitantly in our conversation. Her statement that she is not “tech savvy” contrasts her adept use of technical terms such as “category,” “page,” and “static.” Through the use of the ePortfolio sites in the four required seminars, and her participation in the Springboard course, Christina has adopted a new vocabulary. Despite her initial hesitation, the rhetoric Christina employs exhibits an understanding of these terms and displays her ability to use them correctly. Christina recognizes her own growth in terms of her digital literacy practice.

With ample support from the Macaulay community, Christina’s digital literacy practice evolved significantly, and she was able to build a site with complex functionality. Christina attributes this success to a mixture of experimentation, feedback from her peers, and one-on-one instruction from her ITF. Christina’s experience describes an ideal learning environment—a combination of collaboration and self-study—because this prepares her to work independently and with a team, skills that will certainly benefit her as a speech pathologist and playwright. After completing the version of the ePortfolio she submitted to the Expo, and finishing the Springboard course, Christina was able to imagine the many ways in which the skills she learned throughout this process could transfer to her future as a graduate student and professional in the field of speech pathology. Christina believes that as the “world moves to a more digital-based area, it’s gonna be extremely helpful” to develop her digital literacy skills because the tools she will encounter as speech pathologist will likely require her to navigate the backend of a site, particularly to enter, archive, and access information (Personal Interview).
Christina also used a wide variety of multimedia to present information on the site. Almost every post contains an image, video, or infographic of some kind. As seen in the results of the text analysis presented in Chapter 5, these skills are introduced in the four required seminars, but very few students utilize media when posting without being required to do so. In contrast to those findings, in her ePortfolio site, Christina not only includes media from outside sources as well as media she has created herself, but she does so to enhance her argument. There is a clear relationship between the media and the texts in Christina’s posts, which indicate a highly developed sense of visual rhetoric. For example, in the research section of the site, Christina often provides diagrams to help herself and her reader understand the more complex elements of her project. In the example below, Christina provides both a visual and aural aide for her readers when explaining how a cochlear device is implanted, and how the recipient of that device experiences sound. Both of these points would be difficult to convey without the use of media. (See fig. 6.7)
Since the CI was first invented, technology has improved vastly. The number electrodes used has increased allowing for better and more diverse reception of speech and sound. Cochlear implants have gotten smaller and easier to use. The CI works by bypassing the hair cells of the inner ear and directly stimulates the cochlea nerve with electric pulses. A microphone outside of the skull receives sound input and the processor must determine the frequency of the sound and how it is to be interpreted.

When I studied this in several of my speech and audiology classes, we were told that speech through a cochlear implant does not sound like the speech a hearing person listens to. Some people describe it as robotic or electronic, but what does it really sound like? Thanks, YouTube for answering that question!

This video plays the speech stimulus given and how it is heard by a deaf individual through a cochlear implant.

Fig. 6.7. An example of how Christina incorporates multimedia into the site, Storytelling and Sign Language.
Christina is learning to use media as a rhetorical agent to enhance her argument and to provide greater access to the information she presents. However, in most cases, Christina is missing captions and citations for these media elements, which would make the site more accessible for her readers and would avoid issues of plagiarism and fair use.

Perhaps more impressive than her inclusion of outside media is when Christina incorporates clips of the play she wrote and directed. This play brings together Christina’s knowledge of speech pathology with her passion for theater through an original screenplay: the fictional journey of a deaf person based on interviews with real people. This site gives Christina a platform on which she can present and archive this play alongside the research and creative process she underwent to create it, which provides the viewer with context for the content. (See fig. 6.8)
Using the model of documentary theatre, this play chronicles a story of one woman's experience growing up Deaf. Through research and interviews, stories have been collected from various sources and individuals to create this piece. Together, these stories form the character Dee, who shares her narrative as a series of flashbacks. The play begins with diagnosis and continues to tell her experiences of success and failure in the education system.

Here's an excerpt of the final scene:

For more details about this project, look here.

For more information about the play and its scenes, please look at The Storyboard Page.

Fig. 6.8. A screenshot of a clip from the play Christina wrote and directed for this project.

This site uniquely combines research on deafness with her passion for theater in a way that justifies the medium. Christina entices the reader to engage with her site by placing this teaser clip on the homepage, and underneath the clip, Christina provides links to draw the reader in to the site, offering entry to her storyboard and research journal. The entire play is available under “The Play” tab above as well. The liberal use of hyperlinking (as shown in figure 6.8) demonstrates how Christina uses the linking feature to connect to both internal information contained within this site, as well as to outside information she directs the reader toward. Christina’s widespread hyperlinking situates this site within an information network—which is precisely how the Internet was designed to function. Through linking, Christina connects her work to a community of scholarship.
Christina’s ability to see her work as developing over time, reaching new audiences as she evolves, is particularly interesting because Christina is able to see this work as having a life beyond her career at Macaulay. Whereas mainly college projects are only seen by a small audience of an instructor, peer, and potentially family, Christina envisioned a larger impact for her work on this ePortfolio site. When asked where she sees this site in the next five years Christina responded:

So it’s definitely something that I will continue to use as a resource. And all of the research I had done and the bibliographic information is on that website. So that’ll definitely be helpful when I’m doing papers for graduate school and doing research, having that there. But also, I think sharing it with the community of people that I will work with because they’re all interested in very similar topics, and giving them access to that as well. I also think that using it in even like a clinical setting, bringing it to hopefully clients that I will have in the future and showing them that this is a story that exists, and that they can contribute theirs, too, could be something I would hope to do with it. (Personal Interview)

She wants her efforts to not only benefit herself, but to benefit the deaf community and researchers in the field of communication. The outcomes present in Christina’s work go beyond the learning objectives for the Springboard course and extend learning into her personal and professional life. Christina has developed a passion for her project: it is a showcase of her knowledge that she wants to share with the world.

Zohar: The Traveler
One of the most popular uses for the Macaulay ePortfolio system is travel blogging. Macaulay students in good standing can apply for “Opportunity Funds”\(^{33}\) to be used for research or travel. The large majority of students spend their funding to travel abroad. Zohar was a junior at Queens College who chose to go to Spain not only to strengthen her fluency in the language but also because of her cultural ancestry. Zohar’s site, titled *Returning to My Roots A Sephardic Jew in Spain*, was created to document her adventures abroad. (See fig. 6.9)

![Fig. 6.9. A screenshot of a post from Zohar’s ePortfolio Expo submission *Returning to My Roots A Sephardic Jew in Spain*.](image)

The site evolved considerably during the five months Zohar lived and wrote in Spain. Zohar describes the purpose of this project in her submission to the ePortfolio Expo, explaining:

\(^{33}\) At this time, Macaulay’s “Opportunity Funds” include a $7500 grant that can be applied to a wide range of programs in New York City and around the world. According to the website these funds are “[s]upported by the generous contributions of corporations, foundations, and individual donors...” See more details at [http://www.macaulay.cuny.edu/current-students/opportunities-fund.php](http://www.macaulay.cuny.edu/current-students/opportunities-fund.php)
In Fall 2014 I ventured to Madrid, Spain for a semester abroad sponsored by my Macaulay Opportunities Fund. The choice was not casual; besides for wanting to improve my Spanish fluency, I am a Sephardic Jew, a Jew with roots tracing back to the Jewish community of Spain which coalesced around the beginning of the 2nd millennium. For this reason my semester was a return to my cultural roots, and I committed to documenting the experience. My blog allowed me to share and reflect on my experience with others, but moreover, learn a lot about myself. Through the blog, I re-conceptualized my understanding of community, love, and my complete independence and dependence on others in a foreign country. This is the final product of my semester in Spain, learning much more than just a foreign language. (“Description”)

Zohar’s writing has an honest elegance to it that compels the reader to follow her journey.

Perhaps this is one reason why the blog was far more successful than Zohar envisioned.

Zohar originally imagined her audience to be two of her closest friends who she would be separated from while in Madrid. However, “it actually ended up being a lot more people, so that was pretty cool. People who were just interested in seeing someone else’s travel blog who were curious, other friends who I didn’t expect because I'm not so close with them, so a wider net beyond my two closest friends that I expected to read it” (Personal Interview). In fact, at the Expo, Zohar mentioned that students from other schools who were considering traveling to Spain read her blog for advice. Zohar was shocked to realize that what she saw as a personal journal was being used as a resource by her peers and other unexpected visitors. Comments left for Zohar as replies to her posts are featured on the menu for this site. One of these featured comments is from a student who planned to travel abroad next semester, asking for advice.
Another is from a student who traveled to Spain previously, and they link to their travel blog to share with Zohar. And yet another is from an English professor who remarks on how this blog is well-written. This interactivity is especially significant considering the results of the text analysis from Chapter 5, which revealed that only one of the sites coded for this study contained comments, despite the fact that the commenting feature was available on most of the ePortfolio sites. Zohar knew the blog space was public but did not realize that people would find her story compelling and useful. Publishing in this digital space changed the way Zohar viewed her writing. Further, the unexpected popularity of Zohar’s blog indicates that the community-building elements of the ePortfolio experience do not have to be intentional to come to fruition.

Zohar communicated clearly in her rhetoric the intended community-building aspects of this ePortfolio. Zohar set out to find a Jewish community in a foreign city in order to connect with her roots. From the first post, the reader witnesses Zohar’s search for access to a Jewish community and resources in Madrid. For example, in “Mi Primera Semana,” Zohar recounts an excursion to the “the only Kosher supermarket in Madrid, which is much more like a deli than a supermarket, according to my New York standards;” there she met the owner, who invited her to spend Shabbat at his home. This experience impacted Zohar significantly. In the post she describes her day spent with the family in their home talking, eating, and observing Shabbat.

Zohar writes:

On Saturday morning Mateo heard me saying to a member of the synagogue that they were treating me “like a member of their family.” He stopped by the conversation and corrected me: “Not ‘like,’ Zohar. You are a member of the family!” Furthermore, I felt like a member of the Jewish community there, what

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34 When describing Sabbath observance, Zohar refers to it using the Hebrew term “Shabbat”, which I have maintained for authenticity.
with everyone’s welcoming behavior at the local, small synagogue. My relatively simple knowledge of Spanish was no barrier; I was encouraged to speak in Spanish, and patiently assisted with translations and explanations**. I’m learning that there are special benefits of a small community (this is all in comparison to New York, to be sure); it’s truly the quality, not quantity that matters. (‘Returning to My Roots: A Sephardic Jew in Spain’) 35

Most of the posts on this site consist mainly of text, typically between 600 and 900 words, and some contain photographs of Zohar’s travel. When documenting trips away from Madrid, the posts are almost entirely visual with short descriptions. The design of Zohar’s travel site does not utilize the technical capabilities of the medium extensively. Zohar does not include multimedia other than photos, and the navigation system is difficult to use. Zohar’s site would benefit from tags to help the reader navigate posts, and videos or timelines would certainly enhance the content. Zohar only implements basic web publishing skills in this site rather than a technical expertise developed over extended exposure to this platform. However, Zohar created this site while abroad, when she was separated from the resources Macaulay offers, including the consultation of the faculty, ITFs, and her classmates. And despite the lack of advanced technical development, the site does still function as a journal and archive of Zohar’s time abroad, which was her intention.

In the interview, Zohar exhibited uncertainty about which of her courses used the ePortfolio system. The one experience she definitively remembered was building a site in groups for the final project in Seminar 2: The People of New York City. When asked how this experience helped her to create her travel site, Zohar said, “It was really about knowing the

35 This post, and all the student work included in this dissertation, is unaltered, including all marks and errors. The asterisks remain as they are in the original post.
interface and how to navigate through WordPress that I learned most about. Dates, timestamps, how to navigate within the dashboard, how to hyperlink things… the technical skills is what I learned through the classes and seminars” (Personal Interview). Zohar noted that this previous experience made it possible to build the site since she was not “starting from square one.” These basic skills are evident in Zohar’s Expo submission. The submission, however, lacked the inclusion of multimedia from outside sources or the creation of original interactive media. This could be because Zohar’s site is not research-based, and therefore, the primary purpose does not include the publication of data or complex information. As a digital storytelling site, it may not need information graphics and interactive media to be successful. On the other hand, this could be evidence that Zohar did not develop these skills through the four required seminars, which would indicate a failure of the program or failure of Zohar to transfer the skills into her own work.

Throughout the bi-weekly posts, Zohar’s tone shifts from experiential to reflective. Some posts express the observations of Zohar as a young student traveling to a foreign place for the first time: Zohar notes that she managed to live in Spain without consuming jamon and laments returning to American coffee after drinking cafe con leche. Later posts take a more circumspect perspective, connecting the everyday experience of living in Spain to the greater impact such an experience has on her. For example, at one point in the semester Zohar’s family visits from America, and she documents their visit in “All About My Mother (And Grandmother).” Introducing her mother and grandmother to Spain changes Zohar’s perspective on the city of Madrid:

  Few words can truly sum up walking through the streets of Madrid with my mom on my right and my grandmother on my left. There’s something about
generational continuity that makes us humans feel like part of something greater than we are; it connects us to the past, and synchs us with the present. This past week hosting two of the most important women in my life was a meaningful reminder of my place in this world, especially after three months of feeling quite disconnected from it. (“All About My Mother (And Grandmother).”)

This post marks a shift from posts that chronicle Zohar’s travel to ones that reflect and connect this journey to her past and future.

This trajectory culminates in Zohar’s final posts in which she begins to articulate what she has learned from her time abroad. Zohar’s reflection recounts an intense, holistic learning experience that will take time to process fully. In “My Week of Lasts,” which also serves as a draft for the speech she was preparing to give to her adoptive Jewish family in Madrid, Zohar struggles with the impeding transition back to America, writing:

As the dreaded departure day comes closer, I’m struggling to come to terms with the closing of my experience here. Madrid life–its people, its streets, its rhythm–is permanently impressed in my heart and mind. Familia is another extended part of my family.

The first move in my life, from Israel to New York, tore my heart in two; will leaving Madrid tear my heart even further? Or will this second tearing of my heart create me a third source of love in my life, in a third geographic location? Can my love possibly extend that far?

The use of the interrogative indicates both the awareness of an audience and the use of this site as a journal for herself: Zohar blends the extensive and reflexive modes in her writing. She uses the site to share her personal growth.
In an attempt to summarize and share a small portion of this realization, Zohar creates a list in the post “From Rosh Hashana to January 1st: A New Year, A New Me.” Of the many points Zohar lists, the following is particularly striking:

People are not actually so different from one another. The Spaniards, Germans, English, Dutch, Czech, Italians (this covers the scope of people I’ve met over the past four months), they all want love, good health, and happiness. Our living styles may be drastically different from one another (I’ve lived in Spain without eating jamón once), but we all have the same basic human desires. If you truly take away our superficial diferencias, what remains are humans, and that is of greatest worth and importance.

The gorgeous prose that tugs at the emotions of the reader is part of what makes this site successful as a coming-of-age travel narrative. Although seemingly unbeknownst to the author, this site follows in the genre of travel narratives popular in the nineteenth century and revitalized by travel magazines and blogs in the 2000’s. Zohar has created a hybrid of travel writing and public journaling that blends generic elements such as chronology of events, experiential learning, and personal reflection using the affordances of technology to document and archive her experience. Through this endeavor Zohar learned that composing in a public, digital space can also provide an unexpected audience. While Zohar’s site does not demonstrate the transfer of advanced technical skills, it does showcase a successful learning experience because writing in this digital travel log helped her to chronicle and reflect on her experience, and share that experience with a larger community.

Comparisons
All three of these submissions demonstrate the transfer of basic digital literacy skills from the required seminars at Macaulay to personal use of the ePortfolio platform. In the case of Zohar’s travel blog, the technical skills are minimal but still significant. As Zohar stated in the interview, this site would not exist if she had not learned how to create a blog in her coursework, and this blog made an impact on both her personal experience as well as those of other members of the Macaulay community. Zohar found power in using the ePortfolio system as a platform for her writing. Both Zohar and Victoria articulate their belief that they developed digital literacy skills in their interviews, even though this progress is not always evident on their Expo submissions. Both Zohar and Victoria could see room for improvement on their sites, but unlike Zohar, Victoria intended to continue working on her site in the future. For Zohar, the site was complete when her trip ended, although she anticipated that other students might continue to consult it for information. For Victoria and Christina, their sites were works in progress that they wanted to continue developing after they graduated from Macaulay. Like Zohar, Victoria’s desire to revisit the site is driven by participation from her audience. Christina, however, was propelled forward by audience engagement with the site as well as her passion for the deaf community, the development and proliferation of her play, and the perceived potential for this site to connect to her future work as a speech pathologist. Perhaps this is because Christina had already been accepted to a graduate program in the field at the time of the interview, while Victoria’s post-college plans were not solidified, and Zohar was in her junior year at Macaulay.

Out of all of the sites submitted for the Expo, Christina’s displayed the most technical aptitude, due to its information architecture, multimodal elements, and audience awareness. Christina was able to use the medium to convey her message. All three of the students interviewed utilized their sites in ways that made their work more dynamic and interactive, but
Christina could not have accomplished her goal without the affordances of this platform. Her site, *Storytelling and Sign Language*, demonstrates the advantages of publishing on a digital media platform: some arguments are greatly enhanced by the use of visual and aural rhetoric. Christina’s site provides evidence that requiring the use of the ePortfolio platform at Macaulay can perpetuate digital literacy practices through the development of new skills and awareness of how those skills translate to a larger context outside of coursework.

**Conclusions**

This study showcases the results of one model for digital writing instruction at the college level. These observations are limited to the scope of the dissertation project and the focus on one urban honors program. Furthermore, the students interviewed for this study are exemplary in many ways, and may not be representative of the typical Macaulay students. However, the interviews I conducted contextualize the merit of this application of technology to an immersive learning experience by demonstrating that students can apply what they learned in their coursework when creating their own sites. The results provide evidence that the incorporation of WordPress blogs into general education courses at Macaulay can effectively prepare students to create their own sites outside of the conventional coursework. The general education seminars provide opportunities for the students to observe and engage with the resources available in New York City, and use these experiences to create digital scholarship. The ePortfolio system provides a platform through which students can share their observations, reflections, and creations, and archive this process throughout their career at Macaulay. Previous chapters established the ways in which the program employs the platform in the four required seminars, and this chapter explored the effects of that approach on the development and deployment of digital literacy skills beyond the classroom.
I directed the conversations with my interviewees to address the instruction they received before and during the construction of their personal sites and asked them to articulate what they learned through this process. All of the students credited the use of WordPress in their coursework as essential to the creation of their individual sites, and two of the interviewees mentioned one-on-one work with their ITF as an important factor in their success. Although the three interviewees varied in the degree of specificity they were able to recall from the instruction they received in their coursework, they were all adamant that they would not have had the technical skills to create a personal site on WordPress without having previous exposure to the ePortfolio system in their coursework. Christina and Zohar both felt uncomfortable with the technology and had very little experience blogging before entering Macaulay. Although they expressed insecurity in their technical aptitude, both of their sites display advanced competence in website and content creation. Victoria had the most experience experimenting with web publishing outside of her formal education. However, her site showcases new skills such as the creation and integration of an interactive map. All three sites demonstrate an advanced understanding of information architecture and multimedia content reaction, as well as an understanding of visual and verbal rhetoric.

In all three cases, this progress demonstrates “informational learning,” which Robert Kegan defines as “extending already established cognitive capacities into new terrain” (48). Kegan uses this term to contrast “transformational learning,” the central concept in his work “What ‘Form’ Transforms?: A Constructive-Developmental Perspective on Transformational Learning.” Put simply, information learning “changes . . . what we know,” while transformational learning “changes . . . how we know” (Kegan, 49 emphasis in original). Informational learning lends itself to quantitative assessment and is an essential goal of a college
education. Victoria, Christina, and Zohar all gained valuable information from the research, writing, and building involved in creating their sites, demonstrated in their research results, analysis, and language acquisition. Although harder to assess, transformational learning denotes a profound shift in the way a learner perceives themselves and the world. All three of these students are able to link personal experience with academic pursuits, and all three of these sites make that connection explicit to the viewer. This shows a transformative learning experience for all three of these students.
Chapter 7

Implications for Digital Pedagogy and Future Research

A Review of the Results

The results of this dissertation indicate that students do not have, or have trouble applying, the necessary digital literacy skills to create academic, multimodal scholarship when entering college, and that if educators prioritize these skills, then specific, explicit instruction and guidelines must be integrated into digital writing pedagogy in order to support students in this work. One innovation offered by this dissertation is the combination of three data collection and analysis methods: surveys, text analysis, and interviews. This triangulation method provides insight into the experience Macaulay students have composing in online spaces at three stages of their development, including their exposure to blogging technology before college, during their required coursework, and as an elected educational opportunity as upper classmen. The surveys conducted of Macaulay students, despite the low-response rate, demonstrated that students typically have social media accounts, but rarely blog for personal or extracurricular purposes. Both the Macaulay survey, as well as two nation-wide surveys of student writing practices using digital tools, found that students seldom use blogging technology for formal writing assignments in a classroom setting before college. These results confirm recent scholarship that debunks the digital native myth by demonstrating that students struggle to implement their digital literacy skills in an academic setting.

These results inform the analysis of student work composed on the WordPress-based ePortfolio sites as a part of the required general education seminars at Macaulay Honors College. A textual analysis of sites from both the humanities and science-based courses suggest that students write reflexively and without the use of multimedia or folksonomic elements when
composing for low-stakes assignments that do not require the integration of images, video, hyperlinks, tags, or comments. Even if students have experience creating and integrating media through the use of social media or through the use of blogging technology in their earlier coursework, they still do not take the opportunity to develop their digital literacy practice when composing course-related assignments online unless the assignment prompt explicitly outlines how they should implement these affordances. This is especially surprising considering that Macaulay students have reliable access to the Internet and media creation tools, as well as considerable financial and instructional support from this school. When specifically instructed to create multimodal projects with ample support to do so, students tended to rely on familiar forms of image and video creation rather than embracing more experimental forms of media such as the creation of animations, interactive infographics, or custom maps. Although this deficiency could be attributed to laziness or lack of interest, those attributes are not typical of the Macaulay honors community. There appears to be a disconnect between what students consider to be academic work and how they view composing online. As the landscape of content creation continues to evolve across all facets of the publishing industry, familiarity with various modes of media creation becomes increasingly important, and educators should consider the benefit of cultivating a variety of multimodal writing skills when designing their curriculum. Perhaps most perplexing was the complete lack of commenting and tag use in all of the course content analyzed for this study. This is a missed opportunity to build student confidence and competence as digital citizens. Both commenting and tagging are basic elements of a digital literacy practice that allow students to participate in digital culture broadly across platforms, and an understanding of how to participate effectively is essential to educating students in the 21st century.
Despite the low engagement with multimodal content creation and interactive folksonomic elements in the low-stakes assignments completed on the required ePortfolio seminar sites, most high-stakes assignments demonstrated an initial employment of these features. For students who chose to create their own ePortfolio sites as upper classmen, these introductory experiences transfer into further an exploration of website creation and design. The students interviewed as a part of this dissertation project all expressed the positive impact that their experience using the ePortfolio platform as a part of their coursework had on their ability to successfully create their own sites. Although only nine students submitted entries to the ePortfolio Expo competition, it seems to be clear that those who did felt capable of doing so because of their exposure to the ePortfolio platform in their coursework. When provided with the space and support to design an ePortfolio that reflected their experience, research interests, and personal passions outside of the parameters of formal, evaluated academic requirements, the students blossomed as digital content creators. A close reading of three Expo submissions revealed that students are able to envision an intended audience outside of the college community and meet the needs of that audience through the affordances of the digital space, such as the use of multimedia and interactive elements that invite their readers to actively participate in their sites. Developments in the digital literacy practices of these students are remarkable in the traditional sense of this word—they should be mentioned because they are exceptional. Interviewing these students in combination with analyzing their work provided insight into the evolution of their thoughtful use of visual rhetoric and technical skills. This leads me to conclude that students are able to transfer what they learn in course work and expand on it when encouragement from instructors and technology fellows is continually provided to support these extra-curricular uses of the platform. If students are given the time, space, and support to do
innovative work, some of them will create exceptional products. I have no doubt that the sites these students submitted to the ePortfolio Expo will be advantageous for these students when applying to graduate school or professional opportunities, and that is a desirable result for any university initiative.

**Implications for Digital Writing Pedagogy**

Statements issued by the Common Core State Standards and the Writing Program Administration stress the importance of digital literacy, and the increased efforts of individual schools, teachers, and administrators across the country, indicate that digital literacy skills should be incorporated into the K-12 or college-level curriculum. Therefore, conversations regarding the preparation of students to use web-based tools must happen early and frequently in a university setting, especially when digital literacy and digital writing skills are an objective set forth by the institution. Surveys of incoming students such as the one explored here, as well as diagnostic reporting by students incorporated into entrance writing exams, are two possible approaches that can inform instructors of student digital and information literacy levels upon admittance to the school. In order to effectively integrate digital writing into the college curriculum, whether that be in the form of ePortfolios or any other online engagement, instructors must be aware of how prepared students are to use these spaces to produce, consume, and critique information. At this time, many students require a considerable amount of instruction in both the basic use of digital tools and a deeper understanding of their participation in online spaces.

Macaulay addresses this need through the required use of the ePortfolio system, mandatory multimodal final projects, and the Instructional Technology Fellows program. In order to execute the ePortfolio program successfully, all students are provided with Mac laptops, in-house computer services, and workshops on how to use these tools. One-on-one, dedicated
instruction like the ITF model rarely occurs, and also remains difficult to fund. Based on my study of the Macaulay Honors Program, I strongly recommend devoting resources to dedicated instructional technology support for instructors and students. When possible, assigning this work to graduate students is mutually beneficial: the skills graduate student build by collaborating with their peers, senior faculty, and students on technical projects is valuable in both the traditional and alternative academic job markets. Obviously, this is financially impossible for many institutions, but if the education system is dedicated to teaching students to create digital content, then they must provide access to the tools and the instruction needed to develop a critical digital literacy practice. This difficult paradox must be addressed at the highest levels of institutional and state administration; educators and parents should appeal to those in control of the funding for public education and demand that money is allocated for access to and instruction in digital technology.

However, many alternative models of digital literacy education exist. For instance, one comprehensive approach is to implement a “digital citizenship” course, such as the Living Online curriculum (http://www.livingonlinelab.org/) designed by Reuben Loewy that students take in their first year of college. Versions of this course could address issues of identity, privacy, authority, authenticity, copyright, and other vital skills that deal with finding, evaluating, and creating information online. The digital citizenship course can and should be tailored based on information about the digital practices gathered through surveys or diagnostics completed by students. Similar courses provided by libraries or first-year experience programs already occur in institutions nationwide, both in face-to-face and online courses. It is worth noting that most of these programs do not require students to create individual sites, and those students who do create their own sites often use an ePortfolio platform hosted by the school. This
is the case with the Macaulay WordPress platform; students are not instructed on how to purchase their own domain name or host their site on personal servers. However, the advanced level of digital literacy needed to set-up and host a site is practiced in other programs such as “A Domain of One’s Own” launched by Jim Groom at University of Mary Washington (UMN). This program encourages all first year students to create their own web space to develop and maintain throughout their college career. This model allows students to collect and curate materials from all of their courses in one space alongside personal, extracurricular, and professional interests. It also teaches students to build their own web presence, including and understanding of how domain names and server space functions, which ensures they will have the ability to maintain this space after they graduate (assuming they can pay the hosting fees).

Similarly, as discussed in Chapter 2, instructors such as Karl Stolley advocate for teaching mark-up and programing languages as a requirement for first-year students. This attention to coding is also reflected in recent K-12 level initiatives nationwide that strive to introduce computer science lessons to students as young as five years old. Yet programs of this nature, in whatever form they are offered, can be difficult and time-consuming to implement as well. A program like UMW’s takes an incredible amount of commitment and training for all of the faculty and staff involved. Furthermore, with so many general education courses required by universities, adding another requirement may cause resentment from students and disruption to already complex scheduling systems. Yet, the benefits of requiring an advanced digital literacy initiative that includes hosting a site and learning code seem to be self-explanatory at this point: learning the language of the

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36 According to the project website, the Domain of One's Own project (DoOO) allows UMW students, faculty, and staff to register their own domain name and associate it with a hosted web space, free of charge while at UMW. With their web space, users have “the opportunity and flexibility to design and create a meaningful and vibrant digital presence.” (About)
web provides students with an understanding of how the online world works and gives them the tools to actively participate in the digital realm.

Perhaps the problems of time and money are primary reasons why digital literacy instruction is often relegated to composition or first-year writing courses. The first-year writing course presents a logical location for discussions of multimedia content creation, as the course is typically mandatory for first-year students, and the focus on composition continues to shift toward digital publication. As the WPA statement indicates, the writing studies community recognizes this need and asks composition instructors to answer this call in their classrooms, writing programs, and tutoring centers. In the WPA Statement “composing” refers broadly to complex writing processes that are increasingly reliant on the use of digital technologies:

“Writers also attend to elements of design, incorporating images and graphical elements into texts intended for screens as well as printed pages. Writers’ composing activities have always been shaped by the technologies available to them, and digital technologies are changing writers’ relationships to their texts and audiences in evolving ways.” (“WPA” 2014).

The WPA statement also includes several specific recommendations for curricular development. These areas of attention include that by the end of first-year composition students should “[u]nderstand and use a variety of technologies to address a range of audiences,” and should be able to “[a]dapt composing processes for a variety of technologies and modalities.” Yet, this recommended transition to include digital literacy skills into the composition classroom remains under scrutiny due to the already overwhelming agenda of the typical first-year writing course. Basic writing skills, academic writing techniques, rhetorical analysis, close reading, genre awareness, and research methods are only some of the many objectives found on a composition course syllabus. Many colleges and universities have implemented a two-course composition
series to accommodate these demands, but even with the additional time a two-course sequence affords, instructors still need to be trained to teach digital literacy skills, particularly those associated with publishing multimedia content online. The job market in composition and rhetoric reflects this need, as advertisements that include “digital” and “new media” specialties continually rise (See rhetmap.org results from Jim Ridolofo 2014).

It is not enough for composition instructors to embrace digital literacy education as a part of the first-year writing course: digital writing should be developed at all levels of education across the disciplines. As is evident from the text analysis in Chapter 5 digital writing can be integrated into courses based in the hard and social sciences purposefully and successfully. Just as multimodal scholarship is becoming more common in all areas of academic research, digital content creation is becoming an industry standard across in all sectors of the economy. Institutions of higher education are in a unique position to provide students with the skills they need not only to critically consume digital content, but also to create and innovate in this field.

One of the unique features of the Macaulay Honors Program is that the digital writing platform is integrated into all four general education seminars and used by instructors across the disciplines. The ITFs paired with the faculty members are typically from different academic disciplines as well, encouraging collaboration across the curriculum. This intermingling of faculty and staff fosters communication, and leads to finding more dynamic and innovative solutions to pedagogical problems: the methods employed in one course may offer a solution for a course taught by another professor, or one in a different discipline, or even one at another campus. This collaborative program also extends to the staff and administrators who work with the faculty, ITFs, and students to facilitate the development and maintain of the ePortfolio platform. Of course, there are times when these partnerships break down, or fail, or lead to conflict. However,
conflict and failure can also lead to creative solutions, and risk taking is a necessary component of innovation. Ultimately, collaboration is key to a successful digital literacy program.

The Need for Further Research

As mentioned previously, there are numerous ePortfolio programs worldwide, all of which use a variety of platforms and instructional approaches. Ideally this dissertation project would expand to include comparisons of additional WordPress based programs—such as UMN’s DoOO—and programs that utilize other ePortfolio platforms. These comparisons could shed light on the overall efficacy of the Macaulay program, as well as the efficacy of ePortfolio programs in general. The goal of comparative ePortfolio research should be to develop best practices based on several exemplary programs through extensive quantitative and qualitative data analysis. Additionally, since Macaulay is an elite honors program in New York City, these results should be placed in contrast to ePortfolio programs at community colleges, private liberals art schools, and large public institutions in rural areas to offer a range of perspectives. Further attention to economic, racial, gender, and geographic disparities would strengthen a study of this kind.

Throughout the process of this research project, the desire to compare digital writing samples to an equal number of traditional writing samples for similar assignments became apparent. This would provide a basis to compare when and why students compose in the extensive versus reflexive modes online. This would constitute a true experimental method where control groups could be monitored and compared. Many instructors use a combination of paper or print based writing assignments in conjunction with digital writing projects, so a study of this kind is certainly feasible.
Finally, a call for more large-scale data studies of student writing is recommended. In the past five years composition and rhetoric scholars have adopted corpus-based computational analysis to investigate the rhetoric of the job postings (Lauer), professional journals (Mueller; Almjeld et al.), and dissertation records (Miller; Gatta), but are only now beginning to employ these methods to research student writing—two recent examples include Aull’s examination of student entrance exams and Howard’s analysis of student citation practices. Meanwhile, institutions and writing programs often archive hundreds if not thousands of student writing samples from across all disciplines and grade levels. The question is: how can we use this data to positively impact our pedagogical practices? This is a new facet of writing studies research I hope the field will embrace in the coming years as computational methods become more accessible to scholars in composition and rhetoric.

Final Remarks

This project has only touched the surface of the archive of student writing available at Macaulay Honors College. The ePortfolio program is over a decade old with over 3000 course sites created during that time. The research reported in this dissertation provides a window into that data, but possibilities for further research are endless. I hope this project inspires other researchers both at Macaulay and in other programs that have large databases of student writing to investigate such data critically to add to the growing conversation on digital literacy practices in higher education.
Appendix 1: Assent Form

Assent Form:
This survey was designed by Amanda Licastro, M.A., Instructional Technology Fellow at Macaulay Honors College and Doctoral Candidate in English at the Graduate Center, CUNY. The final version of this survey was approved by Dr. Matthew Gold, Advisor to the Provost for Master's Programs & Digital Initiatives, CUNY Graduate Center and Assistant Professor of English, New York City College of Technology, CUNY (City Tech) and the Internal Review Board (IRB) at City Tech.

The purpose of this survey is better understand your online practices previous to entering Macaulay Honors College. The survey will begin on 10/21/2013 and continue through 11/08/2013. Completion of this survey will take you approximately 20 minutes.

Participation in this project is completely voluntary. If you choose not to take part there will be no penalty. You may choose to stop filling-out the survey at any time with no penalty. There are no risks associated with your involvement in this research project beyond those associated with everyday life. You will directly benefit from this project as your involvement will provide vital information that will help guide future efforts to effectively integrate technology into writing intensive coursework such as the Macaulay Honors Seminars.

No one at Macaulay Honors College will be able to connect your survey responses to you as only Amanda Licastro will have access to the survey data and results will only be presented in total. The surveys are anonymous and no identifying information is available to the researcher. Electronic data collected over the internet will be kept in a password protected and encrypted data file on Amanda Licastro’s Macaulay issued computer which is also password protected.

We hope that you will respond honestly to each question. Your responses are important to us, so please help us by answering every item that you can to the best of your ability. If you don’t want to answer a specific question, or if any of the items make you feel uncomfortable, feel free to leave that question blank and move on to the next.

If you have any questions about this project, or for more information, please contact:
Amanda Licastro, Principal Investigator: alicastro@gc.cuny.edu, 215-801-1878

If you have any questions about your rights as a research participant, you can also contact:
Eric Rodriguez, HRPP Coordinator: erodriguez@citytech.cuny.edu, 718-260-4978

Clicking below indicates that I have read the description of the study and I agree to participate in the study:
Appendix 2: Survey of Seminar 1 Students at Macaulay Honors College, Fall 2013

Survey Content (Distributed using Opinio as links by email)

1. What is your current age?

2. Please give the name and location of the high school you attended:

3. Please list the language(s) in which you have fluency:
   1. If you listed more than one language, which do you consider your primary language?

4. Previous to entering Macaulay Honors College, which of the following did you visit on a regular basis? Select all that apply.
   a. Facebook
   b. Myspace
   c. Twitter
   d. Tumblr
   e. Google +
   f. Formspring
   g. Xenga
   h. Reddit
   i. Other
      i. Please give URL

5. Based on your answer to the previous question, how often did you contribute content like posts, comments, responses, status updates, tweets, etc. on at least one these sites? Select one
   a. 1 or more times a day
   b. 1 or more times a week
   c. 1 or more times a month
   d. Occasionally throughout the year
   e. Other
      i. Please explain…

6. Previous to entering Macaulay Honors College, did you ever read blogs? Note: for this purpose a blog is a website with short posts which are regularly updated and listed in chronological order. Blogs are often narrative, and the can address a wide range of subject matters, for example politics, food, fashion, sports, etc.
   a. Y/N
   b. How frequently? Select one
1. 1 or more times a day
2. 1 or more times a week
3. 1 or more times a month
4. Occasionally throughout the year
5. Other
   a. Please explain…

7. Previous to entering Macaulay, did you maintain a personal website?
   a. Y/N
   b. If you did maintain a personal website, please select all that apply:
      c. I hosted this site using a blogging platform such as Wordpress.com, Blogger, Wix, tumblr, or another free or paid for service.
         i. If yes, please indicate which platform you used:
      d. I hosted this site on a private server.
      e. I (or someone on your behalf) purchased a domain name for this site.
      f. I designed the interface (either using the elements provided by the blogging platform such as selecting themes and color schemes, or using my knowledge of markup languages).
      g. I wrote code using a programming language to develop this site.

8. If you did maintain a personal website, how frequently did you post to this site? Select one
   a. 1 or more times a day
   b. 1 or more times a week
   c. 1 or more times a month
   d. Occasionally throughout the year
   e. Other
      i. Please explain…

9. Previous to entering Macaulay, did you write posts on a site or managed by a group or organization? (This could include writing for a job or internship, or writing with for a special interest or community group such as a religious organization, team, or political group.)
   a. Y/N
   b. If yes, please describe the site (relevant information would include the URL, purpose, and sponsor of the site):
   c. How frequently did you contribute to this site? Select one
      i. 1 or more times a month
      ii. 1 or more times a week
      iii. 1 or more times a day
iv. Occasionally throughout the year  
v. Other  
   1. Please explain…

10. Previous to entering Macaulay, has a teacher, tutor, or educator asked you to write in an online space for educational purposes - such as on blogs, ePortfolios, discussion forums, chat rooms, or in an online space that had an educational focus?  
   a. Y/N  
   b. Please describe the site you posted on (relevant information would include the URL, purpose, and sponsor of the site):  
   c. How frequently did you compose on this site? Select one  
      1. 1 or more times a day  
      2. 1 or more times a week  
      3. 1 or more times a month  
      4. Occasionally throughout the year  
      5. Other  
         a. Please explain…
Appendix 3: Interview Consent Form

Interview of Students at Macaulay Honors College, May, 2015

This survey was designed by Amanda Licastro, M.A., Instructional Technology Fellow at Macaulay Honors College and Doctoral Candidate in English at the Graduate Center, CUNY. The final version of this survey was approved by Dr. Matthew Gold, Advisor to the Provost for Master's Programs & Digital Initiatives, CUNY Graduate Center and Assistant Professor of English, New York City College of Technology, CUNY (City Tech) and the Internal Review Board (IRB) at City Tech.

The purpose of this survey is better understand your work on the Macaulay Honors College ePortfolio site. Completion of this interview will take approximately 10 minutes. Participation in this project is completely voluntary. If you choose not to take part there will be no penalty. You may choose to stop the interview at any time with no penalty. There are no risks associated with your involvement in this research project beyond those associated with everyday life. You will directly benefit from this project as your involvement will provide vital information that will help guide future efforts to effectively integrate technology into coursework such as the Macaulay Honors Seminars.

Amanda Licastro will conduct the interviews through audio or video recording and will use the results for use in her doctoral dissertation. The method of recording is up to you as a participant. The data collected will be kept in a password protected and encrypted data file on Amanda Licastro’s Macaulay issued computer which is also password protected.

We hope that you will respond honestly to each question. Your responses are important to us, so please help us by answering every item that you can to the best of your ability. If you don’t want to answer a specific question, or if any of the items make you feel uncomfortable, feel free to move on to the next question.

If you have any questions about this project, or for more information, please contact:
Amanda Licastro, Principal Investigator: alicastro@gc.cuny.edu, 215-801-1878
If you have any questions about your rights as a research participant, you can also contact:
Eric Rodriguez, HRPP Coordinator: erodriguez@citytech.cuny.edu, 718-260-4978
Survey Content: https://survey.gc.cuny.edu/s/?s=272
Appendix 4: Interview Questions

Name:

1) Why did you create this ePortfolio site?

2) Who do you imagine as your audience for this site?

3) What was your experience blogging before creating this site?

4) What did you learn from using the ePortfolio system in your seminars that helped you create this site?

5) Where do you see this site in 5 years? What do you hope to be doing then?
Appendix 5: Coding Schema
Appendix 6A: Coding Database Seminar 1

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## Appendix 6B: Coding Database Seminar 3

<table>
<thead>
<tr>
<th>Seminar Number</th>
<th>Seminar Name</th>
<th>Instructor</th>
<th>ITF Name</th>
<th>Semester</th>
<th>Site Link</th>
<th>Assignment Stakes</th>
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<td>3</td>
<td>Science Forward 2014</td>
<td>Dr. Kelly O'Donnell</td>
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**Assignment Content**

- Assignment Link: [Macaulay CUNY EPortfolios](http://macaulay.cuny.edu/eportfolios/odonnell14/assignments/video-project/videos/)

**BioBlitz Project**

- Project Description: 
  - **Purpose:** Enhancing the public's understanding of biodiversity.
  - **Activities:**
    - **Observation:** Identifying and documenting species found during a specified time period.
    - **Participation:** Volunteers from the community.
    - **Data Collection:** Utilizing scientific methodologies.

**ITF on this project.** It will be graded on a four-point scale.

**Assignment Content:**

- **ITF Content:**
  - **Assignment:** Writing a peer-reviewed research paper.
  - **Instructions:**
    - **Research:** Conducting literature review on biodiversity conservation.
    - **Writing:** Drafting the paper according to the guidelines provided.
  - **Grading Criteria:**
    - **Content (30%):** Accuracy and relevance of the research.
    - **Structure (30%):** Clarity and organization of the paper.
    - **Writing (30%):** Quality of the written content.
    - **Presentation (10%):** Formatting and adherence to submission guidelines.

**Assignment Content:**

- **Assignment Link:** [Macaulay CUNY EPortfolios](http://macaulay.cuny.edu/eportfolios/odonnell14/2014/10/06/trouble-sleeping-get-off-the-computer/)

**Trouble Sleeping? Get Off the Computer**

- **Objective:** Understanding the effects of ICT usage on sleep quality.
- **Methodology:**
  - **Participants:** University students.
  - **Procedure:**
    - **Data Collection:** Self-reported sleep hours and ICT usage.
    - **Analysis:** Statistical analysis of collected data.
- **Findings:**
  - **Key Insight:** Increased ICT usage negatively affects sleep quality.
  - **Recommendation:** Reducing ICT usage before bedtime.

**Assignment Content:**

- **Assignment Link:** [Macaulay CUNY EPortfolios](http://macaulay.cuny.edu/eportfolios/adams2013/assignments/final-project/)

**Assignment Stakes (Low/High)**

- **Stakes:**
  - **Low:** Individual work.
  - **High:** Collaborative work with group participation.

**Assignment Content:**

- **Assignment:**
  - **Objective:** Preparing a final project report.
  - **Requirements:**
    - **Content:** Reflections on the course content and personal experiences.
    - **Presentation:** Effective organization and communication skills.

**Assignment Content:**

- **Assignment Link:** [Macaulay CUNY EPortfolios](http://macaulay.cuny.edu/eportfolios/adams2013/assignments/final-project/)

**Science Forward 2014**

- **Theme:** Science and Society
- **Activities:**
  - **Lecture:** Introduction to current scientific issues.
  - **Discussion:** Group analysis of scientific articles.
- **Assessment:**
  - **Criteria:** Participation, critical thinking, and written reflections.

**Assignment Content:**

- **Assignment:**
  - **Objective:** Understanding the role of science in societal issues.
  - **Requirements:**
    - **Research:** Conducting independent research.
    - **Reflection:** Personal interpretation of findings.

**Assignment Content:**

- **Assignment Link:** [Macaulay CUNY EPortfolios](http://macaulay.cuny.edu/eportfolios/adams2013/assignments/final-project/)

**Science Forward 2015**

- **Theme:** Science and Society
- **Activities:**
  - **Lecture:** Introduction to current scientific issues.
  - **Discussion:** Group analysis of scientific articles.
- **Assessment:**
  - **Criteria:** Participation, critical thinking, and written reflections.

**Assignment Content:**

- **Assignment:**
  - **Objective:** Understanding the role of science in societal issues.
  - **Requirements:**
    - **Research:** Conducting independent research.
    - **Reflection:** Personal interpretation of findings.
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