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**NAMED BUT NOT KNOWN:
TEACHING AND ASSESSING THE RESEARCH-WRITING PROCESS**

by

RUTH BOEDER

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

2020

MAJOR: ENGLISH (Rhetoric & Composition)

Approved By:

Advisor

Date

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DEDICATION

With gratitude for all they taught me, this dissertation is dedicated to the memories of Bernell Violet Mueller and Dr. Kathryn Klintworth.

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I don't think anyone reaches this point on their academic life's journey without feeling overwhelmed at the thought of all the support they had along the way. There are many people I will name here but also many who will remain unnamed. I am thankful to all, whether formally acknowledged or not. I would not be here if I had not been shaped by the experiences of your love for me.

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CHAPTER 1: Introduction

For me, this whole project began over a decade ago—nearly 15 years ago now. In my sophomore year of college, I was working in both the library and the writing center at my university. It was a small university, so the student workers in the library got to handle some of the lightweight reference questions—the ones that were a step up from simple directions to the bathroom or the printer—and my supervisors knew I wanted to be a librarian someday, so they allowed me to take on even more advanced roles than that. Meanwhile, I was also being introduced to the basics of composition theory by the director of the campus writing center, who had hired me as a peer tutor that fall. Ken Bruffee’s “parlor” metaphor for writerly participation in ongoing discourses had a big impact on my mind that year. Ever since that year of college, I’ve been engaged in helping students learn to research and to write, at four campuses of varying sizes and locales, sometimes as an instructional librarian and sometimes as a writing tutor and later a composition instructor. I’ve become increasingly convinced that the two processes are intertwined with each other and that although both are given short shrift within the broader academic curriculum, the complex dynamics of that relationship receive even less attention. This dissertation is the latest of my attempts to understand that dynamic, which I’ve come to think of as one process: the research-writing process. In this chapter, I will sketch out some of the conversations in the two scholarly parlors I’ve been floating between, tracing the common threads between each to explain how both groups inform me and this project and contribute to my vision of a single research-writing process.

Assignments involving “research” are nearly omnipresent in undergraduate coursework, so much so that the term may be close to overuse and, consequently, may possess only an imprecise meaning. In response to their instructor’s requirements, students are expected to access secondary

and primary source materials, frequently via complicated library systems, and to use those sources to create papers, projects, and presentations. (Unless otherwise noted, throughout this document, “research” will be taken to mean this form of secondary, document-driven information access, rather than original, primary knowledge creation.) Although the demand for research is high, the level of pedagogical support for this endeavor is inconsistent from campus to campus, course to course, and section to section—or as Susan Ariew more positively describes it, these instructional programs are highly customized to respond to their individual campuses (214). This dissertation project explores the variety of ways that research is presented to students inside one particular kind of classroom: the first-year composition course. The purpose/Creswell or the goal of this project is to establish a set of best practices for composition instructors who provide research support and training to students and to assess their progress as they master this important academic skill.

Literature Review

Research on “research” is surprisingly limited within the field of writing studies. What little work has been done seems to build from the traditions of genre studies (John Swales!) and Writing Across the Curriculum/Writing in the Disciplines (WAC/WID) and attempts to trace the boundaries and conventions of research *writing* as an academic genre. Edited collections from Ford and Zemliansky and Bishop have provided guidance in the teaching and pedagogy of the research paper for classroom practitioners. This body of literature does not delve deeply into examining the mental labor involved in actually performing research, but the literature of library and information science focuses on this almost exclusively.

Scholarly Context: Research in Rhetoric & Composition

Research finds its way into the composition classroom because, like writing itself, it is included in projects across multiple disciplines. Within the United States and its systems of higher

education, the ability to write has been considered important enough that it merits specific, mandatory instruction¹. As research becomes assigned as part of the process of composing particular projects, it also starts to fall into the purview of composition instructors. But this does not mean the field of composition instruction has established a common approach to research instruction any more than it has found a single correct way to teach writing. Neither does it mean that every instructor feels a duty to include formal research instruction among the myriad topics they squeeze into their short semesters.

However, there is some expectation from the field's professional organizations that writing instruction will also cover research instruction. The Conference on College Composition and Communication (CCCC), the National Council of Teachers of English (NCTE), and the Council of Writing Program Administrators (CWPA) have all issued statements and standards for writing classroom pedagogy and/or writing program design that discuss the importance of accessing and evaluating information as a part of the writing process ("Framework for Success", "Position Statement", "WPA Outcomes"). These documents codify a set of expectations for writing curriculum, but they are not prescriptively enforced as standards sometimes have been at primary and secondary levels of education. Individual instructors exercise their discretion to teach courses that they feel best fit their students' needs in their unique campus ecologies. At the same time, these composition courses frequently are part of a standardized writing program under the purview of a writing program administrator, who may facilitate collaboration with other campus units, such as the library.

¹ The emergence and professionalization of the field of composition has already been ably examined by Berlin, Crowley, North, Strickland, and others. These authors trace the development of the field out of instruction in English literature and rhetorical theory, motivated by a concern for underprepared students and catalyzed by various historic events and social factors. Interestingly, the field's turn from assigning literary-critical essays to engaging genres such as the research paper that have currency in disciplines outside or beyond English receives scant attention in these histories.

The term “research paper” has a popular, common understanding: students are assigned to learn about a certain topic (typically assigned by the instructor or pre-determined in some way by the course’s topics) by reading a certain number of sources (typically from traditional scholarly publications) and then write a certain number of pages that synthesize the information from those sources according to the formatting guidelines from an academic organization or discipline. However, a common definition that lacks a basis in fact is simply a stereotype. In reality, investigations by Hood, Melzer, and others demonstrate that the activity of research is carried out as a component of a larger composing process for many types of documents and projects.

Carra Leah Hood’s 2010 article “Ways of Research: The Status of the Traditional Research Paper Assignment in First-year Writing/Composition Courses” updates a 1961 study conducted by Ambrose N. Manning. Manning explored the prevalence of the traditional research paper, as roughly encapsulated in the definition above, in first-year writing courses. He discovered that it was assigned in 83% of these courses. Hood also mentions a follow-up study performed by Ford and Perry in 1982, which found that the research paper was still included in 78% of such courses. Surveying faculty at his own campus just before the turn of the millennium, Irwin Weiser found a similar preponderance of the research paper, with faculty especially assigning it at the 300 and 400 class levels and 70% respondents also “expect[ing] students to incorporate information from sources other than those assigned in the course”, specifically scholarly journals and books at the 300 and 400 level. During the years between these projects and Hood’s, scholars engaged in extensive discussion about altering the typical research assignment to enable greater agency on the part of the student and greater innovation in the final product—an alternative to the traditional model (Davis and Shadle describe a number of these as well as tracing their own history of the research paper’s development). Hood sought not only to measure the presence of a research

assignment in first-year composition courses, but also to determine how frequently the assignments could be characterized as “traditional” or “alternative”. Hood found a distinct difference between the private and public schools that responded to her survey; approximately 36% of private schools required a research project and 16% listed the traditional research paper as the expected product, whereas 85% of public schools required a research assignment and 4% of them asked students to write the traditional research paper. Overall, Hood’s research indicates that the traditional research paper is a diminishing subgenre, but the more contemporary alternative model retains a strong presence.

Dan Melzer’s book *Assignments across the Curriculum: A National Study of College Writing* takes a systematic approach to measuring the prevalence of major writing genres in disciplinary courses. Analyzing 2,101 writing assignments and following the models of James Britton and Anne Beaufort, Melzer attempted to map the purposes, genres, audiences, and roles invoked in college writing situations. He found that essay exams were the most common writing exercise, but research projects were the second most common. Similarly to Hood, Melzer found that the traditional paper (which he calls “modernist”, following Davis and Shadle) were far less common than alternative research projects.

Instead of focusing on the state of writing at a national level, Michael Carter’s “Ways of Knowing, Doing, and Writing in the Disciplines” is an expansive report on the state of writing at his own campus. This piece describes the discoveries he and his colleagues made as part of institutional program assessment, and explains their new framework for conceptualizing the relationship between the process of knowledge production and the various products that are evidence of that work across the university. Carter describes four major metagenres, or ways of creating knowledge that are common across disciplines and departments on his campus. He names

research writing from sources as one of these four metagenres, along with problem solving, empirical enquiry, and performance. Additionally, the sample assignments and outcomes he discusses for problem solving and empirical enquiry also include the activity of secondary research in their process. Carter does not comment on this, because the context for his study was ultimately focused on campus products and their assessment. However, this supports the argument that research and the behaviors associated with information literacy may be an even more fundamental skill than a simple genre analysis of the products called “research assignments” would suggest.

In “The Research Paper and Why We Should Still Care”, Douglas Brent acknowledges the omnipresence of research as a practice in a way that Carter, with his focus on named and naming genres, did not. Brent writes from the perspective of a writing program administrator to argue for continuing and even expanding the interest in teaching research as a component of composition curriculum. He asserts that “if the definition of ‘research’ is extended to include searching for information in any place outside the writer’s own self, then almost any writing is research writing” (35). To better reflect this expansive understanding of research, Brent uses the phrase “writing from sources” in his paper, and argues that this area of instruction is woefully unattended to. He urges program administrators and composition teachers to engage with this task in a more deliberate and thorough way not only to help students find a bridge to deeper understandings and better writing in disciplinary contexts, but also so that they can become proficient at research as a “master genre” (50; notice the similarity between Brent’s term and Carter’s metagenres).

Brent is unique among scholars in the field of composition in recognizing research as an activity that goes beyond the conventions of the genre whose products are labeled with the term. In his earlier book, *Reading as Rhetorical Invention*, Brent describes research as “seeking out ... new information in texts and amalgamating it with a preexisting mental structure.... Processing

discourse can thus be seen as a matter of accumulating and organizing knowledge as a basis for action” (p. 22). This definition captures in broad strokes what will be elaborated in detail in the following section, which presents commentary from the discipline of library and information science on the topic.

A very few other researchers in composition studies (Nelson; Artman, Friscaro-Pawlowski, and Monge) also focus on this deeper level of engagement with research practices, and call for the integration of information literacy practices into composition pedagogy through collaboration between library and disciplinary instructors. These instructors report their struggle to avoid a “skill-and-drill” practice that keeps the teacher and students focused on mastery of interfaces, rather than on deep engagement with texts and ideas, as Brent describes in his definition quoted above. Their reports of their successes and struggles in writing courses echo the stories common in the literature of library and information science, where librarian instructors have been developing, performing, and studying information literacy pedagogy for many years. Hearing these complaints echo in the literature of two fields for over a decade, and tracing their forward echoes through earlier publications, in this dissertation I respond to the call for a more nuanced understanding of what actually happens in the research process as it is practiced by undergraduate students.

Scholarly Context: Research in Library & Information Science

When research is taught in composition classrooms (and in other disciplines, as well), instructors frequently seek assistance from their campus library. Most academic libraries assign the duty of providing research instruction to specific employees, some of whom may have specialized in this area as they pursued a master’s degrees in library and information science (LIS). Some libraries have established complex research instruction programs, even including credit-

bearing, semester-long courses taught by librarian instructors, but those programs are a minority in the United States. For the majority of campuses and students, formal research instruction from librarians occurs in a single session per project or per course that supplements the disciplinary instructor's own teaching. Such a session runs the danger of becoming little more than a long, group, reference-desk-style transaction, though ideally it would transcend this and become an opportunity to practice a new set of skills and knowledge.

Within the field of library science, the performance of research is seen as an aspect of information literacy. The Association of College and Research Libraries (ACRL) has long established descriptions of behaviors that an information literate individual can perform recorded in the *Information Literacy Competency Standards for Higher Education*, which were recently supplanted by the *Framework for Information Literacy for Higher Education*. These documents attempt to capture the complexity of behaviors and tasks that individuals must navigate as they seek, obtain, and use information. What we call "research" can be broken down to a very granular set of tasks and attitudes; failing to perform any of them successfully can delay or derail a project. Although "research" elides a number of components, information literacy documentation seeks to explicate those parts back out, and information literacy instruction seeks to build novice researchers' awareness of this complexity at the same time that their performance of the tasks becomes stronger. As mastery of basic skills increases, the performance of research as a creative and exploratory act of knowledge discovery and creation becomes possible.

Information literacy researchers frequently focus their attention on student performance; one of the more widely-known examples is Project Information Literacy from the University of Washington's iSchool. The field of information literacy has a weaker understanding of disciplinary faculty's secondary research pedagogy, since library faculty are infrequently asked to participate

in a course beyond a single research instruction session. Though notable exceptions exist, such as Jacobs and Jacobs work, the development of sustained partnerships between disciplinary and library instructors has also been inhibited by many librarians' decision to prioritize the development of a credit-bearing information literacy course as part of general education or first-year requirements and independent of specific subject disciplines (Badke "Can't Get No Respect"; Wilkinson and Cairns). However, to responsibly develop such courses, instruction librarians must have a better sense of the current status of undergraduate research instruction, so that their required courses can segue into disciplinary research assignments. Such an understanding is also critical for first year composition instructors, as this class is typically tasked with preparing students for more advanced coursework in their major.

Librarians have also been hampered in their attempts at improving their instruction sessions by not knowing how those sessions aligned with the instructional goals held by disciplinary faculty or their models of the research process or assumptions about their students' research-writing abilities. Recognizing this, Manuel, Beck, and Molloy conducted a series of interviews with faculty from across the disciplines to find out what their campus colleagues found most and least useful and helpful in those sessions. In response to the question "Why do you think it is important that students be taught library research skills and information sources?", the two most common responses were summarized as "Students lack skills" and "Combat the internet." For twenty-first century information practitioners, this is a disheartening response; it indicates that the faculty, in that time and place at least, were reluctant to recognize and respect their students' skills, however nascent they might be, and were equally reluctant to consider the greatest technological revolution in human history since the printing press as a valid source of knowledge. These faculty members seem to conceptualize their role in teaching the research-writing process as guardians of a received

tradition, which must be preserved and passed on to a new generation. In contrast, I (and other librarians) view the research-writing process as a dynamic and evolving practice, or even set of practices, pragmatically bound to the currents of thought and conversation surrounding the researcher-writer.

Colleen Addison and Eric Meyers trace three areas, three threads of discourse and theory, which have developed in the study of information literacy within the literature of library and information science. The first is “information literacy as the acquisition of ‘information age’ skills” (page number!), which focuses on the successful replication of a measurable performance: e.g. students can retrieve an article from a database. This is the essence of the skill-and-drill perspective bemoaned by many library and composition instructors, but it is the aspect of information literacy that is part of many popular stereotypes of the highly skilled information age student or worker. It is also the area this is most commonly reflected in standards and outcomes at all levels of education, due to the ease with which it can be measured and assessed. The second discourse area Addison and Meyer identify “emphasizes the application of abstract mental models to activities involving information” and “focuses on how individuals [cognitively] process information” (page #). This area of thought acknowledges the importance of metacognition and self-reflection to improving information literacy skills. The third thread explores information literacy as “engagement in a set of practices involving tools and media that are deeply embedded in a particular context or activity. #” This area situates information literacy instruction and practices within specific contexts and situations, since individual people process information in response to their specific locales and needs. It also explores the ways that an individual’s information literacy evolves over time and is challenged by limitations imposed by structural and systemic realities; overall, it is reflective of ecological and complexity theory (which will be explored further in the

following section). Being much harder to replicate in a classroom environment, especially in the single class meeting or “one-shot” research instruction sessions that are the most common model, the latter two areas of information literacy study are less practiced as a pedagogical approach than the first one. By studying the practice of research in specific disciplinary situations, this project increases knowledge of what Addison and Meyer identify as the third thread of information literacy theory, the ways that people build knowledge in response to localized, situated information needs.

In the third chapter of his book *Teaching Research Processes*, Bill Badke, a professor-turned-librarian, calls out the ongoing issue of lack of knowledge about information literacy and the research process among the academy writ large. He identifies eight specific contributing factors, some of which overlap with and inform the interpretation of Manuel, Beck, and Molloy’s findings above. The foundation for the other seven causes—and the one most relevant to this dissertation study—is the first listed in the chapter, which he labels “The Understanding Gap” (p. 50-54). He summarizes the problem thus:

Though we are dealing, in the teaching of research processes, with a complex and challenging set of understandings and skills that require much instruction and practice to develop to the point of sophistication, the response of academia to this point has been to make it a remedial issue. This indicates a misunderstanding of the nature of the challenge and, indeed, of the complexity of research processes. ... library instruction *per se* is not the point. Information literacy is about *understanding information and how it works*. ... to equate this with teaching students how to use a library is as short-sighted as assuming that driving a car

simply requires that a person needs to know how to use a steering wheel. (p. 51;
italics original)

Badke is not alone in envisioning and naming the research-writing process as a complex one, although he and many other scholars are not necessarily deploying either complexity or ecological theories when they use the terms. Examining the ways these scholars describe research and writing individually as complex processes highlights the overlap and reveals the close relationship between the two.

Scholarly Context: Research-and-Writing as a Complex, Iterative Ecology

In the mid-20th century, it was possible to write a monograph that could describe the existing information systems of the United States from the lens of a particular discipline—economics for instance (Machlup), or communication (Kaufer and Carley), or library science (Wilson). Systems theory had been developing through the early part of the 20th century and the means of communication, information sharing, and knowledge building were limited enough that the system could be comprehended and explained. As the 20th century closed and the personal computer revolution began, though, information systems became more and more dynamic and open. In other words, they became increasingly complex—although there were always hints at the complexity of such systems. Writers and researchers, teachers and students, all operate within the complex system of information that composes part of our environment. Understanding this complex system more thoroughly helps to illuminate the work we ask our students to do when we assign a research-based writing assignment.

I will not attempt to provide a full overview of complexity/complex adaptive systems theory (For a reader seeking such an overview, I would recommend Taylor's *The Moment of*

Complexity, Holland's *Signals and Boundaries*, or Johnson's *Simply Complexity*, of which I paraphrase section 1.4 for the list below.) In brief, however, complexity theory asserts that:

- Systems are collections of interacting objects or agents; their behavior is sometimes ordered and sometimes disordered
- The behavior of objects/agents is affected by feedback from within the system and/or their memory of experiences in previous, similar sets of circumstances—and thus, objects/agents can adapt their strategies to make best use of the available, limited resources
- The system itself is open and alive; it can be influenced by its environment and changes to that environment and evolve in response to those changes
- Emergent phenomena happen within the system, which are surprising and unpredictable; these arise without the influence of a central controlling power in the system

The scholars in this section help illuminate how the research-writing process demonstrates these various features of complex systems. In our daily lives and in our classrooms, researcher-writers engage and contribute to the complex system of information and knowledge production that we are enmeshed in, here in the 21st century.

Writing in the 1970s, Patrick Wilson describes the activity of research in his contemporary information system thus:

“The public stock of knowledge changes constantly.... To discover the extent of change in the body of knowledge, we have perpetually to review the results of inquiry.... The task is not, or not primarily, to increase our knowledge, but simply to say what it is. It is, then, not

a job of original research, but it is a job of research: library research, or, as we shall call it, documentary research.” (p. 10)

Later, Wilson discusses how the combination and synthesis of information gathered in this way can itself be a form of contributing to the body of knowledge (p. 11) and how individuals decide they have learned enough (p. 68), and that the limit on learning is not a desire for complete knowledge but a desire to avoid costly ignorance which would harm the individual (p. 70-71, 81). Here, we already see some of the defining characteristics of a complex system: the behavior of agents is affected by feedback and their memory and they are making best use of limited resources, including their own energy, attention, time, and memory. When we assign research to students, as agents within a complex system, they will seek to complete the task with most efficient use of their own inner resources of energy, attention, time, and memory, as well as other external and fiscal resources such as printer paper and ink, space and weight distribution in a backpack, and transportation and childcare budgets. Research, even documentary research, is a costly activity. It behooves us as instructors to consider how we help make that investment of resources worthwhile for our students.

The work of Annemaree Lloyd and Carol Kuhlthau further explores the complexity of information systems and of individual agents—students, researchers, writers—as part of that complexity. Kuhlthau’s book *Seeking Meaning* draws on her decades of research on information-seeking behavior in both educational and real-world settings to articulate her model of the “Information Search Process”. This model consists of six stages that an individual (an “agent” in the language of complexity theory) accomplishes as they seek information: Task Initiation, Topic Selection, Prefocus Exploration, Focus Formulation, Information Collection, Search Closure, and Starting Writing (p. 45). Kuhlthau’s model encompasses the domains of feelings, thoughts, and

actions at each stage to capture a more nuanced portrait of the behavior and experiences common at that point. Kuhlthau's stages encompass both the ordered and disordered behavior exhibited by agents in complex systems. Annemaree Lloyd, also working to describe and theorize the behavior of information-seeking individuals, uses the metaphor of "landscape" to describe the system in which those individuals operate. "Becoming information literate," she says, "requires a person to engage with information within a landscape and to understand the paths, nodes, and edge that shape that landscape" (p. 2). In language similar to that of some composition researchers, Lloyd points out that "literacy cannot be described...as a set of universal skills and abstract processes. Rather, literacy is in constant flux" (p. 12). This echoes her description of information as emerging from relationships between individuals—information is "the subjective and intersubjective meaning that is constructed from this experience" (p. 11). Lloyd ultimately declares that information literacy:

can be characterized as a constellation of activities...and skills.... [which] are sanctioned within a particular community and will legitimize some forms of information and ways of knowing, while at the same time contesting others. (p. 24)

Information literacy thus becomes an emergent phenomenon within an information system. It cannot be predicted because it is dependent on and made necessary by particular constellations of resources and agents, whose own behavior cannot be predicted and is affected by changes in the system itself due to its openness (even the hierarchical and hidebound world of academic publishing has been through significant economic upheaval in the last two decades, from the disappearance of small scholarly presses to the monopolization of journals within big database vendors and resultant exploitation of faculty labor). There is no central controlling power arranging these constellations or deeming an individual actor to have achieved information literacy (much

as some faculty may believe they serve in this gatekeeping role). An information literate individual is one who can meet their own information needs at any given moment—and of course any individual agent will expend a minimum of effort in meeting those needs. This presents instructors with a challenge and an opportunity. If we could reframe the research paper and the teaching of research within composition so that it is viewed as a chance to help students see new information needs and how to meet them, show them the complexity of the system and their role in it, and encourage them to increase the rigor of what counts towards “meeting” their information needs, we will do much to improve not only their immediate performance but also their future participation in the complex information system. But, it starts with the teacher recognizing this reality and leaving behind simplistic worldviews and expectations.

So much for the complex system of information and research. What of writing?

An understanding writing as an ecological system, or as a component of the ecology a writer exists within, has been established and explored by Cooper, Syverson and others. Examining writing through the lens of complexity theory has been rarer, but Chris Mays’ 2017 article “Writing Complexity, One Stability at a Time: Teaching Writing as a Complex System” explicitly engages in that task. One of the key insights Mays shares in the article is that when we view a piece of writing, we are not seeing the whole system, but rather one point of stability in that system—a “cut” (p. 565) or section of the whole, representing only a fraction of its wider, deeper, and broader chaos and reducing it to order so that it can be comprehended by our limited cognitive abilities. Even then, Mays points out, it is not that stable, as negotiations of meaning between the writer and reader are notoriously slippery. As a writer makes choices, they impose order onto the chaos of writing, on multiple levels (word choice, genre, technology, etc.) but change an element of the reader’s system—or change the reader themselves—and the effect of that ordering disintegrates.

Thus, we see that writing, too, is a system that is open and alive, without a central controlling figure to ensure consistency of experience, and that what emerges out of the system is thus surprising and unpredictable.

If writing is re-envisioned as not just complex, but actually considered as a complex system, a number of recent issues in scholarship suddenly make more sense. As one example, it then becomes sensible that transfer across courses would be difficult and difficult to measure—agents can and do draw on their memories and past feedback to inform their present responses, but their ability to do so depends on their ability to read a complex and shifting environment. Elizabeth Wardle touches on the issue of failure-to-transfer as she discusses “mutt genres” of the academy as she advances her claim that the focus of first-year writing classes should be less “how *to* write in the academy” and more “learn *about* writing in the academy”. A class structured around this principle would come closer to acknowledging and then tracing the complex system that is academic writing, even on a single campus. It also would help to lay to rest the common complaint that a “research paper” isn’t a “real genre” because it doesn’t exist in “the real world”. The academic world is no less real, and seeking to create a stable place from which to examine the complexity of research and writing is more than adequate justification for the genre’s existence, if we would be willing to admit this to ourselves and to our students.

“Writing and information literacy are each a series of judgements and decisions”, declares Mary Snyder Broussard as she concludes her book *Reading, Research, and Writing* (p. 106). Broussard’s statement captures the essence of what students, as agents in complex systems of information and writing, are tasked with doing in their research-based assignments—and the limits of their agency within those systems. Although agents in the system can respond to the environment presented to them, based on their memory of previous interactions, their own

contributions to that system will have unknown consequences: perhaps nothing will happen, perhaps a small change will happen, perhaps, by a confluence of their action with others, a cataclysmic consequence will be unleashed. Nonetheless, students need to be empowered to recognize and take seriously their opportunities to judge and decide, and to contribute to their environment.

I have separated the two systems—of information and of writing—for the sake of discussing their scholarship and examining the application of complexity theory to each, but in lived experience, the two overlap and intertwine interminably creating an overarching complex system as research becomes expressed in writing and writing generates new research. When we seriously examine the research-writing process, we cannot consider it to be a “remedial issue” (Badke *Teaching* p. 51). Students already know how to perform the heavy cognitive burden of research from their own participation in information systems beyond the college classroom, but then we place more upon them—for their good, so they will grow, but nonetheless, what we ask for in the typical research paper is not an easy task. They often perform it well, or well enough, and so we rarely are led to reflect on what we truly demand. Those of us who have persisted through many years of higher education to join the ranks of the faculty may well have forgotten what struggles we once faced as undergraduates or beginning graduate students—or, possibly, we had learned to perform well enough to skate by and thus never seriously engaged the research process.

Research Questions

This dissertation project fills a gap in scholarly knowledge and practice by bridging previously disparate fields. We know that research-as-activity is common across the disciplines, but we are still establishing the nuances of the complex performance of research and writing in

response to specific information situations. Improved knowledge of the level and kind of research-writing process performed by undergraduate students will, therefore, be beneficial to both composition and library instructors. Furthermore, the two groups potentially have much to learn from each other, as their overlapping interests and goals could lead to fruitful collaborations in not only immediately classroom pedagogy but related academic work, such as assessment. Therefore, this dissertation project will seek answers to the following research questions:

1. How do students describe their research-writing process?
 - What curricular interventions might help students improve their research-writing process?
 - How do the students' descriptions correspond to national organizations' descriptions?
2. Can a course learning outcome for "research" be assessed with reliability and validity?
 - Can library faculty contribute to that assessment process or will they prove to be unreliable raters?

Chapter Descriptions

The remaining chapters of this dissertation explain how I sought answers to these questions. Chapter 2 describes the site for my study and explains the methods by which I designed and implemented a classroom study in the Winter 2017 semester to gather my data. Chapters 3 and 4 each present the results of analyzing a specific set of data to answer a specific research question—number one and number two, respectively. In Chapter 3, I recount how I used reflective journaling prompts to collect my student participants' descriptions of their research and writing processes as well as their own evaluations of their abilities as researchers and writers. Building from this, I recommend particular curricular practices that could help both writing and library

instructors improve their pedagogy of the research-writing practice. In Chapter 4, I address research question two by conducting a series of assessment readings following best practices for assessment in my program and the field of composition—but with librarian raters working alongside raters drawn from the ranks of writing instructors. The findings in this chapter underscore the need for an improved pedagogy of the research-writing process, but also demonstrate that library faculty could be fuller partners in that pedagogy than they have previously been. Chapter 5 concludes the project and connects its findings to the broader themes of the literature review presented here in Chapter 1.

CHAPTER 2: Methods

Introduction

This chapter describes the methods used to develop and deploy the study in this dissertation. The two research questions for this study are:

1. How do students describe their research and writing process?
 - a. How does their description correspond to the ones given by national organizations in outcome, standard, or framework documents?
2. Can course learning outcomes related to research be assessed with reliability and validity?
 - a. Can library faculty contribute effectively to that research process?

The present chapter includes the following sections:

- Site description: giving details of the study location
- Participant description: giving details about the instructor and student participants in the study
- Instruments: listing and briefly describing the procedures and artifacts of the study
- Research chapters: describing the use of the artifacts to address the two research questions and the subsequent organization of this dissertation

This study was reviewed and approved by the Institutional Review Board of Wayne State University

Several philosophical and ethical commitments guided me as I conducted this study. First, as discussed in the literature review, this study proceeded under the assumption that research and writing are intertwined processes, that they are complex and iterative, and that they exist in ecologies of a specific classroom and campus as well as broader 21st century information

networks. Neither my participants nor I could or can fully comprehend the environment we operate in as we research and author our own contributions to our topics of interest, but this study is an attempt to trace the operation of our research-writing processes (RWP) and of ourselves as actors in those ecologies and networks. Given those positions, this classroom study also operates under the assumption that students know themselves and their RWPs better than I and likely better than their teachers, and that they are fundamentally honest. In this study, I take their words and work at its face value and operate under an ethic of respect for their agency.

The purpose of the study was to explore the complexity of the relationship between research and writing within a first-year writing classroom. The goals of the design for this project were: first, to set conditions for soliciting and capturing the complexity of the RWP while remaining within the established parameters of a standardized first-year writing class at the study location; second, to respect and integrate students' descriptions and evaluations of their own RWPs; and third, to draw on the expertise of library faculty as respected colleagues in the task of teaching the RWP and to involve them more as full(er) partners in pedagogical processes outside the one-shot classroom session.

Site Description

This study is a classroom study conducted at Wayne State University (Wayne State or WSU) during the Winter 2017 semester. WSU is a large public urban university located in Detroit, MI and ranked as "very high research" in the Carnegie classification system. Although it is not a majority-minority institution, according to *Wayne State's Fact Book* for 2016-17 the student body at WSU is the most diverse in the state of Michigan (p. 9). The majority of students commute to campus, many are first-generation college students, and many of them are second-

language speakers of English (Wayne State University *2016-2017 Fact Book*; Wayne State University *Common Data Set 2016-17*).

Wayne State’s General Education requirements mandate successful completion of a First Year Composition class. The class that meets this requirement at WSU is ENG 1020. The Rhetoric & Composition Program (R&CP), which is housed within the department of English, fields approximately 90 sections of ENG 1020 each academic year to enable students to fulfill this requirement. Enrollment in ENG 1020 sections is capped at 24 students. The R&CP has developed a Common Syllabus for ENG 1020 so that the course objectives, assignments, and textbook are consistent across all sections, although instructors may request approval from the Director of Composition to use a different assignment or reading/s. The four course learning outcomes for ENG 1020 in AY 2016-17 are listed in Figure 1.

<p>Reading</p> <ul style="list-style-type: none"> • Use reading strategies in order to identify, analyze, evaluate, and respond to arguments, rhetorical elements, and genre conventions in college-level texts and other media. <p>Writing</p> <ul style="list-style-type: none"> • Compose persuasive academic genres, including argument and analysis, using rhetorical and genre awareness. • Use a flexible writing process that includes brainstorming/inventing ideas, planning, drafting, giving and receiving feedback, revising, editing, and publishing. <p>Researching</p> <ul style="list-style-type: none"> • Use a flexible research process to find, evaluate, and use information from secondary sources to support and formulate new ideas and arguments. <p>Reflecting</p> <ul style="list-style-type: none"> • Use written reflection to plan, monitor, and evaluate one’s own learning and writing.

Figure 1 ENG 1020 Course Learning Outcomes AY 16-17

Participant Description

New graduate student instructors in the WSU English department are assigned three sections of 1020 in their first year, one section in the fall semester and two in the winter. During their first year they are also required to take a Pedagogical Practicum (ENG 6001). I visited the Pedagogical Practicum near the end of the Fall 2016 semester to solicit participation in my study for the upcoming Winter 2017 semester. I hoped to recruit 4-6 instructors, 2-3 of whom would continue to teach the common syllabus for ENG 1020 (and would thus formed a “control” group for the study) and 2-3 of whom would teach an experimental curriculum of my designing. Four instructors consented to participate in the study. All four were specializing in areas other than rhetoric and composition and all four were in their first year teaching at the college level; thus, their experience with the theory and practice of composition pedagogy was roughly equal. The instructors were allowed to choose which curriculum they were teach, and the group split itself in half, with two instructors choosing each curricular design. Each instructor had been assigned two sections of ENG 1020 in the Winter 2017 semester—the standard teaching load for first year GTAs.

In the second week of class for the Winter 2017 semester, I visited all eight sections being taught by my instructor participants to solicit participation in the study from their students. The students had a chance to review the consent form and were told that their work would only be used if the consented to participate in the study and they had the option to enroll in a different section if they preferred. Across the eight sections, ninety students consented to participate (out of 163 total, which gives a participation rate of 55.21%). At this time, the student also completed a basic demographic questionnaire (see Appendix A) and a pre-intervention survey. I visited the class sections again in the final two weeks of the semester to administer a post-intervention

questionnaire (see Appendix B for the pre- and post-intervention questionnaire). During the course of the semester, not all student participants completed all the various activities in the curriculum for their class; however, all student participants completed at least one activity, and therefore no participant was removed from the study. A demographic breakdown of the student participants is provided in Table 1. The distribution of students across the sections taught by the four instructor participants is given in Table 2. Student participant identities were never revealed to the instructor participants. Other than administering the surveys, I did not have contact with the student participants and I did not retrieve their files until after final grades were entered for the semester. All participants were assigned a codename to identify their materials in the study files. The master lists were destroyed after data analysis was completed.

Race/Ethnic Identity	
Asian/Asian Am.	5
African Am./Black	29
Chaldean	2
Latino/a/Hispanic	5
Native Am./Alaska Nat	1
White/Caucasian	40
Bi-racial	7
No answer	1
Age	
18yo	53
19yo	24
20+	13
Gender Identity	
Male	33
Female	56
Non-binary	1
Semester in College	
1st semester	5
2nd semester	63

3rd+ semester	22
First-Generation Student	
Yes	64
No	26

Table 1: Student Participant Demographics. Note: some students chose to identify as bi-racial, while others selected multiple options for their race/ethnicity.

Headcount: Control Sections		
Inst. 1	Section A	19
	Section B	7
Inst. 2	Section A	11
	Section B	9
Total:		46
Headcount: Experimental Sections		
Inst. 1	Section A	16
	Section B	3
Inst. 2	Section A	20
	Section B	5
Total:		44

Table 2: Student Participant Distribution by Section

Instruments

The instructor and student participants in this study followed two different curricular designs: a Common Syllabus version and an Experimental version. The major distinction between the two designs was that in the Common Syllabus version, the second major project of the semester was an I-Search assignment and in the Experimental version, this was replaced with an assignment of my own design: the Whole Class Research Project (WCRP).

The Common Syllabus version of the ENG 1020 curriculum in AY 2016-17 consisted of five major projects: a Rhetorical Analysis, an I-Search essay based on Macrorie (1988), a Researched Argument, an Infographic, and a final Reflective Letter. For this study, the students' I-Search and Researched Argument essays were collected (see Appendix C for the two assignment sheets). The WSU I-Search expects students to pursue a topic such that academic and scholarly information sources are appropriate to the investigation. In this sense, the I-Search departs from Macrorie's original vision. The I-Search was relatively new to the 1020 curriculum in Fall 2016, having been included in the required curriculum for the first time in the Fall of

2015. Some instructors in the Program (in particular the graduate teaching assistants) had confessed to me during this time that they had been struggling to teach this assignment effectively; they doubted its usefulness and were not sure how to guide students to both master the research process and the genre of narrative writing at the same time.

Although it was not specifically meant to address the generalized concerns those instructors had about the I-Search, it was certainly fortuitous that my WCRP assignment did so. This assignment was designed to allow students to focus on just the steps of locating, evaluating, and sharing sources as part of the research process (see Appendix D for the assignment description). This assignment was inspired by the work of Niles Haich, a composition teacher-researcher whose work I found during my own secondary research for this dissertation. Haich asked students to contribute to building a classroom library on a given topic by writing summaries of sources on that topic, with the goal of having them better understand and perform summary as a tool for source integration. In my Whole Class Research Projects, students voted for the topics they would research as a class, then individually found, read, and summarized two unique sources on the topic, posting their summaries and citations for the sources on a class discussion board and then doing further collaborative work with the sources in class.

Besides designing an alternate major assignment, my curricular design also included a series of eight reflective journal prompts for students to complete during the approximately eight weeks they were working on either their I-Search Essay or WCRPs and then their Researched Argument (see Appendix E for the list of journal prompts. I asked all the participating instructors to assign these to their students.

In addition to these curricular changes, the student participants also completed a pre- and post-intervention survey (see Appendix B), and the instructor participants who taught the

Experimental curriculum participated in a semi-structured group interview at the end of the Winter 2017 semester to provide their feedback and comments on the curriculum and their teaching experience. The interview questions are provided in Appendix F.

Research Chapters

To address research question 1, I selected four journal prompts that I thought were likely to have solicited responses that would address the issues raised in the question. These prompts are listed in Figure 2. The responses to these journal prompts were analyzed through grounded theory methods (Creswell p. 14) for coding, utilizing both descriptive and in vivo coding to reflect the concepts named in the research design and by the research participants, respectively (Saldaña, p. 97 ff.) and to establish common themes and patterns in the data. The details of this analytical process and its results are described further in Chapter 3.

To address research question 2, I chose to measure student performance of the research outcomes via rubric-based assessment. As mentioned above, the artifact for this assessment was the Researched Argument essay, as it would allow for comparison between the two curricular designs. I designed a rubric for this assessment (Appendix G) based on the designs already used by the R/CP in their program assessment of the writing and reflection course learning outcomes. I engaged a panel of raters from the faculty of both the writing program and the library. The assessment activities took place in two stages and spanned three working days. The procedures, instruments, and results of this assessment activity are further described in Chapter 4.

Limitations and Contributions to the Literature

It must be acknowledged that this study works with a small sample size and thus is not generalizable. However, as an exploratory study, this work has merit; as the literature review in the previous chapter revealed, research is frequently assigned but rarely studied. This study

attempts to build knowledge about what students have to say their research-writing process and how that compares to what disciplinary organization have said about those intertwined processes. It attempts to show what we, as faculty and administrators charged with teaching the research-writing process, can do to assess our students' learning and progress towards that outcome. Specific threats and limitations to the two sub-studies of the journal responses and the assessment activities are described in Chapters 3 and 4.

CHAPTER 3: Analysis of Student Journal Responses

Introduction

The following chapter shares findings drawn from student responses to assigned journaling prompts. These journaling prompts were assigned and completed during the time the students worked on their two major research projects. This chapter describes the methods used to assign and gather student responses to the journal prompts and then analyze those responses through a process of descriptive coding. I then present results from that analysis, including the most frequently named strengths and weaknesses students feel they have as researchers and the criteria by which students evaluate sources. Several insights result from this analysis—the frequency distribution patterns of strengths and weaknesses, the co-occurrence of research and writing in student discussions, and the ways that students discuss authors and audiences and credibility and bias—which indicate opportunities for improvement in how we teach research and writing processes. Thus, the chapter also suggests curricular revisions and student assignments to address the weaknesses identified in the analysis.

Research Questions

The analysis described in this chapter seeks to answer two questions.

- 1. If given the chance, what would students say about their research process, and how their research process influences their writing process, and about their sense of themselves as researchers and writers?** Although secondary research is a commonly assigned activity in school, students may not get as many opportunities to explain their own understanding of research and how their research informs and influences their writing process. Certainly the scholarly literature in writing studies has

investigated writing process models, but it reflects little of students' own models of the research process.

- 2. How and by what criteria do students evaluate information sources?** Source evaluation and selection is perhaps at the heart of the secondary research process, but it is a component that typically occurs outside the classroom, in homework exercises or simply as an implied component of search processes. For each search on each topic, the researcher must determine what criteria will be used to select useful, appropriate, “good” sources and distinguish them from useless, inappropriate, “bad” sources. The stereotype of 21st-century student research is that students only select the first few google search results; an older stereotype that still applies is that students just find the minimum number of print sources the assignment requires. This question seeks to open a space for students to articulate the standards by which they do evaluate information.

Materials and Methods

To give students the opportunity to provide their opinions and self-evaluations, a series of journal prompts was designed for them to complete during the eight weeks that they worked on Projects 2 and 3 in ENG 1020. Specific journaling prompts were associated with specific research questions, and a coding schema was developed for analyzing each; the specific prompts and schemas are further described below.

Data Collection

The participant instructors assigned the journaling prompts to their students to be completed within the course website on the campus learning management system. At the end of the semester, the responses were downloaded, anonymized, and loaded into the Dedoose coding platform for analysis.

Data Analysis

The analysis method followed was descriptive coding (Creswell 2014 pp. 197-200), with a goal of describing the student authors' content and ideas in such a way that these could be counted and mapped. I developed the coding schemas by reading a subset of responses (~10% of the total collected) to identify broad themes and common topics. I then applied the schemas to the full set of responses. As the codes were applied to the journal responses, I created extracts within the students' responses to the journaling prompts. Each extract had at least one code applied, though some had multiple codes applied.

Data Analysis--Research Question 1. To address research question 1 (RQ1), students were assigned a series of three journal prompts over the course of eight weeks. These are listed in Table 1, labeled with each week they were assigned within the eight-week sequence. The questions were designed to be similar (but not the same) so that the students could be tasked with reflecting on and describing change in their research and writing processes over time. These prompts function as a repeated measurement of the students' developing understanding of research. Seventy-five students responded to Journaling Prompt 1, seventy to Journaling Prompt 5, and sixty-four to Journaling Prompt 8. Eighty-four total students responded to at least one of these three journaling prompts.

Journaling Prompt Week 1

What do you think your strengths are as a researcher? What do you think your weaknesses are as a researcher?

Journaling Prompt Week 5

Knowing your strengths and weaknesses as a researcher and a writer, what do you think will be easy for you during this new assignment? What do you think will be hard for you in those two areas?

Journaling Prompt Week 8

Look back at your journal from the beginning of [your third project]. Were your predictions correct? Were things easy/hard in the way you expected? Did anything unexpected happen that made things easier or harder?

Figure 2: RQ 1 Journaling Prompts

The coding schema for these journaling prompts is given in Appendix H. During the development of the schema, I paid particular attention to capturing specific strengths and weaknesses in research mentioned by students. These are displayed as subcodes under R(earch)-Strength and R(earch)-Weakness.

Data Analysis--Research Question 2. To address research question 2 (RQ2), students were assigned a journaling prompt that asked them to explain their process and criteria for evaluating information. The prompt, which was assigned in Week 3, is provided in Fig. 2. Sixty-seven students responded to this journaling prompt.

Journaling Prompt Week 3

What makes an information source good or useful? Are there things you consistently look for or notice in good sources? Explain in as much detail as you can.

Figure 3: RQ 2 Journaling Prompt

The coding schema for this journaling prompt is given in Appendix I.

Results

This section presents the quantitative results from the application of the coding schemas to the journaling prompts associated with RQ1 and RQ 2. It also presents findings from an analysis of co-application of subcodes within the RQ1 schema.

Research Question 1

Table 4 displays the application of Prompt 1, 5, and 8's coding schema to all student responses to all three prompts, with the codes listed in decreasing order of frequency. 486 extracts were created in the process of applying the schema to the student responses. Some extracts had multiple codes applied to them; thus, the percentages column represent each code's application to a portion of the whole set of extracts, but the percentages add up to more than 100%. The co-occurrence of certain codes is explored in more detail below.

Code	No. of extracts	Percentage of total extracts
R-Strength	167	34.36
R-Weakness	160	32.92
Writing	112	23.05
R-positive	58	11.93
Disposition	35	7.20
R-School	28	5.76
R-Tools	23	4.73
R-Definition	7	1.44
R-Personal	5	1.03
R-Dislike	3	0.62
Total	486	

Table 3: RQ 1 Code Application by Frequency

The subcodes under R-Strength and R-Weakness, which represent broad themes within student responses, are also organized by frequency in Tables 2 and 3.

R-Strength Subcodes		
Integrating Sources	38	22.75
Getting scholarly or credible sources	32	19.16
Interest in topic	31	18.56
Search/searching	31	18.56
Analysis/evaluation	28	16.77
Variety of sources	23	13.77
Persistence	11	6.59
Previous knowledge	9	5.39
Citations	7	4.19
Ease	7	4.19
Organization	5	2.99
Sharing knowledge	4	2.40
R-Strength Total	167	

Table 4: R-Strength Subcodes

R-Weakness Subcodes		
Integration of sources	35	21.88
Variety of sources--lack	31	19.38
Analysis	21	13.13
Getting scholarly or credible sources	18	11.25
Volume of sources	18	11.25
Interest in topic--lack of	15	9.38
Thoroughness	15	9.38
Search/Searching	12	7.50
Voice	9	5.63
Past experience--lack of	7	4.38
Time management	7	4.38
Citing, quoting, summarizing	6	3.75
R-Weakness Total	160	

Table 5: R-Weakness Subcodes

The top six most commonly discussed research strengths each occurs more than twice as often as the remainder of the named strengths. The list of weaknesses contrasts with this; there's a larger group clustered in the middle range of frequencies, with six strategies occurring in 5.67—

11.25% of the extracts. The distinct patterns between these two groups is more obvious in Figure 3. The overall line is much flatter for R-Weakness than for R-Strength.

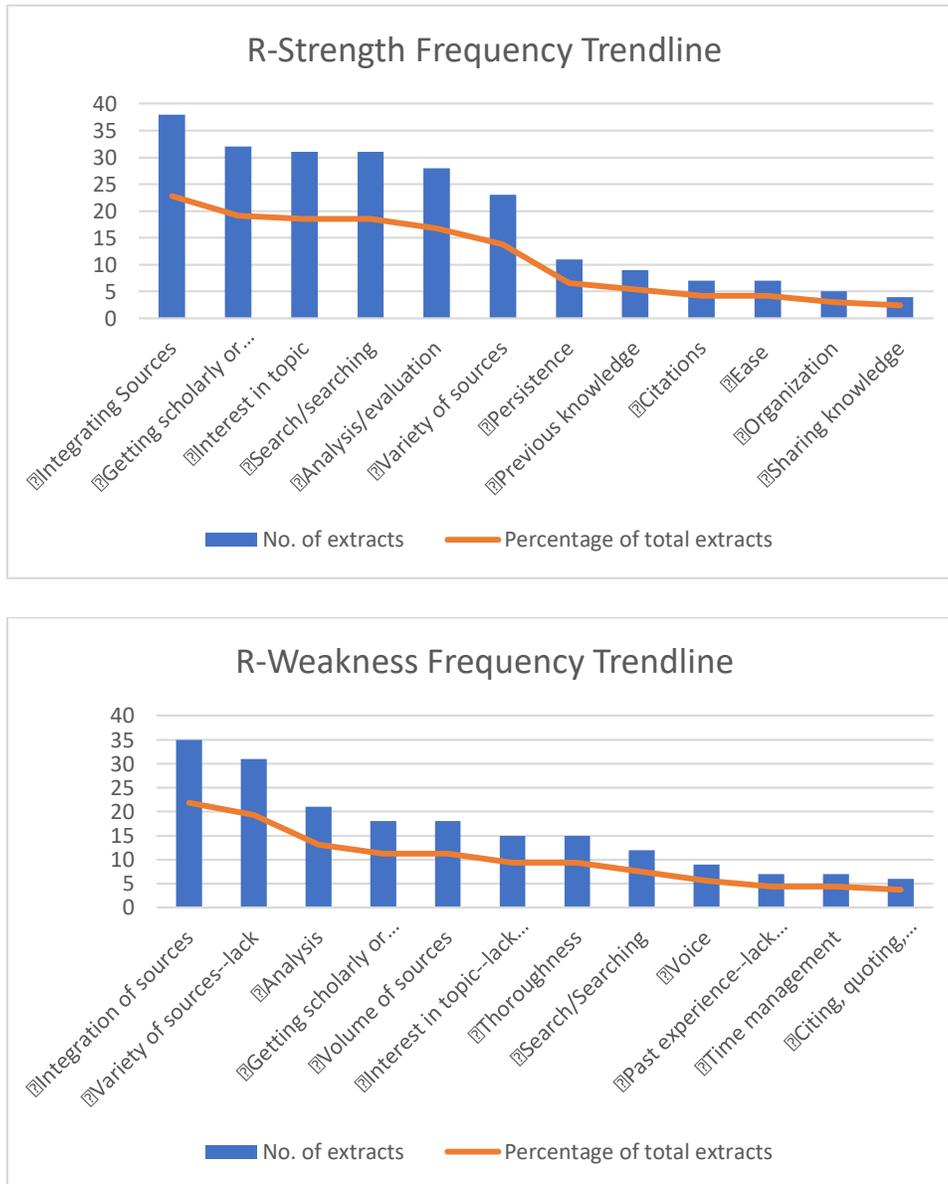


Figure 4: R-Strength and R-Weakness Trend Line Comparison

Besides asking students to discuss their perceptions of their performance as researchers, Journaling Prompts 1, 5, and 8 explicitly asked students to consider their abilities as writers. Figure

3 presents trend lines of the frequency at which research-strength, research-weakness, and writing are each used in response to Prompts 1, 5, and 8.

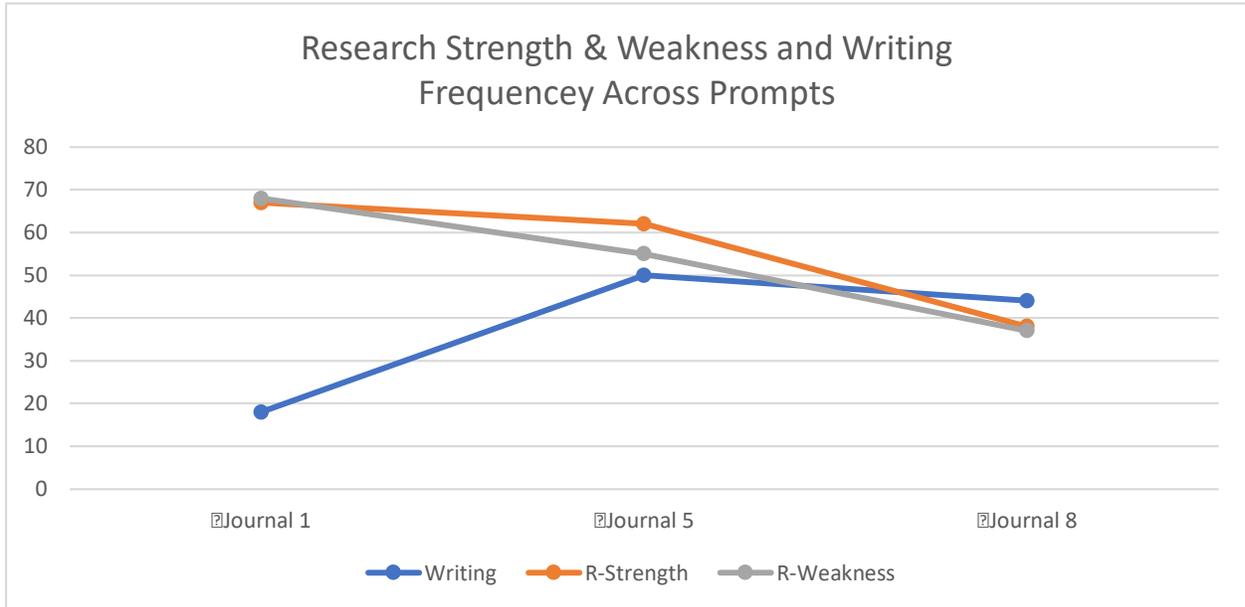


Figure 5: R-Strength, R-Weakness, and Writing Codes Frequency Across Prompts

Discussions of research strengths and weaknesses both decline over time, while discussion of writing increases. This finding is discussed further below.

Table 5 presents data about how often the “Writing”, “R-Strength”, and “R-Weakness” codes co-occurred within an extract—how often two of the three codes were applied to one section of the students’ response. It also provides examples of extracts with the co-occurring codes.

Co-Occurring Codes	Example	Frequency
R-Strength + R-Weakness	“When I was introduced to research papers I always became anxious because I never was taught how to research in the correct format until I came to Wayne State University. When I came to Wayne State my research skills improved drastically.”	71
R-Weakness + Writing	“One weakness I do have while doing research papers, or any sort of paper is if that paper is longer I do tend to repeat myself a lot throughout the paper. That is a very bad habit of mine, I believe that I do this just to fill up space if I do not have enough information in my paper.”	69
R-Strength + Writing	“I also learned how to format my findings into a piece of writing that’s goal was to find an answer to my posed questions.”	50

Table 6: RQ 1 Coding Schema--Co-Occurrence of R-Strength, R-Weakness, and Writing Codes

Writing co-occurred with “R-Weakness” 38% more often than it did with “R-Strength” (69 co-occurrences versus 50). This finding is discussed further below.

Three findings from Research Question 1’s analysis are discussed further below: the varying patterns of R-Strength and R-Weakness subcode application; the decline in discussion of research strengths and weaknesses and the rise of writing as a discussion topic in the journal responses over the eight-week period; and the more frequent co-occurrence of writing with R-Weakness than with R-Strength. Taken together, the findings show students’ reflective consideration of their abilities as researchers and writers.

Research Question 2

In applying the coding schema for RQ2 to the student journal responses, 356 extracts were created. The code applications for RQ2’s schema were ranked by frequency, to reveal which topics were most discussed by the students. Tables 5 and 6 displays the frequency of application of

Journaling Prompt 3's coding scheme, providing first the number of extracts to which the code was applied and second the number of student journal responses to which the code was applied

Code	Extracts (out of 356 total)	
Author	52	14.6%
Information/content	48	13.5%
Evaluation Process Description	40	11.2%
Credible/unbiased	37	10.4%
Helpful/relevant	36	9.9%
--To own claim	23	6.5%
Cites others	34	9.5%
Platform/venue	33	9.3%
-- Library	6	1.7%
Date/recency	28	7.9%
Formatting	25	7.0%
Length	7	1.9%
Audience	4	1.1%

Table 7: Frequency Application of Journaling Prompt 3 Codes by Extract.

Code	Student Responses (out of 67 total)	
Information/content	42	62.7%
Author	41	61.1%
Credible/unbiased	34	51.7%
Cites others	31	46.3%
Evaluation Process Description	29	43.3%
Helpful/relevant	28	41.8%
--To own claim	20	29.9%
Date/recency	26	38.8%
Platform/venue	25	37.3%
-- Library	6	8.9%
Formatting	20	29.9%
Length	7	10.4%
Audience	3	4.5%

Table 8: Frequency Application of Journaling Prompt 3 Codes by Student Response

Both sets of numbers are given because the journal responses were frequently a list of criteria for evaluating sources, though some students chose to expound upon their list, which led to the creation of additional extracts from their response. Thus, the analysis by extract artificially reduced

the significance of each code; each one represents a relatively small percentage of the total (Table 5) and no code appears in more than 15% of the extracts. But when the code application is examined by occurrence within the student journal responses (i.e., the code was applied at least once within the student's journal response), certain codes have much more prominent percentages (Table 6). Two codes were applied to nearly two-thirds of the journal responses: "Information/content" and "Author". These topics are predominant in students' responses to the prompt questions and this finding will be discussed further below. The application of "Credible/unbiased" to approximately half the journals also signals that this is also a concern for many students as they analyze sources. Below these top three response codes, the students' concerns become more diffuse, with three codes appearing in 40-49% of the journal responses, another three in approximately 30-39% of the responses, and the last couple of codes each applied to only a handful of responses.

Discussion

There are consistent and repeated trends across the students' responses. That alone speaks to the value of administering such an exercise to our students, so we as instructors can be better informed about the practices and opinions they hold. Reflecting on these trends, though, reveals additional nuances that could impact our pedagogy, particularly in how we pay attention to the research process as part of the writing process and how we provide careful feedback about student strengths as well as weaknesses.

Research Question 1

Journal prompts 1, 5, and 8 worked as a sequence to give students opportunities to reflect on their prior work as researchers and writers and evaluate their progress. Analyzing the

participants' own explanations of their development allows instructors to see students in the act of building and growing their own awareness of their strengths in research-based writing. In reality, the students' journals articulated a messier picture of the interaction between their research and writing skills.

Clusters of strengths and weaknesses. Students name a few strengths with high frequency, while the list of weaknesses is more diffuse. One explanation for this may be that students have simply heard more about their weaknesses than their strengths. The guiding documents from composition's professional organizations do not capture a robust description of research for instructors to learn and work from. Thus, instructors might only name a small number aspects of research when it is successfully accomplished—approximately six of them. But instructors know when something goes wrong, and they can name and describe that wrongness to students with greater nuance than they can success. Students continue using the language that has been given to them, with a limited number of options to describe their strengths and a larger number to describe their weaknesses. This leads to charts where a small number of strengths are named with great frequency compared to a more diffuse pattern of named weaknesses.

Research and Writing. Across journaling prompts 1, 5, and 8, students connect weaknesses in research and writing more often than they connect strengths (see Table 5). This seems disheartening, for a curriculum with an instructional goal of strengthening research skills. This phenomenon may also be tied to a limited understanding and definition of research and of how research processes connect to writing processes. If instructors are giving greater amounts of feedback about weaknesses in writing and research, rather than strengths, students may also be more aware of and more likely to report those.

Changing pedagogical emphases over time may also be a factor in this phenomenon.

As described in Chapter 2 (Methods), these journals were assigned in sequence with two major research based writing assignments. However, it is possible that research was discussed with the greatest detail and emphasis at the beginning of the first assignment (the I-Search or the Whole Class Research Projects), and then only mentioned increasingly infrequently as students moved into drafting stages of both projects and began work on their Researched Arguments. This runs counter to the recursive nature of both writing and research, but it corresponds with the worst fears of library faculty, who have bemoaned the limited impact and quick withering of research lessons delivered in a one-shot instruction session format. Faculty may have given research, as a concept and a practice, a focused introduction, but it may not have received sustained attention. The journals were meant to draw the students' attention to their research practice, but faculty were not given explicit materials for additional daily activities about research. Thus, over time, we see the student's attention shift, as in Figure 4 earlier, to discussing writing-in-general more than research or research-and-writing as a complex and iterative process.

Research Question 2

The third prompt in the overall sequence asked students to provide definitions of good and bad sources; they were tasked with articulating the criteria by which they evaluate sources. Examining their definitions across the group of participants reveals common values among the students. Comparing the students' standards with those articulated by professional organizations reveals limitations in the students' articulations. These limitations can become opportunities for instructors, who could use them as a starting point to assist students in adding nuance and depth to their information evaluation standards.

A disconnect between author and audience. That the author was directly mentioned as an important aspect of student's source analysis was a surprise, though maybe it should not have been.

That audience was invoked so few times was not a surprise, though it is unfortunate. This campus follows a standard assignment sequence and these students all completed a rhetorical analysis paper as their first major assignment. In the course of this assignment, students are instructed in the basics of the rhetorical appeals to logos, ethos, and pathos as well as the components of the rhetorical situation: the rhetor, the audience, the situation or exigence, and the medium². A writer's ethos arises from their position and relationships within a community. Students reported that they consider repeated publication on a topic to be a mark of authority to that topic, as it presumably is a sign of both growing knowledge and growing respect from the community of readers. However, for students to not consider how the audience may affect an author's choices shows a lack of connection between those two elements of the rhetorical situation—and a lack of transfer of knowledge from the rhetorical analysis assignment's instruction to a new situation calling for similar analytical work.

The formulation of the students' criteria for evaluating authors is also concerning. The example quote provided for "Author" in Table 1 is typical of the explanations provided across the corpus. Relying simply on how frequently an author has been published or what their academic credentials might be are overbroad principles. An author who defends the position that the earth is flat may have a large body of work and many supporters; it does not mean his belief is correct. Continued valorization of academic credentials and commercial success also contributes to neglect and oppression of minority voices. Deeper reflection about the processes by which authority is earned and granted may open our students' minds to voices and stories they had previously ignored.

² For a brief synopsis of and links to additional reading on the concept of the rhetorical situation, see "Rhetorical Situation", a poster page from the National Council of Teachers of English, available at <https://secure.ncte.org/library/NCTEFiles/Resources/Journals/CCC/0613-feb2010/CCC0613Poster.pdf>.

Credibility & bias: When is opinion not actually opinion. In their journals, students drew a connection between the presence of an author's opinion and a lack of credibility in the source. Once again, though, this presents a pedagogical opportunity to engage in deeper thinking about the rhetorical life cycle of sources. Students were willing to grant authority and ethos to authors upon examination of their background. Why would they become unwilling to hear that author out when a piece is, in the students' estimation, opinionated? At what point, in relation to a particular topic, does a respected expert lose credibility? What are the markers of bias in an alpha-numeric text? How do the answers to these questions vary from one person or topic to another? These additional questions could open up an ever deeper discussion about ethos and relationships with audiences. It could also engage conversations about how dominant cultural tropes can become utilized in circumstances they were not meant for—for instance, how the concept of “bias” has one meaning in neuroscience, another in a courtroom, and a different one in popular culture.

Not every course will stress a rhetorical or argumentative approach to writing, as the campus in this study did. But all of us could ask our students how they consider an author's reputation and relationship with audiences when they evaluate sources. We can start conversations that explore the nuances of that relationship and how it affects both the source itself in its original context and the way it is perceived by other audiences when it circulates into a new situation beyond that original context.

Connecting dots between students and professional organizations. When the students in this study described how and why they choose sources, they were reaching towards the nuance present in the ACRL's *Framework for Information Literacy in Higher Education*. Many of the most frequently applied codes (see Table 2) map neatly onto the threshold concepts included in the ACRL's *Framework*, at first glance. But there are further nuances to the process of evaluation

that could be teased out further, as described above. The CWPA's *Framework* may provide a useful heuristic for thinking about what additional behaviors and qualities students would need to perform as part of these extra analyses. The CWPA describes writers as possessing curiosity, flexibility, and engagement. As we encourage students to deepen their analysis of sources beyond broad strokes and surface-level perceptions, we should remember that we are asking them to look for more information than they have in the past, to stretch themselves beyond their previous mental models, and to remain connected to a learning process that may demand more time and energy than they anticipated.

Curricular Implications

This study reveals two opportunities for future work and improvement in pedagogy and curriculum supporting research-based writing. Although these suggestions have the goal of improving written products, the instructor's focus must be on the elements of the research-writing process and early engagement in those processes with students. If students are to create better written products based on their research, they must receive quality instruction on the research process itself, on information retrieval and evaluation, while it is still ongoing.

Bring Research into the Writing Classroom. The first curricular change that should happen is for the instructors to find ways to bring a more robust research process back into the classroom. When research is assigned as "find X number of sources for this paper and X number have to be from the library", with the work completed outside of the classroom and never again discussed, instructors lose valuable opportunities to model searching and analysis activities for their students. Although one-shot library sessions may be well meant as opportunities for further instruction in research, if course instructors do not spend additional time providing guidance and feedback in research, students will only ever that have 55-75 minutes' worth of knowledge—and surely

everyone can agree that almost any academic task takes longer than that to master. Our students need and deserve more time, more care, and more attention given to the development of their research skills.

One possibility for giving students more practice in research is to have them complete research on more than one topic during the length of the course. Such an assignment was created as part of this larger study, although the data from the assignment has not yet been analyzed. In this assignment, called “Whole Class Research Projects” (see Appendix D), students proposed topics and questions that the whole class could potentially research, in order to practice their searching and analysis skills from one topic to another. The students voted to determine the top three choices and the students then spent a week researching each one. In the week, students were expected to find two unique sources related to the topic and then write brief annotated bibliography entries for each source. One class session for the week was set aside for reporting out and discussing what students had learned from their research on the topic. In this assignment, the annotated bibliography entries and the class discussion both give instructors opportunity to provide feedback and guidance to students about their searching and analysis work.

Only four sections in the study completed Whole-Class Research Projects. The remaining four sections completed I-Search projects, modified from Ken Macrorie’s original 1988 description (see assignment descriptions in Appendices C and D and discussion in Chapter 2: Methods). This project initially focuses on inquiry and developing suitable questions before moving into finding sources of information to answer that question. In their final deliverable, students are expected to describe their research journey and how they found answers to their questions, which involves describing how and when sources were chosen or not. However, it is not known how and when instructors provide instruction on source evaluation or on locating points

of agreement or disagreement between sources. Anecdotally, instructors have expressed both their own and their students' discomfort with the I-Search, feeling that the difficulty of mastering narrative writing for the sake of the single assignment distracted their attention from other skills and tasks.

The two projects described previously were designed to be major assignments within the curriculum given to students. Additional research process class exercises could be shorter or less time intensive than the lengthy projects described above, perhaps taking up as little as one or even a part of one class session, but still achieve the goal of engaging research practices in the classroom space. Some possibilities include:

- For practice in searching, students could be challenged to find the best and worst sources on a topic using either/both library and web searching platforms, and then write or present explanations of why the sources were bad.
- Students could be assigned a “think aloud” protocol, where they have to explain their process as they go through it, either performing for the class or record themselves doing a searching session as homework. Instructors could also complete a think-aloud recording of their own search process and then have the students reflect on the differences between the instructor's search and their own.
- Instructors could model the analysis of an article and how to craft research paper sections based on the insights from the analysis, using the think-aloud process or an annotated article and paper draft.
- To reflect on the research process, students could draft brief (one or perhaps two page) research narratives in class, which are reported out and discussed during class as well as evaluated by the instructor afterward.

Including a variety of activities that focus on various elements of research and how research moves into writing gives students repeated opportunities to practice and hone their skills. There are any number of activities that could be done to bring research processes into the classroom—if instructors will choose to prioritize it as an essential part of the writing process.

Increase Our Focus on Describing Student Strengths. Instructors guide students to better, deeper, more nuanced knowledge of the subjects we teach. As students learn our disciplines, they also begin learning the jargon used in our disciplinary community. Writing studies scholarship

tells us that students will pick up the language we use to describe their writing and then use it to describe their and others' writing back to us (Dressler et al; Kim). By that same process, students will also take up and repeat back whatever language we use to describe their research. What sort of vocabulary are we introducing to them? The data discussed previously indicates that students have a more nuanced understanding of their weaknesses than their strengths, and that they are more likely to identify research as a weakness partnered with their writing than a strength. Instructors can help students move those perceptions, if they take the time to build up their own vocabulary of research and to use it to describe and evaluate student's research performances.

Two activities that are components of the research process were mentioned earlier: searching and evaluation. Several activities that could be used to teach both components within the classroom were also described. As students perform these tasks, instructors would have opportunities to assess student performance, potentially using terminology from the ACRL's *Framework* to guide them in locating, describing, and giving feedback on research behaviors. In doing so, instructors would be rising to the challenge and following the advice of the CCCC *Position Statement on Teaching, Learning, and Assessing Writing in Digital Environments*. This document is posited on 5 assumptions about what features a course involving digital writing should have; fourth in the list was the assumption that the course would "engage students in the critical evaluation of information (see American Library Association "Information Literacy")". By giving more detailed feedback and providing positive reinforcement while students are engaged in searching for and evaluating information, instructors can help students have a better understanding of how to perform research and when they have done their research well. Examples of such language are given in Figure 5. Students can move from these strengths to address any weaknesses

that remain in their research process, and then move to creating a stronger written product based on a more thorough understanding of the topic they were exploring.

	Searching for information	Evaluating information
Sample tasks/ assignments/ artifacts	<ul style="list-style-type: none"> • Search results page/s • Keyword brainstorming worksheets • Think-aloud recordings • Research narratives 	<ul style="list-style-type: none"> • Annotated bibliography • Summaries • CRAAP test or similar mnemonic devices • Sample article analysis • Paragraph or section drafting
ACRL Framework descriptive language	<ul style="list-style-type: none"> • “Searching... is nonlinear and iterative” • “Searching... requires mental flexibility” • “first attempts at searching...do not always produce adequate results” 	<ul style="list-style-type: none"> • “Information sources reflect their creators’ expertise” • “Information possesses several dimensions of value” • “Communities... engage in sustained discourse with new insights... over time”
Evaluative language for feedback	<ul style="list-style-type: none"> • “Good results so far, especially...” • “What could you do to narrow this search and make it more focused” • “These all seem like good possibilities. What about [additional subtopic]? Is there a reason why you wouldn’t explore it?” • “From my experience, you might want to try X keyword/database/ search platform, because it will be more focused/more broad/more relevant” 	<ul style="list-style-type: none"> • “Good job explaining the relevance of this source.” • “This is a thorough explanation of the author’s position on the topic.” • “A few details are missing: [list them]. Going back to add these will give you more to share with your reader” • “How does Person/Topic A connect to B?” • “How does this source/person have credibility? How can you explain that for your reader?”

Figure 6: Sample Feedback for Research Process Assignments

As writing instructors move towards a more expansive and granular engagement with research pedagogy, library faculty may be valuable partners. Library faculty have a deeper, more developed theoretical framework to describe the research process and an extensive scholarship of teaching and learning to find inspiration for classroom practices. Any instructor wishing to

improve their teaching of research would be well served by asking for advice and collaboration from their campus' instruction librarians.

Conclusion

The pedagogical goal of this journaling assignment—to have students articulate their own definition and abilities as researchers—meshes with the theoretical goal of this project—to establish a grounded and nuanced definition of research as it is operationalized in the writing classroom. Through their journals, the students shared their perceptions of information sources and their own self-assessments of their research skills. Though many insights were gained from this analysis, there are still ways the study could be strengthened if it is replicated or if additional work is done in the future.

Limitations

The study design did not include requiring particular daily class assignments beyond the weekly journals discussed here and the expectation that sections following the Whole Class Research Projects assignment would spend one day doing some form of discussion of or reporting out about the sources students had read. This lack of structure was intended to give instructors freedom, but it also means there is less context for the data in this analysis. There could have been a deep or shallow focus on either research or writing processes in the class sessions surrounding the moments when students responded to these journal prompts. We will never know at this point. Although interviews were conducted with some participating instructors at the conclusion of the semester, the goal of the interviews was to hear feedback on the Whole Class Research Projects, not to minutely examine their day-to-day teaching practices.

Another potential weakness exists in the freedom given to students in the open-ended, perhaps even vague, nature of the journal prompt questions. The prompts were designed with a goal of just seeing what students would name in their responses, what associations they would make and name on their own when given concepts and keywords such as “research”. A more specific prompt (e.g. “what classroom activity helped you learn research”) might have yielded more specific answers. Instructors were also not given particular instructions on how to deliver or administer the journals; they were, in fact, told to follow whatever practice they would otherwise use for journals. Many of them reported that they use journals as a brief, free write opener to class. If students had been allowed more time to respond to the journals, they might have developed more complex thoughts. On a deeper level, the relative shallowness in the journals may speak to a need for instructors to expect specificity and nuance in journals—which would track with the need for students to hear more specific and positive feedback on their general research-writing process. A further significant limitation is that the coding schemas were that I engaged in a process of solo coding for the project due to time and budget constraints.

Future Research

Future additional research would potentially address some of these shortcomings by delving deeper into the data set. Engaging a team of coders would allow for a more reliable application of the coding schemas. Or, undertaking a qualitative analysis of a sub-set of student journal responses, tracking a small number of students’ development over time in detail, would certainly reveal more individual nuance than the broad-view, quantitative analysis performed here.

One topic of discussion during the drafting of this chapter was the possibility of developing profiles of student researchers, based on the self-reported descriptions in these journals. This task

would require reframing both quantitative and qualitative analysis, as they would then focus on a different goal. However, developing such profiles could be a useful pedagogical and diagnostic tool for instructors. For example, perhaps a student might be a reluctant researcher (“research is easy when I’m interested in the topic”) rather than truly unskilled or inexperienced (“I haven’t done much research for school”). If instructors could offer students a chance to describe their past research experiences and then compare that to such profiles based on past students’ descriptions, they might also be able to tailor their recommendations or even assigned activities for the students. For instance, some might work additional brainstorming activities to find a topic that excites them, while others complete more exercises in searching practice. This would offer students a chance to experience a customized research curriculum that respects and supports the range of skills and abilities they bring into the classroom and articulate to the instructor. It would help students develop their areas of weakness into areas of strength.

CHAPTER 4: Assessment of a Research Course Learning Outcome

Introduction

The following chapter shares findings from an assessment reading of student research papers. To my knowledge, the assessment activities carried out in this study were the first time the research course learning outcome had been assessed in the first year writing course at my research site—certainly, it is the first time since the Composition Program’s current assessment regimen was instituted. This chapter will provide a brief overview of the assessment process in that Composition Program and a review of immediately relevant literature. It will then describe the methods by which I conducted my assessment and analyzed my data, followed by a brief discussion of the results of my analysis.

Research Questions

In this chapter, I seek answers to the following questions:

- Research Question 1: Can a research learning outcome in first-year writing be reliably assessed in students’ written artifacts?
- Research Question 2: Can library faculty assess students’ performance of research as reliably as writing faculty?
- Research Question 3: How do the assessment scores of students in the experimental section (the ones assigned the Whole Class Research Project) compare to those of students in the control sections (the ones assigned the standard syllabus and its I-Search)?

Site History

The assessment process within the Composition Program at my participating institution is thorough and provides rich data to the Program and its institutional stakeholders. The rigor of their assessment process has won recognition and accolades at the department, college, and

university levels. The current assessment process has been in place since approximately AY 13-14. An Assessment Committee identifies target courses and learning outcomes for assessment, develops a rubric, and tests it on sample artifacts. This Committee, in particular the Chair of the Committee, works with the Director of Composition to develop and execute a process for collecting artifacts for assessment and recruiting readers to rate the artifacts. A date—or sometimes dates—are set for the assessment reading. After the reading is finished, the scores given to the papers are analyzed and reported to comply with University requirements for programmatic assessment. The Composition Research Committee has conducted research on their own assessment process, which has led to innovations that have improved the assessment process (in particular, the Program’s ability to analyze a truly representative sample through the use of thin slice methods—see Barton et al. and Pruchnic et al.) as well as multiple publications in the discipline’s journals. This context provides important background for this study. My study was conducted in a location that values and creates value through the process of assessment. The Composition Program and its faculty dedicate significant resources to their assessment practices and have found that to be a wise investment. Assessment is a crucial part of how they tell the story of their Program, their pedagogy, and their students. Thus, it was a natural decision to include an assessment reading as part of my dissertation study. This is how this Program builds knowledge.

Literature Review

Although assessment itself has a prominent place in the scholarly literature of composition and writing studies, assessment of research or research-based writing is harder to find. The recent edited collection *Points of Departure* (Serviss and Jamieson) includes a number of studies on the assessment of research (though none at the level of rigor engaged by the

Composition Program in this dissertation study), and it is to be hoped that this will mark a future turn to increased interest in this area. As we make this turn, though, we must continue to pursue both methodological rigor and ethical excellence. The collection begins with an introduction that explains the common thread among the studies, which all sought to practice RAD (replicable, aggregable, data-driven) research, and it just happens that a number of them also are studying secondary research processes and/or using data from The Citation Project in their study. The chapters of the collection demonstrate the growing pains composition research is experiencing as it embraces RAD research and grapples with the complexity of the research-writing process. For instance, Costello's survey of students enrolled in basic and first-year composition courses at her campus indicates that there may be significant differences in research process knowledge and practices between the two groups (Chapter 5 in Serviss and Jamieson). Costello asserts that "[students] who were confident about their research and research writing skills, were actually confused as to what faculty recognize as university-level research and research writing" (p. 150-151). My own review of the literature of rhetoric and composition has led me to ponder if faculty are articulating their understanding of research and research writing, or even can do so given the complexity of the research-writing process, and if the attempt is made, is it being done in a form that students can access and grasp? This is a significant consideration for assessment: students should know what they were expected to do before we assess their resulting work. If Costello's survey had been intentionally designed from the start to gather and compare basic vs. first-year composition student attitudes and abilities (the explanation of the distinction between the two courses is not as clear as it could be) there would already be richer data to work with towards answering this question.

Kleinfeld's study (chapter 8 in Serviss and Jamieson), which analyzed publicly available composition course syllabuses to determine how source selection and use was described, contains another approach to addressing the question of whether and how faculty are articulating their expectations for research to students. Although the analysis is brief, Kleinfeld found that faculty expect students to perform research at an expert level, similar to their own. However, they do not set conditions within their assignments and other course documents that allow the students to actually do expert research behaviors. The mismatch here fits the old proverb: "do what I say [in the assignment sheet], not what I do [in my own life and what I think my assignment is asking you to do]." If we are so poorly articulating our expectations within our assignments, can we be surprised that students are confused? And which set of behaviors are we looking for when we turn from the classroom to the assessment session—the expert level, or the level our assignments actually told students to do? Are we faculty aware of any of this, or are we suffering from cognitive dissonance?

Olsen and Diekema, in their own chapter (Chapter 7 in Serviss and Jamieson), make a similar point to Costello's. Having interviewed eleven first-year undergraduates, they found that students arrive at a campus with a practice of using family and friends as their most trusted research sources, that students' search practices begin with broad terms and gradually become more specific as they search more, and that students will rely on one "good" source until they feel they have every bit of useful information out of it and only then search for more. These findings correspond with information literacy scholarship; these are truths instruction and reference librarians have known for decades. What I find troubling in Olsen and Diekema's characterization of students is that they repeatedly describe the students themselves as deficient researchers. As composition scholarship develops its work on the research process, I hope that

we will move away from a deficit model (as indeed many scholars have for writing itself). Embracing an information literacy understanding may help with this, as it encourages a viewpoint that everyone is at a different point in developing their abilities in information literacy. I hope composition researchers will become better about honoring our students for all the research and writing abilities and practices they bring to our classrooms and to our research³. When we grade and when we assess, we measure a range of student performance; we can describe that range without saying the students themselves are deficient.

In ELL literature, with its historic investment in educational measurement, some recent studies are illuminating as they investigate student writing based on sources as part of ESL/EFL testing and how raters have measured this research-based writing. In one study from this field, Gebril and Plakans share a useful list of what specifically raters were looking for as they assessed students' use of sources. They group their raters concerns into three groups: locating instances of source use, citation mechanics, and quality of source use. Building on this, Cho and Choi's study offers additional insight about this third set of concerns, as they analyzed students' summaries of sources in order to determine their abilities to establish the context for a source and select relevant information from the source to summarize, as well as proper attribution of the source. Cho and Choi's analysis indicated that there was "a positive relationship between overall writing ability and the accuracy of information" (p. 34) presented in a student's summary. This is a hopeful finding for writing studies and for the assessment of research; it indicates that the

³ I also hope that we honor them for being only barely past thinking and speaking and acting as a child, when parents and peers are the primary sources of information about navigating the world. I hope we will recall that our own literature reviews are our peers still acting as our primary information sources. I hope we will have patience while our students master a research process whose technology and terminology no longer have corresponding physical entities they can touch and hold and interact with (who among the recent generations of teachers and scholars has touched a physical index or bibliography?). I hope we will remember that this is new to them and extend grace to them in our analyses of their efforts. Because if we don't, we will reify the outdated and elitist knowledge hierarchies of the academy, instead of actively engaging in transforming them for a new reality and a more diverse set of minds and knowledge practices.

students who have become good writers have probably also become good researchers. However, further assessment work is needed to determine the best pedagogical practices to achieve this desired outcome. My dissertation study takes up that challenge in part, as I included two curriculum designs in the hope of determining if one of them might lead to better student outcomes with regard to secondary research.

This study is also unique in the role it creates for librarians in the assessment process. Although other studies have included librarians in assessment readings before, these investigations often are formative assessments (e.g. Brady et al., Grettano and Witek), rather than summative. When there is a more summative or programmatic reading, it is often initiated or bounded by librarians' interest in applying the *Framework for Information Literacy* within a discipline (see Willson and Angell for a concise account of such a partnership). To my knowledge, there has not yet been an account of librarian participation in assessment readings as part of programmatic assessment within first-year writing (although McClure's collection includes many studies of other assessment or research methods with library faculty besides Grettano and Witek, and Serviss and Jamieson's collection includes librarians and information literacy researchers among its coauthors, such as Olsen and Diekema cited above and Blackwell-Stames and Walker).

Materials and Methods

To address the multiple facets of the research questions, I describe the methods by which I prepared for these assessment activities and analyzed the resulting data in this section.

Materials

The research papers assigned to the students and assessed by the readers have been previously described in Chapter 2 (Methods). To briefly summarize, all the students in ENG

1020 in the Winter 2017 semester were given the same prompt for this assignment as part of the course's standard syllabus. The full assignment sheet is available in Appendix C. The basic requirements were for the students to use at least seven sources to support an argument or claim of their own and to compose an eight-to-ten-page paper for an academic audience. At the end of the semester, the participating students' completed papers were downloaded from the course website and anonymized. Seventy-six papers across eight sections were collected from students who had consented to participate in the study and whose files were readable. Thirty-nine papers came from students in the four control sections (the ones which had followed the standard syllabus for major assignments) and thirty-seven from the four experimental sections (the ones which had done the alternate Project Two). The smallest number of papers from any section was three; the greatest was fifteen. Therefore, a subset of 24 papers was selected for further analysis, with three papers coming from each section. Papers were selected by using a random number generator, except in the case of the section which only had three papers available. The twenty-four papers selected for assessment were placed into a Dropbox folder for the readers to access for scoring. The papers were anonymized before being added to the Dropbox folder.

The rubric used for the assessment reading is reproduced in Image 1. This assessment rubric tasked readers with being attentive to two aspects of the course outcome for research: evaluation and support. The rubric was reviewed and beta-tested by a group of writing faculty using a sample paper from the student submissions (this sample was not included in the subset used for the assessment reading).

Rubric for Research Outcome						
	6	5	4	3	2	1
	6,5,4--Sufficient			3,2,1—Insufficient		
Find, evaluate, and use information from secondary sources to support and formulate new ideas and arguments	Excellent evaluation (critiques sources; connects ideas across sources)	Good evaluation (critiques sources; connects ideas across sources)	Adequate evaluation (critiques sources; connects ideas across sources)	Limited evaluation (critiques sources; connects ideas across sources)	Poor evaluation (critiques sources; connects ideas across sources)	No evaluation (critiques sources; connects ideas across sources)
	Excellent support (sources add to student's own claims)	Good support (sources add to student's own claims)	Adequate support (sources add to student's own claims)	Limited support (sources add to student's own claims)	Poor support (sources add to student's own claims)	No support (sources add to student's own claims)

Logical Decision Rule: if an essay has a mixed score, record the lower score.
 Example: If an essay has excellent evaluation and good support, then it is a 5/Good.
 Example: If an essay has adequate evaluation and poor support, then it is a 2/Poor.

Figure 7: The Research Rubric

Participants

The readers for this study came from two campus units—the University Libraries and the Composition Program. The library faculty participants had all served as research instruction session leaders to undergraduate students (i.e. “one-shot” sessions, as discussed in Chapter 1: a class meeting in which a guest library instructor gives students instruction regarding the research process and the use of information and searching tools, including the library resources). Initially, four library faculty and four writing faculty members participated in the first reading day, which was held on July 19, 2018, while seven writing faculty participated in the second day, which was

held on January 4, 2019. Two writing faculty members participated on both days of scoring; thus, there were thirteen total participants.

Procedures

Two reading days were planned: one day with both library and writing faculty readers, and one day with only writing faculty. This was done to enable comparison scoring not just between the two faculty groups on the first day but also between the mix of scores across the two sessions. Participants in both sessions were normed using the same protocol. All participants were reminded of the history of the program's assessment practices, were given a copy of the rubric, and had the opportunity to read and score papers using the rubric. A group of four papers had been randomly selected to serve as samples for norming. The readers shared and discussed the scores they gave the norming samples to establish a better understanding of how to apply the rubric. On both days, the four samples were not adequate for the group's needs and the goals of norming, so the first paper pulled for scoring was used as a fifth norming sample. This paper's scores were not included in the data analyzed. After norming, the readers scored the remaining essays individually, and did not discuss their scores with other scorers (although some table talk did occur). I removed another paper from the set after initial scoring due to its unusual topic choice and uncharacteristic style. Thus, the final corpus consisted of twenty-two papers (10 from the Control group and 12 from the Experimental group).

Data Analysis

After each day, the scores were analyzed with various methods for each research question. For RQ1, the overall average scores of the papers from both assessment days were calculated, as was the inter-rater reliability. For RQ2, the average scores of the library and writing faculty on Day 1 and the papers' overall averages on Day 1 and Day 2 were compared.

T-tests were performed to compare the two pairs and the inter-rater reliability was calculated. For RQ3, the average scores of the papers from the control and experimental sections were calculated and compared and a t-test was performed.

Results

The results of the statistical tests performed for each research question are presented below.

Research Question 1

The average score given to papers on the first day was 3.62. The average score given on the second day was 3.57. The overall average score was 3.60. The intra-class correlation coefficient (ICC) for the raters across all days was 0.41, which is “fair” on Cicchetti’s scale.

Research Question 2

On the first reading day, when both library and Composition Program faculty participated in assessment activities, the overall average score for a paper was 3.62. The library faculty gave an average score of 3.70 to the student papers, while the writing faculty gave a score of 3.53. The t-test showed that there is a significant difference between the two average scores. The overall ICC for all raters on this day was 0.41, which is fair on Cicchetti’s scale. The library faculty’s ICC was 0.27, which is poor on Cicchetti’s scale, while the writing faculty ICC was 0.57, which is fair on Cicchetti’s scale.

On the second reading day, when only Composition Program faculty participated in assessment activities, the overall average score given to a paper was 3.57. A t-test comparing this score to the average from the first day (3.62) found a statistically significant difference between the average scores from the two days. The ICC for the second day was 0.38, which is “poor” on Cicchetti’s scale.

Research Question 3

Across both days, the overall average score given to a paper from a section in the Control group was 3.77; for the Experimental sections, the average was 3.46. The t-test showed that there is a significant difference between the two averages.

Discussion

In this section, I discuss the interpretation of the results.

Research Question 1

This question asked if it was possible to reliably assess the performance of a research course learning outcome. The answer is barely a yes. The raters consistently measured what they were told to measure in the rubric provided; however, it is important to note that a score below 0.40 is not acceptable in Cicchetti's scale. When sub-groups of raters were analyzed further in pursuit of answers to other questions, some of them achieved only poor reliability. This will be discussed below.

Research Question 2

This question asked if library faculty could be just as reliable raters as Composition Program faculty. Though the results are somewhat mixed, there are indications that they are, at times, no worse than writing faculty are. Although the library faculty's ICC on Day 1 was "poor" on Cicchetti's scale, the overall group's rate for that day was "fair"—and the writing faculty on Day 2 had a "poor" rating of their own. The indications are that library faculty could serve as assessment readers, at least for this course learning outcome where they have been involved as instructors in the course being assessed. The implications of establishing such a practice are described further below.

Research Question 3

This dissertation study included two treatment groups, and this assessment question asked if one group performed better than the other in the assessment process. The statistical results indicate that there is no significant difference between the groups' scores. However, these sets are small: the final group of papers that were assessed included only 10 papers from the Control group and 12 from the Experimental group. It is possible that a larger set of artifacts would show a difference between the two groups; certainly, I would feel more confident in the declaration that there isn't a difference between the two groups if time and resources had allowed us to assess a larger set.

This dissertation study was, to my knowledge, the first time that the research course learning outcome had been assessed for the first-year writing class. As is so often the case with initial studies, this project raised trickier issues than it started with and more questions than it answered. Two of the most pressing are described below.

The first question that these results raise is: what do we do when assessments result in inconsistencies in the data? One possible explanation for this might be differences in norming on a given day versus a different day; another explanation might be the validity of the rubric itself (a point which will be discussed further in the limitations section). But both of these explanations, and the inconsistent ICC scores themselves, underscore how complicated the task of writing assessment is. Assessing the performance of research, as expressed in this particular course learning outcome, presents an even more complicated task. Many of the behaviors listed in the outcome (e.g. finding information, evaluating information, or formulating new ideas) are performed before the final written product is created, and do not leave a visible or measurable trace in that document—and it is those final documents that are typically the artifacts used in

assessment, not an in-progress or process document. Indeed, Radcliff et al.'s *A Practical Guide to Information Literacy Assessment for Academic Librarians* does not even include “research papers” among the potential artifacts to be used, possibly because it would typically be hard or impossible for library faculty to access them, or also possibly because the final product of a research process may not be the best place to see that process happening.

Articulating outcomes, designing assignments, and performing assessments of student learning should be a holistic process, where each steps' effect on the others is carefully considered; if one step is designed and deployed independently of the others, it leads to breakdowns in the overall assessment process. The inconsistent ICC ratings across sub-groups indicates that there is a poor match between the course learning outcome, the design of the artifact being assessed, and the rubric's vision of the course learning outcome. On reflection, this is not surprising, as they were all created independently of each other at different points in time and by different people. The raters could not fully reconcile the conflicting models of the research process and performance in the moment (for a discussion of how such reconciliation happens, see Colombini and McBride and Trace, Meier, and Janssen).

A second major question raised by this study is: who does the labor of assessment, and how are the stakeholders of composition involved in that work? This raises a number of related question, as well. Who counts as an instructor—and thus as a recognized potential participant in assessment, because they will be affected by the results? What do we consider to be a representative sample not just of our students' work, but also of the pedagogues who have taught them? Librarians have been part of classroom instruction in the research process for decades, but the literature and the lore of composition indicate that they have not been considered as active partners in program assessment (certainly that had not been the practice at the institution in this

study). The field has a commitment to involving part-time and graduate instructors in the administration and assessment of writing programs; how could we usefully involve library faculty, both to grant them representation and to draw on their expertise in the teaching of research? At the end of their reading day, library faculty participants in this study expressed their appreciation of the opportunity to participate in the assessment process and to see the final products from students; they felt there would be a direct benefit to themselves as instructors and to the library's instruction program from their work. A collective commitment to a sustainable and strategic partnership with our library colleagues could have immense benefits for both the writing and library instruction programs, on any campus.

Conclusion and Limitations

In this chapter, more than any other part of this dissertation study, I felt the limitations of time, money, and my own education. If I had a better background in statistics or the resources to hire a statistician, I might have been able to analyze and interpret the data more, and draw a more nuanced story from it—a larger sample size would have helped with that, also. If there had been time available in my schedule, I could have conducted a qualitative analysis of high and low scoring papers, from both treatment groups, to determine if I could find a difference between them that was obscured in the numerical scoring. With additional time to conduct assessment readings and more money to pay raters, I could have generated additional data to analyze and hoped to isolate variables such as the norming or the rubric. With more time, I could have developed a number of rubrics based on the course learning outcome and tested them to determine which would be the most effective. Each of these is a potential opportunity, however, for continuing study after the dissertation is concluded and defended.

My research questions for this chapter did not address validity as part of my experimental design. There were a number of potential threats to validity within this study, though. A major one was the rubric itself. I developed the rubric, and although it went through testing, it could have conveyed an overly idiosyncratic interpretation of the course learning outcome, leading readers astray as they used it to rate the papers. The small number of papers used as artifacts for assessment also works against validity. In addition, as I stated earlier, at the time these assessment readings were conducted the Composition Program had not, to my knowledge, assessed the reading outcome for the first-year writing course. I genuinely did not know how I would construct an argument for validity, since there was no existing work on this particular learning outcome to draw on. The course design and set of interventions for the Experimental sections was neither radical or burdensome; this was an intentional choice, so that it would be more likely that instructors and students could complete the tasks successfully. This, I thought, would help to establish some degree of validity for my work, as would the fact that I did not change anything about the research paper assignment itself, and this was the artifact used for assessment. In addition, although I did develop the rubric on my own, it did receive testing from a group of instructors prior to being used in assessment, and the readers were able to use and apply it during the two assessment sessions.

Since the time I conducted my assessment readings, the Program has conducted its own assessment of the research course learning outcome, with a pair of rubrics developed by the Assessment Committee and a much larger set of artifacts than I used. Although I have not done an extensive comparative analysis of their data and my own, the average score on the rubric area that most closely matched my own rubric was 3.71 (the average score reported from my assessment design was 3.60). When I selected a subset of scores equal to the number of papers

scored in my session (n=22), the average score was 3.65. This variability demonstrates how the size of a sample can radically affect the average score. The correspondingly low scores from both sessions indicate that in both sessions, readers were rating similarly. I have conducted an additional assessment session using the new pair of rubrics to rate my own set of artifacts; my next steps will be to analyze this data and make the multiple comparisons needed.

The relatively low scores from both my and the Program's assessment raise additional, thornier questions. When we assess the student performance of a research course learning outcome through a written artifact, what are we measuring? Are we measuring the student's research abilities, or their ability to capture their research in writing? How could we measure their research, and not their writing, or separately from their writing? Is our outcome written in a way that its expectations can be performed in writing? Is our rubric measuring what is in the outcome, or what we think our students should be capable of doing—or what we think we can find in their writing? We are, thus, returning to the questions that were stated in the introduction to this document. How do we teach, and then how do we measure student performance of, the research-and-writing process as complex and iterative? This chapter has at least indicated some ways to capture the simplicity, rather than the complexity, of the research-writing process, as well as some paths for future, deeper inquiry that hopefully will bear better fruit.

CHAPTER 5: Conclusion

“Everyone’s doing research nowadays,” said Tuppence. “You know, all the teenagers and all one’s nephews and cousins or other people’s sons and daughters. They’re all doing research. I don’t know actually what they do research into nowadays, but they never seem to do it, whatever it is, afterwards. They just have the research and a good time doing the research and they’re very pleased with themselves and—well, I don’t quite know what does come next.”

From “Postern of Fate” by Agatha Christie, 1973

The field of rhetoric and composition invokes “research” within its curriculum fairly frequently, providing the most concrete practice in this skill through the assignment known as the research paper. The observation made by Agatha Christie’s unfortunately lesser-known detective, Tuppence Beresford, in the frontispiece to this chapter echoes critiques made by the research paper’s detractors. Where it departs from the scholarly complaints, though, is in its musing on the activity of research itself, rather than how it is captured within a particular genre.

When I began my own process of secondary research for this project, and as I’ve continued it during the timespan of the project, it has been a continual disappointment, though increasingly not a surprise, to see how little attention the field of rhetoric and composition pays to the concept and activity of research in comparison to other components of the writing process and writing pedagogy. Research is named but not known. For instance, although the eight habits of mind in the CWPA’s *Framework for Success in Postsecondary Writing* nearly all include some form of searching for, finding, or analyzing texts—which is the research process in brief—only “curiosity” explicitly names “research” as the activity being carried out. In the recent scholarly literature of

composition, transfer of writing skills has been a significant topic, but I am not aware of any study examining how “research” transfers as part of those writing skills. There is a distinct lack of understanding around this complex activity, even though it is foundational to a major academic genre, because there has been a distinct lack of scholarly inquiry surrounding it.

My research questions sought to remedy this lack of understanding. By asking “how do students describe their research process?” and “can a course learning outcome for ‘research’ be assessed with reliability and validity?” I sought to address this knowledge gap by utilizing two of the methods frequently used to build knowledge within rhetoric and composition: assigning and analyzing reflective writing and programmatic assessment of student writing. And within this context, the mixed results and negligible differences between the control and experimental sections in the two analyses shared within this dissertation takes on a new significance. The lack of difference demonstrates, again, how little we know about the research process as part of the writing process, and how to intervene in the research process in ways that will be fruitful and helpful to the students. Simply put, we do not know how to teach research. We assign it, and sometimes students figure out how to do it—or rather, sometimes other people have taught them before or other people teach them on our campus—and we and they get lucky because they transfer that knowledge from those other contexts to our context.

Some of my findings, though, have begun to add to our stock of knowledge about the research-writing process. In Chapter 3, where student responses to journaling prompts were analyzed, we learned that students will thoughtfully name the strengths and weaknesses they bring to their research process—when we ask them to. My study participants also connected weaknesses in research and writing more often than they do strengths. We further learned that the student’s articulation of their research process does not reflect the level of nuance that may be desirable.

There is encouragement here, but there also are challenges for us as teachers. How can we build on student's reflective understandings of themselves to see their strengths as well as their weaknesses? How can we help them become even more thoughtful and deft in their analysis and selection of sources?

Chapter 4 explored the possibilities and difficulties of assessing a research course learning outcome. Though the results were mixed and there are indications that artifact selection as well as rubric design and testing may be even more important for this outcome than for others. But, the results also indicate that library faculty can serve as raters for assessment, which would benefit both campus library instruction systems and writing programs.

As we still do not fully know what happens in the writing-research process, we need to see and capture it. This will require qualitative and quantitative research methods that capture longitudinal data, across and beyond a semester. The research project described in this study did not seek a longitudinal view, but it might be possible to use the data to answer a longitudinal question about student growth between the beginning and the end of the semester. A fresh analysis of student responses to all eight of the journal prompts might help us see parts of their research-writing process that are not captured in their major assignments. Analyzing the I-Searches and Whole-Class Research Projects would also give us a different view of the students, as these major assignments explicitly ask students to display elements of the research process that typically are not included in a research paper. Cross-analysis between these groups of documents might show which place we would more find a visible trace of student's research activities and abilities for assessment and pedagogical purposes.

As we move forward, the research methods used to study the writing-research process will also need to explicitly expect and account for change—which means the overall projects will have

to be designed to accommodate it. This is not always a value sought in a research project; data collection tends to be a static rather than evolving process, creating a snapshot rather than a panorama or a time-lapse. But if research affects writing, and writing affects research, and if the two are interconnected and dynamic, then all of those vectors must be accommodated in future research designs.

This primary research is itself inseparable from the pedagogy of secondary research. How could we improve our teaching of research-and-writing processes? We could begin by examining our pedagogy surrounding other course outcomes and habits of mind. How do we model and practice those skills in our curriculum? How much attention is given to them? How do we measure and communicate student progress? How could those pedagogical methods be used to support instruction in research?

Another way we could improve our instruction of research would be to intentionally and enthusiastically break the antiquated silo that keeps library faculty from full participation as faculty in the pedagogical work of our campuses. Their expertise—and their extensive body of publications—in the pedagogy of research has not had the impact on disciplinary pedagogy and student classroom experience that it ought to. Rhetoric and composition as a field has undertheorized research; library science has spent decades devoting attention and resources to theorizing research and information literacy instruction. This dissertation included library faculty within the assessment process, which was a first for the participating campus and, I believe, a first for the field. There is the potential for building a stronger, more active, more productive partnership beyond the one-shot instruction sessions, which would be beneficial to both parties. More importantly, such a partnership would benefit our students, whose instruction in the research process would help move them towards a fuller achievement of information literacy.

The lens of communities of practice (CoP) may help in deconstructing the silos that have kept disciplinary and library faculty separate for so long. Rhetoric and composition and library science educators all have some knowledge about teaching the research-writing process. Their bodies of knowledge are different, though. When working through a communities of practice model, researchers and leaders examine the practices that establish community within an organization. Applying this to the teaching of research, researchers would ask questions such as: What are the common points of knowledge between library and disciplinary faculty? Where are their intersections and crossing stations? Who belongs to each group, and who crosses between them—on individual campuses and within larger disciplinary structures? How could a community of practice model help us build more commonalities and an explicitly shared body of knowledge and practices? An investigation into the current state of research-writing process pedagogy, guided by the communities of practice model, would surely uncover many interesting insights, which could then be used to build up better research-writing instructional programs and partnerships in the future.

As a follow-up project to this dissertation, I hope in the near future to be able to conduct such a CoP-based study at my participating institution. The study participants would include both composition faculty and library faculty. These faculty would have their first meetings as a group before the beginning of the academic year to begin sharing knowledge of the research-writing process and to develop research-based assignments for the upcoming semester. During the semester, the group would continue to meet to discuss the effectiveness of the assignments and ways to further their knowledge as well as the students' knowledge. In a final wrap-up session, the participants would plan how to expand the CoP to include other faculty and to record their knowledge for future use with the Composition Program and University Libraries. My hypothesis

is that explicitly forming a community of practice around the teaching of research will help all participants become better at articulating the research-writing process to students, which will lead to improved outcomes for them in their writing classes. I also believe that it will help create a formalized, stable vision of the research-writing process that will benefit the stakeholder organizations and the larger fields represented by the participants.

Another area of future research is curriculum design to support improved mastery of the research-writing process. My hope in designing the current study was that I would be able to achieve this; I was not fully successful. In reviewing the literature, it seems writing faculty at many other campuses are also discontented with the state of research instruction. This begs the question: What would a successful research curriculum look like? Chapter 3 suggested additional curricular interventions that might be more successful, including researching multiple topics as smaller assignments (similar to the Whole-Class Research Projects), completing a “think aloud” protocol for their research process and reflecting on their articulation of their process, and having instructors model the analysis of an article. I believe we also should redouble our commitment to describing student strengths in their research, as well as their weaknesses—but this means that we do need to see them doing that research, so we can make fuller observations of their work. Fundamentally, we need to bring research out of the realm of homework and into the space of the classroom.

One area for immediate work is to bring the activity of research into the classroom. Much of the labor of search and evaluation is completed as homework, which means it is functionally invisible to the instructor and other students. What activities might make this work visible? How can we open up opportunities for dialog while the research process is ongoing? How could we create space for targeted interventions from peers and instructors for students struggling with or becoming disheartened during the research, or to add challenge for students ready to tackle more

complex questions and projects? Of course, this will not be possible if and while instructors feel inadequate to teach the research component of the research-writing process. To prepare instructors to teach this process, what sort of teacher training is needed? How can we empower instructors with greater knowledge of the nuances of the research-writing process, so they are more confident directing students' research projects? How could instructors take their knowledge of their own research processes and use that to demystify the research-writing process for their students? What partnerships could be built with library faculty, and what is an appropriate division of labor between the two groups within this pedagogy? Some suggestions towards improvement in these areas was made in the conclusion to Chapter 3 and are listed above, but further work is needed to develop this curriculum. The research-writing CoP study described here will be a first step in this work, but I hope that this area will also receive attention from other researchers.

In the 21st century knowledge world of irresponsible media outlets, corrupt political leadership, and persistent credulity, when instructors at all levels do not teach research as best we can, we are dodging an ethical responsibility to prepare our students for citizenship and public participation. Everyone's cousins, as Christie pointed out, are still doing research both inside and outside the classroom. But the stakes are higher now. There are, in fact, consequences to the research that they do--and there are also consequences to leaving research undone. Despite how pleased they may or may not feel at the end, research must be done well, and the researcher must see what comes next after the research is concluded. The first-year writing classroom is a unique educational environment, and research has been a part of the student experience in this course for decades. It behooves all writing instructors to continue learning more about how the research process is part of the writing process beyond a particular assignment or genre, and how they can improve their instruction in the research-writing process.

Appendix A: Demographic Instrument

Demographic Instrument
 “Assessing Methods of Research Writing Pedagogy”
 Ruth Boeder

Thank you for agreeing to participate in my study! I would like to collect some background information about you to help me in my analysis. As I explained on the informed consent sheet, I will replace your name with an anonymous one in any public presentation of this study, written or spoken.

1. What is your name (first and last)? _____

2. What is your WSU access ID? _____

3. What is your age? _____

4. Where did you attend high school? (please name the school and city)

5. How many prior semesters have you been in college, including WSU and/or other schools if applicable? (If this is your first semester, put 0. Do not count time spent dual-enrolled in high school and college.) _____

6. Has anyone in your immediate family (grandparents, parents/guardians, siblings) graduated from college? Yes No

7. What gender do you identify as? _____

8. What is your racial/ethnic identity? (Select all that apply.)

African American or Black

Asian or Asian American

Latino/a or Hispanic

Native American or Alaska Native

Native Hawaiian or Pacific Islander

White or Caucasian

Other (please provide): _____

Prefer not to answer

Appendix B: Pre- and Post-Intervention Questionnaire

Pre-Intervention Survey Instrument
 “Assessing Methods of Research Writing Pedagogy”
 Ruth Boeder

These questions ask you about your previous experience with research, that is, looking for information to improve your knowledge on a topic.

Please read the instructions carefully before recording your answer.

There are 5 questions total and it should take about 10-15 minutes to complete them.

1a. Did you receive any instruction about how to do research during your past school experiences? (select one response)

Yes No/don't remember (skip to question 4)

1b. If you said yes, on a scale of 1 to 10, with 1 being low and 10 being high, how helpful would you say that instruction was? (select one response)

1 2 3 4 5 6 7 8 9 10

2a. Do you do research for your school tasks or projects? (select one response)

Yes, daily
 Yes, weekly
 Yes, 1-2 times a month
 Yes, 1-2 times a semester
 No (skip to question 3)

2b. On a scale of 1 to 10, with 1 being low and 10 being high, how good would you say you are at research for school projects or tasks? (select one response)

1 2 3 4 5 6 7 8 9 10

3a. Do you do research for your personal interests or pursuits? (select one response)

Yes, daily
 Yes, weekly
 Yes, 1-2 times a month
 Yes, 1-2 times a semester
 No (skip to question 4)

3b. On a scale of 1 to 10, with 1 being low and 10 being high, how good would you say you are at research for personal interests or pursuits? (select one response)

1 2 3 4 5 6 7 8 9 10

4a. Did you visit a library or use a library's digital resources in the last 3 months? (select one response)

Yes, 6+ times Yes, 3-5 times Yes, 1-2 times No (skip to question 5)

4b. If you said yes, were you using the library for... (check all that apply)

a school task or project

a personal interest or pursuit

5. If I asked you to find information on a topic that you didn't already know anything about, what would you do to learn about that topic? Describe the first two or three steps that you would take, in as much detail as you can.

Post-Intervention Survey Instrument
 “Assessing Methods of Research Writing Pedagogy”
 Ruth Boeder

These questions ask you about your previous experience with research, that is, looking for information to improve your knowledge on a topic.

Please read the instructions carefully before recording your answer.

There are 5 questions total and it should take about 10-15 minutes to complete them.

1a. Did you receive any instruction about how to do research during your past school experiences? (select one response)

Yes No/don't remember (skip to question 4)

1b. If you said yes, on a scale of 1 to 10, with 1 being low and 10 being high, how helpful would you say that instruction was? (select one response)

1 2 3 4 5 6 7 8 9 10

2a. Do you do research for your school tasks or projects? (select one response)

Yes, daily
 Yes, weekly
 Yes, 1-2 times a month
 Yes, 1-2 times a semester
 No (skip to question 3)

2b. On a scale of 1 to 10, with 1 being low and 10 being high, how good would you say you are at research for school projects or tasks? (select one response)

1 2 3 4 5 6 7 8 9 10

3a. Do you do research for your personal interests or pursuits? (select one response)

Yes, daily
 Yes, weekly
 Yes, 1-2 times a month
 Yes, 1-2 times a semester
 No (skip to question 4)

3b. On a scale of 1 to 10, with 1 being low and 10 being high, how good would you say you are at research for personal interests or pursuits? (select one response)

1 2 3 4 5 6 7 8 9 10

4a. Did you visit a library or use a library's digital resources in the last 3 months? (select one response)

Yes, 6+ times Yes, 3-5 times Yes, 1-2 times No (skip to question 5)

4b. If you said yes, were you using the library for... (check all that apply)

a school task or project

a personal interest or pursuit

5. If I asked you to find information on a topic that you didn't already know anything about, what would you do to learn about that topic? Describe the first two or three steps that you would take, in as much detail as you can.

Appendix C: The Common Syllabus 1020 Major Research Assignments

2: I-Search Project

Introduction/Rationale

This project will be used to explore and develop research skills and your ethos as a researcher. You will pick a topic and compose a research question or questions about that topic. Then you will use the “I-Search” method to work through the process of composing a reflective research narrative. The I-Search is a process of researching a question, but also refers to a particular form of writing—a genre—that is based in questions, rather than answers, and that centers on a narrative of research. It is a project where *you* search for information rather than only reporting what other writers have researched before you. The outcome of the I-Search project may be an answer to your initial research question, an understanding of how to best research this kind of question, an evaluation of sources for a future research project, or even a refined sense of the argument you might pursue in the next project.

Assignment

For this project, pick a topic and compose a research question or set of related research questions on a topic of significant personal interest, and work through relevant research strategies to begin to find answers to these questions. Compose a 1500-2000 word project that explains your research process, findings, and reflections.

Prompt

How do I begin?

- To start, consider what issue you would like to explore.
- Assess the knowledge you have about this topic and the knowledge you need, and brainstorm a list of questions.
- Group related questions together, and spend some time brainstorming any other related questions. These **research questions** will guide your inquiry: the reading, research, and writing you do for the paper.

Some questions students in past classes were interested in researching:

- *Does the food that we eat affect our dreams? How? What exactly causes this? Is it the chemicals inside the food or is it psychological?*
- *How do musicians know when they are ready to perform?*
- *What does a job at the FSO [Foreign Service Office] entail? How do I get a position there? What is the lifestyle like for those employed by the FSO?*
- *How does social media affect romantic relationships?*
- *How does chronic pain, or treatment for chronic pain, lead to depression?*

When you're thinking about whether or not your I-Search question will “work,” ask yourself the following questions:

- Is it written as a question or set of questions, instead of a statement?
- Do I need to clarify any terms to make my research question understandable to my audience?

- Am I personally invested in exploring this question? Why or how will exploring this question help me? Can I articulate my motivation for asking this question?
- Is my question something I can research using secondary sources? Can it be answered too easily, or do I need a diverse set of sources to understand the answer?
- Is my question specific or concrete enough to explore in 1500-2000 words? Or is it too broad or too narrow?

What does the paper “look” like?

The I-search paper is a narrative of sorts, describing your search for answers to your research questions. In this paper, you will use first person (“I”), and will think about what vocabulary, style, and tone work best to support your development of the topic.

Ken Macrorie, in his book *I-Search* lists four parts of the paper (What I Knew, Why I’m Writing This Paper, The Search, and What I Learned), though, as he notes, this is flexible:

- I) The **introduction** (What I Knew and Why I’m Writing the Paper)
 - a. In the introduction you will explain three things:
 - i. Your research question
 - ii. What you know or think you know about the topic
 - iii. Your motivation for finding the answers to your question(s)
 - b. The introduction may be more than one paragraph long, depending on how much prior knowledge you have. Decide in which order the content is best presented.

- II) Part 2: The **body** of the paper (The Search)
 - a. The body of the essay is the narrative of your search for answers and your reflection on this research process.
 - i. In the beginning of the project, we will learn about the tools available to you through the WSU library database. You will explore these library tools as you engage in library-based research on your topic.
 - b. There are two ways students generally plan the research process:
 - i. You might begin with the source that is “closest” to you, the one that is easiest to access. Write about what you find there to answer your question and what seems like an intuitive next step for research. Then move on to that next source, and continue to follow the research path.
 - ii. Or, you might have a more concrete research plan in place when you begin. For example, you might plan to look at scholarly articles from three particular journals to answer your question, or you might plan to find the answers to your sub-questions in a certain order.
 - c. You will find at least three relevant secondary sources to learn more about your topic. For each source you write about in the body of the essay, you should do the following:
 - i. Explain how you found that source: What search tools did you use? How did you navigate them?
 - ii. Summarize the information you find in that source as it relates to your question.

- iii. Reflect on how that source helps you answer your question and/or how it helps you build on the knowledge you've found in other sources.
- d. Your narration of the search process and your reflection on and analysis of sources will help you build transitions between your discussion of the sources you discover.

III) Part 3: The **conclusion** (What I Learned)

- a. The conclusion of the paper is different than the traditional conclusion you may be used to in academic writing. While you may be able to summarize what you've learned, it's also just as likely that you will be left with more questions, or will have gone down an unsatisfying research path. This is also worth writing about, as you are nevertheless learning about the research process, and can always carry your inquiry forth in a future project. Your conclusion should include three things:
 - i. An explanation/summary of what you learned through research about possible answers to your research question.
 - ii. An explanation/summary of what you learned *about* research and/or writing through examining this question and using the research methods you used.
 - iii. A claim about your conclusions in a nutshell; that is, state what you learned through this project (your research process, writing process and topic) in one sentence (“After finishing this project, I hypothesize/claim/understand/argue that....”)

Minimum Requirements

- Length: 1500-2000 words long
- Research: At least three relevant secondary sources
- Format: MLA format

After successfully completing this project, students should be able to:

Writing

- Use key course concepts (genre and rhetoric) to write effectively
 - *You'll practice employing narrative, reporting, and reflection in the text, showing that you understand the features of the I-Search genre.*
- Use a flexible writing process that includes brainstorming/inventing ideas, planning, drafting, giving and receiving feedback, revising, editing, and publishing.
 - *You'll practice brainstorming, drafting, response, reflection, and revision activities in class and for homework to develop ideas and refine writing.*

Reading

- Use reading strategies in order to identify, analyze, evaluate, and respond to arguments, rhetorical elements and genre conventions in college-level texts and other media.
 - *You'll practice using your knowledge of rhetoric to read, analyze, evaluate, and respond to sources, thinking about how they provide information and perspectives integral to a discussion of the topic.*

Researching

- Conduct research by finding and evaluating print, electronic, and other sources;
 - *You'll practice using the library databases to identify relevant and sufficient resources for the project.*

- Generate information and ideas from research;
 - *You'll practice summarizing, paraphrasing, and quoting relevant information from sources.*
- Appropriately integrate material from sources.
 - *You'll practice using search narrative to introduce sources.*
 - *You'll practice using MLA format to integrate in-text citations and a works cited page.*

Reflecting

- Use written reflection to plan, monitor, and evaluate one's own learning and writing.
 - *You'll practice articulating prior knowledge and knowledge gaps in order to form research questions in reflection.*
 - *You'll practice monitoring your development of voice, and topic and assessing the effectiveness of organization and style through in-process reflection.*
 - *You'll practice evaluating your composition of the I-search project in a post-process reflection.*

3: Research Essay Project

Introduction/Rationale

Now it's time to embark on the research study you've prepared for in Project 2. In Project 2, you learned how to craft a personalized research process to help you "read in" to a topic that interests you. It is time to take those research skills and put them to use in building persuasive arguments about your topic, targeted to a specific audience. You will compose a **researched argument essay**, using the argument types outlined in our reading (definition, evaluation, causal, rebuttal, proposal). The objective of this paper is to present the findings from your research, composing an argument about the issue you've identified within the topic you studied. You will be focusing on writing in an academic tone and style, developing your ethos as researchers by practicing using an "academic voice" to respond to or join the conversation you see happening.

To help develop your understanding of academic discourse, you will use a technique called genre analysis to examine publications in undergraduate research journals. These journals serve as places for students like you to publish their research and participate in a particular conversation...one that you will join.

As your instructor, I will use this assignment to assess your achievement across the following goals:

1. To have composed a paper that is appropriate for submission to a *real-life academic forum*, such as an undergraduate research journal, or even the Rushton Conference here at WSU.
2. To be practicing the research strategies you've developed in Project 2—posing research questions, figuring out where to look to find the answers we seek, locating and evaluating scholarly and popular sources, reading the conversation (figuring out who's saying what about your topic, where are there gaps? are scholars *not* talking about something? what's missing?) and figuring out how you can contribute.

Assignment Prompt

Your final paper should make the reader feel like the argument you are making is reasonable and persuasive, supported by research-based evidence (a reason it is very important to be strategic with your choice and use of sources, to keep excellent notes on rhetorical analysis of sources, and to sketch out the conversation accurately).

You will integrate data gathered through your research into the conversation that you have already begun to identify in your I-Search project. You will further your knowledge by adding at least 4 new sources to your works cited list (2 scholarly, 2 popular, and any other applicable sources needed).

In order to successfully complete this essay assignment, you will need to:

- Make a **claim** that is based on **the argument types** we read about in *the Wayne Writer* (definition, evaluation, causal, rebuttal, proposal).
- Support your claim throughout your essay with examples and evidence gathered through your research methods.

- Identify and clearly target a specific **academic** audience with your writing, considering whether that audience is comprised of insiders or outsiders relative to your community of observation.
- Your essay should also address the purpose you stated in your I-Search project, and the results of your research investigations. Did you find what you expected? Why or why not?
- Conclude with avenues for further pursuit: is there an issue or tension you've discovered that needs to be further explored? A change you think should be made? More research that needs to be conducted to further pursue your questions?

Minimum Requirements (what you'll turn in)

- 2000-2500 word Final Researched Argument Essay (plus Works Cited)
- MLA Format
- Total of 7 secondary sources (3 from the I-Search plus at least 2 additional scholarly sources, 2 popular sources, and any other applicable sources needed)
- 300-500 word Reflection Letter written to the audience of your choice and addressing the following questions:
 - what was positive and negative about the process of composing Project 3?
 - what Course Learning Outcome did you grow in the most?
 - what is the area of Project 3 that you feel proudest of? Why?

After successfully completing this project, students should be able to:

Writing

- Use key course concepts (genre and rhetoric) to write effectively
 - *You'll practice demonstrating an understanding of the features of academic research writing and demonstrating appropriate use of rhetorical strategies for academic research writing*
- Use a flexible writing process that includes brainstorming/inventing ideas, planning, drafting, giving and receiving feedback, revising, editing, and publishing.
 - *You'll practice working through brainstorming, drafting, response, reflection, and revision activities in class and for homework to develop ideas and refine your writing*

Reading

- Use reading strategies in order to identify, analyze, evaluate, and respond to arguments, rhetorical elements and genre conventions in college-level texts and other media.
 - *You'll practice reading, analyzing, evaluating, and responding to sources, thinking about how they provide information and perspectives integral to a discussion of the topic.*

Researching

- Conduct research by finding and evaluating print, electronic, and other sources;
 - *You'll practice using the library databases to identify relevant and sufficient resources for the project.*
- Generate information and ideas from research;
 - *You'll practice articulating the conversation (be able to present a brief review of the literature), formulating a response to the conversation, articulating stance or argument*

- *You'll practice summarizing, paraphrasing, and quoting relevant information from sources.*
- Appropriately integrate material from sources.
 - *You'll practice using MLA format to integrate in-text citations and a works cited page.*
 - *You'll practice using academic writing conventions for introducing sources material and linking back to writer's argument*

Reflecting

- Use written reflection to plan, monitor, and evaluate one's own learning and writing.
 - *You'll practice using reflection to articulate prior knowledge and knowledge gaps in order to form research questions.*
 - *You'll practice using post-project reflection to evaluate your research and writing process.*

Appendix D: Whole Class Research Projects Assignment

Assignment Two: Whole-Class Research Projects

Assignment Prompt:

Over the next few weeks, you will practice and improve your research skills by looking for information on topics chosen by the whole class. We will work together to find good sources to help us learn about these topics. The goal of this assignment is to give you the opportunity to master the research process by not only seeing how you approach it, but also how your classmates do. We will spend a lot of class time talking about what is good and bad about the sources we find and what we feel is going well—or not so good—in our research process.

During the first week of the assignment, everyone will have a chance to propose a topic for us to work with. We will then take a vote, and the topics with the top three vote counts will be researched, one per week, for the next three weeks. Every student will be responsible for finding two sources on each topic and creating a post for each source in a Blackboard Discussion Board dedicated to the topic. At the end of each week, we will look at everyone's postings in class to determine how the sources relate to each other and we will work together to create an idea map of the sources.

Formatting:

Each week, you will create two posts, one for each of the two sources you found related to the week's topic. Each post must contain three components: 1) the citation for the source 2) a 1-2 paragraph summary of the source that describes and evaluates it for the rest of the class, and 3) any search notes your peers would need to know to help them find it (see the template below for more information). You will post this information in the appropriate Blackboard discussion board for the week.

You cannot repeat sources. If you see that someone else has posted a source that you were planning to use, you will have to come up with a new one. (For this reason, I recommend that you post at least the citation of your source early in the week—it will be possible for you to edit your posts to add the summary later).

You are allowed to post sources that you ultimately decide are bad, *but* you must have read the whole thing *and* explain in your summary why you think it is not useful. If you stop reading before you get to the end of a source, you cannot use it.

Grading:

Each post you contribute will be worth 25 points (x 6 posts = 150 points for the whole assignment). If you forget to complete one of the three components, the post will be docked five points. If there are inaccuracies in your citation or your summary is missing major information (such as the main point of your source), your summary will be docked points corresponding to the severity of the inaccuracy (ex: leaving out a period isn't a big deal, but leaving out an author's name is).

Assignment Two: Posting Template

Source Citation:

(See the MLA Handbook or Purdue OWL for examples and assistance)

Summary of Source:

(You must include a synopsis of the piece in or two sentences that covers the main point/thesis/argument along with any significant details. Here are some ideas for other things to include in the summary, though you may also think of more: your explanation of how this piece contributes to the bigger topic we're researching—what does it support or argue against, what subtopic does it explore, etc.; how current is this source; what is the most important or useful piece of information in the source; is the author well-known or an expert on this topic; what are the biases of the piece, its author, or the publisher; etc.)

Search Notes:

(Put anything here that you think would be helpful to other people looking for the source: your search terms, databases or search engines used, what website that hosts it, was it linked from another place or recommended by another person, did it give you ideas for new subtopics, etc.)

Assignment Two: Schedule

The basic schedule for this assignment is below:

Week 1, day 1: Go over the assignment and view samples of Blackboard posts. Create list of suggested topics, do initial vote to narrow to 5-7 topics. Homework: Journal 1

Week 1, day 2: Library Day. Do initial search on all topics in library databases. Final vote to reduce number of topics to 3. Homework: begin doing research related to chosen topics (A, B, C)

Week 2, day 1: Topic: evaluating sources. Lecture and in-class activities. Homework: post summary + citation for two sources related to Topic A

Week 2, day 2: Look at entries and create idea map of topic. Discuss what was/wasn't useful about particular sources, and why.

Week 3, day 1: Topic TBD by class needs. Homework: post summary + citation for two sources related to Topic B

Week 3, day 2: Look at entries and create idea map of topic. Discuss what was/wasn't useful about particular sources, and why.

Week 4, day 1: Topic TBD by class needs. Homework: post summary + citation for two sources related to Topic C

Week 4, day 2: Look at entries and create idea map of topic. Discuss what was/wasn't useful about particular sources, and why.

Appendix E: Reflective Journal Prompts

Journal Prompts

Journal 1 (at beginning of Assignment 2):

What do you think your strengths are as a researcher? What do you think your weaknesses are as a researcher?

Journal 2 (at the beginning of the second week of Assignment 2):

What are some red flags that would tell you that an information source was bad or not useful? Explain in as much detail as you can.

Journal 3 (at the beginning of the third week of Assignment 2):

What makes an information source good or useful? Are there things you consistently look for or notice in good sources? Explain in as much detail as you can.

Journal 4 (at conclusion Assignment 2):

Look back at your journal from the beginning of this assignment. Answer the questions again: what are your strengths and weaknesses as a researcher? Have you changed in good or bad ways since then?

Journal 5 (at beginning of Assignment 2):

Knowing your strengths and weaknesses as a researcher and a writer, what do you think will be easy for you during this new assignment? What do you think will be hard for you in those two areas?

Journal 6 (in the second week of Assignment 3):

What did you learn in Assignment 2 that is helping you to do Assignment 3? For instance, are there specific terms/ideas that you are working with? Are there specific places you are looking or search strategies you are using? Or are there other things you learned that are helpful now?

Journal 7 (in the third week of Assignment 3):

What is one challenge or problem you experienced while you were doing research for this assignment? How were you able to overcome or work around it?

Journal 8 (at the end of Assignment 3):

Look back at your journal from the beginning of this assignment. Were your predictions correct? Were things easy/hard in the way you expected? Did anything unexpected happen that made things easier or harder?

Appendix F: Group Interview Questions

Interview Question Schedule

“Assessing Methods of Research Writing Pedagogy”

Ruth Boeder

How easy do you feel it was to teach this curriculum?

Were there parts of the curriculum that you found difficult to teach or that you were not comfortable with?

Do you recall if any of your students displayed a positive or negative attitude towards the second project? What about the journals? What about the surveys?

Do you feel that your students learned how to research better with this system than they did with the sequence in the fall semester?

Would you teach this assignment sequence again?

Appendix G: Assessment Rubric for Research Course Learning Outcome

Rubric for Research Outcome

	6	5	4	3	2	1
	6,5,4--Sufficient			3,2,1—Insufficient		
Find, evaluate, and use information from secondary sources to support and formulate new ideas and arguments	<p>Excellent evaluation (critiques sources; connects ideas across sources)</p> <p>Excellent support (sources add to student's own claims)</p>	<p>Good evaluation (critiques sources; connects ideas across sources)</p> <p>Good support (sources add to student's own claims)</p>	<p>Adequate evaluation (critiques sources; connects ideas across sources)</p> <p>Adequate support (sources add to student's own claims)</p>	<p>Limited evaluation (critiques sources; connects ideas across sources)</p> <p>Limited support (sources add to student's own claims)</p>	<p>Poor evaluation (critiques sources; connects ideas across sources)</p> <p>Poor support (sources add to student's own claims)</p>	<p>No evaluation (critiques sources; connects ideas across sources)</p> <p>No support (sources add to student's own claims)</p>

Logical Decision Rule: if an essay has a mixed score, record the lower score.

Example: If an essay has excellent evaluation and good support, then it is a 5/Good.

Example: If an essay has adequate evaluation and poor support, then it is a 2/Poor.

Appendix H: RQ 1 Journal Responses Coding Schema

Note: All examples from student journals are unchanged and unedited.

Code	Content Description	Example Student Journal Response
Disposition	Discussion of emotion or attitude	“A research paper would be the least liked type of paper I could be assigned.” “I haven’t did a research paper in years but Interested in doing more.”
R-Definition	Definition of research	“A researcher is someone who picks a topic and they look up all the facts about that certain topic. they give details on that topic and they educate another person about whatever the topic is.”
R-Dislike	Discussion of negative experience of or emotion towards research	“Researching is kind of an open thing for the most part but when you have specific guidelines to follow it can start to get a bit tricky.”
R-Personal	Discussion of research for personal projects or purposes	“I also feel I am a good researcher because I do research often when buying a new product for hunting or fishing.”
R-Positive	Discussion of positive experience of or emotion towards research	“I like to research things that I find interesting and things that I would like to know.”
--Growth	Discussion of progress and development over time	“Overall my strengths improved and my weakness from the beginning became my strengths. My weakness will continue to improve and I will continue to work towards fixing them.”
R-School	Discussion of research for school projects or purposes	“Research has been something that I have done many times throughout middle and high school.”
R-Strength	Discussion of research as a strength and specific skills that make for strong research/ers	“Though it might have been just a quick short research project, I feel that I am pretty good at researching and using the available resouces.”
--Analysis/evaluation	Locating relevant ideas and information in sources	“My strengths as a researcher i would say is being able to find the most important details that I need to be researched on a specific topic.” “I think im very good at filtering out what I dont need but i could improve upon finding things that counter my argument.”
--Citations	Mechanics of integrating information	“My strengths as a researcher would be having the right citations for that certain piece of evidence.

--Ease	Research process being easy to accomplish	“As a researcher I feel as though it will be easy for me to look for the answers to the questions that I have.”
--Getting scholarly or credible sources	Finding sources that meet academic community expectations	“I’m really good with choosing credible and reliable resources when coming up with supporting materials for my subject.” “But besides that when i do actually do the research I think I find good articles and quotes from sources other than Google.”
--Integrating Sources	Description of use of sources in larger project	“My strengths are my ability to expand information I find and form it into an argument. I feel like the argument to the paper will be a strong because arguing is one of my strong suits as a writer.”
--Interest in topic	Motivation or success of research tied to interest in topic	“My strengths are researching the topic really well and finding all the information. If I’m really interested in a topic I would go all out on finding information and making sure it’s up to my standards.”
--Organization	Ability to organize work or results	“Another strength I have as a researcher is being organized. Organization will definitely make writing this essay easier for me because I would have all of my information from each article separated into where I want it to be in my work. Organizing the articles that way would make writing easier because it would help me stay on a good flow in writing instead of being all over the place.”
--Persistence	Being able to continue project in the face of obstacles	“The fact that I knew that I would have problems helped me be more aware of the articles I found and it also helped me find useful information articles.”
--Previous knowledge	Prior learning on topic contributing to current research	“This assignment will be easy because I have researched the topic before and have a quite a bit of prior knowledge to make writing and researching for my paper easier.”
--Search/ searching	Mechanics of using information tools	“My strengths as a researcher is that i can find information regarding a topic. I would be able to find lots of details, about certain topic, on-line.” “I feel my strengths as a researcher are the vast amounts of sources i can find. I have some very different ways to find information.
--Sharing knowledge	Drawing on others' knowledge or	“In addition I enjoy talking about what I have found and how I found the subject interesting,

	contributing own knowledge to discussions	hopefully interesting to others as well, maybe that's why I enjoy talking about the material I have research."
--Variety of sources	Meeting assigned or personal expectations for having a range of sources	"My strengths as a researcher would be that I'm very productive. I do as much research as possible and try getting as much information or notes so that I can cover almost every aspect or empty topic there is to fill out."
R-Tools	Discussion of particular tools and technologies used for research	"I am also very bad with navigating computers which is unusual for someone my age." "The most valuable skill I obtained from the previous assignment was the knowledge of the databases that are available."
R-Weakness	Discussion of research as a weakness or a lack of skills that make for poor research/ers	"A weakness that I have as a researcher is probably staying as focused as I can get, sometimes if I read about something that interests me I end up doing research on that and completely zone out from my original subject."
--Analysis	Struggling or failing to locate relevant ideas and information in sources	"My weakness as a researcher is lack of confidence because I always wonder if I am using the information to the correct of my knowledge"
--Citing, quoting, summarizing	Mechanics of integrating information	"The harder areas for me will probably be the in text citation which always get me on every paper."
--Getting scholarly or credible sources	Finding sources that meet academic community expectations	"My weakness has to be looking for info in different sources such as books or credible sources. Since, i usually look up for information on-line, sometimes i don't pay attention if the sources are credible or not. I blindly just believe everything the web has to say."
--Integration of sources	Description of use of sources in larger project	"Also my weakness is I worry if I can find the right evidence for my topic."
--Interest in topic--lack of	No or low interest in topic led to lack of motivation for or success of research	"I still struggle with the depth of my research due to a short attention span and general lack of interest in most topics I have had to write about in the past"
--Past experience--lack of	Lack of prior knowledge about topic that would contribute to current research	"My weaknesses, on the other hands, is my limited prior knowledge of the subject and research methods."
--Search/ Searching	Mechanics of using information tools	"Prior to my first semester in college, I hadn't had much experience searching through databases in order to find 'scholarly articles' and as a result, I did poorly on my first paper."

		<p>“A weakness is when my topic has very little information in the data bases I do not know what my next step is to finding more information, it rarely happens but I have encountered problems like that in the past.”</p>
--Thoroughness	Topic being exhaustively searched	<p>“My weaknesses as a researcher is that sometimes I can get impatient when I just want to get the work done that I start to get impatient and the sources I look for, might not be the best to use for a paper or I just settle for articles that might pop up on Google so my work can then get done faster.”</p>
--Time management	Lack of time; procrastination	<p>“One of my weaknesses are I don’t really know how collect a certain amount of information in little time.”</p>
--Variety of sources--lack	Failing to meet assigned or personal expectations for having a range of sources	<p>“I actually already found some really good articles for my topic and both are scholarly. I have not looked for a popular source yet because I’m having such good findings on the Wayne library but for my next three sources I’ll try and get 2 popular or at least one.”</p>
--Voice	Balancing multiple voices; navigating voices in research vs. self	<p>“The last thing I think will be hard for me is fully explaining what I mean because a lot of times when I’m trying to get my point across I understand what I mean but others don’t.”</p>
--Volume of sources	Concern over large amount of results/sources	<p>“My weaknesses as a researcher is looking for enough information, I either find too little or too much information and inf I find too much information it usually is something I already found just with different wording, it’s good when I get too much information but I never know what info I should use.”</p>
Writing	Discussion of skills at written communication	<p>“Explaining what I found on paper is another weakness of mine.” “and I am feeling more comfortable about writing. I always had this problem, which was a problem to start and finish essays, but now I feel that start writing does not feel as hard as it used to be for me.”</p>

Appendix I: RQ 2 Journal Responses Coding Schema

Note: All examples from student journals are unchanged and unedited.

Code	Content Description	Example Student Journal Response
Audience	Student mentions audience for source/author	“The type of language and directed audience matters as well.”
Author	Student considers presence or persona of author	“What also makes a good and useful source is the authors credentials. What is their experience, degree, and reputation?”
Cites others	Student mentions citations within source	“Good sources cite their sources. Good sources [c]ite many sources, instead of maybe one or two sources.”
Credible/ unbiased	Student mentions considerations of reliability or bias within source	<p>“A good or useful source is always credible. If a source isn't credible, this source is not useful. If the source begins to come off more opinionated rather than factual, this is not a good or useful source.”</p> <p>“If this information is biased or not, if the author is biased, it can skew what the reader thinks and believes.”</p>
Date/recency	Student mentions date or time considerations	“The time that it was published always need to be a little bit recent too depending on the question unless you're looking at something that took place some time ago.”
Evaluation Process Description	Student describes their own analytical process	<p>“When I do research I go the logical route, wanting facts to back up my claim. I typically skim through an article to see if they can give me that, if they do then I decide to save that source and read it more in depth later.”</p> <p>“The internet is full of information and sometimes I find that it can be hard to distinguish a bad source from a good source.”</p>
Formatting	Student mentions elements of layout, organization, or design	<p>“9 times out of 10, when I see that an article has an abstract (powerful statement that summarizes that main idea of the article), it is a credible source.”</p> <p>“So to sum up everything what makes an source a good or useful source is when it has a great sense of quality and well formatted information that isn't everywhere but all in place.”</p>
Helpful/relevant	Student mentions a source's usefulness or connection to the searcher's topic	“Another important piece of finding a credible source is determining whether the information it provides is relevant or not. Often times, articles can provide solid information, but it is out of date or not relevant towards the research question.”
-- To own claim	Student mentions a source's usefulness or	“A source can be a good and useful source if it provides all the necessary information needed for the particular research.”

	connection to their own claim or project	
Information/ content	Student mentions contents of source; may include expectations of particular kinds of content	<p>“Information that makes a source good or useful is facts and statistics, which is best for research papers.”</p> <p>“The way to tell if one scholarly article is better than another is in its content. The content of a good article will have a detailed and well written format that answer the question with a sufficient response.”</p>
Length	Student mentions length	<p>“[A source] that isn't too long nor is too short. I feel like an article that is too short won't have enough information to give us if we had to write a resource paper on it. I feel like when they are too long its too much information to gather in just one article.”</p>
Platform/venue	Student mentions the location, host, or access point for source	<p>“What makes an information source good or useful I believe is the location the material is published in.”</p>
--Library	Student mentions libraries as information access point or location	<p>“A good way to start to identify a good source is to look for it through the library's databases. The articles coming from these sources are scholarly and generally hold really good information.”</p>

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ABSTRACT**NAMED BUT NOT KNOWN:
TEACHING AND ASSESSING THE RESEARCH-WRITING PROCESS**

BY

RUTH BOEDER**DECEMBER 2020****Advisor:** Dr. Jeff Pruchnic**Major:** English (Rhetoric and Composition)**Degree:** Doctor of Philosophy

In lived experience, the two processes of secondary research and writing overlap and intertwine interminably, creating an overarching complex system as research becomes expressed in writing and writing generates new research. This classroom study explores the two processes as one—the research-writing process—through coding of student journal responses and assessment of student research papers. Analysis reveals students to be thoughtful but not yet as nuanced in their descriptions of their research process as much be desired. They more frequently discuss writing with weaknesses in their research process than with research strengths. Further findings indicate that although it is difficult to assess a research course learning outcome, library faculty can be assessment raters with as much reliability and validity as writing faculty. Suggestions for improving the curriculum, pedagogy, and assessment of the research-writing process are provided as well as ideas for future research.

AUTOBIOGRAPHICAL STATEMENT

Ruth Boeder pursued her PhD in English Rhetoric and Composition at Wayne State University (WSU) and earned her Master's in Library and Information Science from the same university in 2011. She has worked as a composition instructor since 2014. In the past, she worked as a circulation desk manager and reference and instructional librarian. Her current research projects focus on the intersection of composition studies with information literacy, critical digital studies, and research writing pedagogy.