



CHAPTER 2

Interpreting the Frameworks:

Faculty Constructions of Research and the Researching Student

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Introduction

In Fall 2015, our institution transitioned to a new set of general education requirements. During the course approval process for these new and revised general education courses, our librarians became interested in exploring ways non-library faculty planned to teach and assess research and information literacy (IL) skills. In other words, they wanted to understand how faculty construct the act of research for their students. This study contributes to composition and rhetoric scholar Karen Kaiser Lee's call for faculty and librarians to "consider what is meant by 'research' in writing assignments that students encounter across the undergraduate experience...and ascertain what sort of assignments and requirements are now in place."¹

For the purpose of this chapter, we requested access to and were able to collect syllabi and course approval forms from all advanced communication courses offered in the general education curriculum. These courses (designat-

ed as COM3) include learning outcomes with a writing-in-the-disciplines focus. Through analysis of these course application forms, we hoped to identify common trends and gaps in faculty definitions and approaches to IL, with the larger goal of developing instructional support to deepen and extend faculty teaching in this area.

Specifically, we chose to analyze faculty descriptions of their approaches to research by coding around a set of rough binaries suggested during our examination of the documents: skills vs. discourse focus, telling vs. transforming purpose, content vs. issue orientation, and linear vs. iterative process. We believe this way of coding and analyzing the data can provide faculty—in libraries, writing and communication programs, teaching and learning centers, and the disciplines—with an understanding of research that may help them develop and support curricula in line with frameworks for twenty-first century scholars and citizens.

This chapter reviews recent scholarship about faculty approaches to research, provides a brief analysis of national frameworks meant to guide student writing and research, presents key findings from our analysis of COM3 application materials, and ends with a set of suggestions we believe useful to our campus as well as others.

Existing Research about Faculty Approaches to Research Assignments

Surveying previous scholarship by composition scholars David Russell, Stephen North, Ambrose N. Manning, and Richard L. Larson, Karen Lee's chapter in *The New Digital Scholar*² argues research papers, since the mid-twentieth century, have tended towards ossification that oversimplifies the research process, confines it to a "single, often laborious task," promotes an artificial and rigid process, isolates research from the writing process, and ultimately decontextualizes research activity from larger course objectives. Quoting Doug Brent, Lee notes a disconnect between research as process and research as product: "[R]esearch, the eternal ether that interpenetrates all formal inquiry, becomes 'the research paper,' a separate genre that occupies a separate little section of the course."³

According to Russell, this disconnect emerged as written scholarly discourse (primarily in the form of journals) associated with the German research model replaced a previously oral tradition; classrooms became sites of apprenticeship where faculty represented the larger disciplinary community. Yet, as faculty pressure to research increased, less time was available for teaching research, leading to writing which looked "toward the ideal of research, but [which was] effectively cut off from the activities of disciplinary research."⁴

As a result of this disconnect, the classroom research assignment is often characterized by a rushed, artificial process. For example, a 2010 Project Information Literacy (PIL) survey found 58 percent of students select a thesis statement early in their process. Additionally, only 55 percent of students surveyed listed “having a chance to be creative” as important during academic research (second to last among fifteen options, ahead of only “impressing parents with grade received.”)⁵ Another PIL report further describes a relatively rushed, linear process for most students, with three-quarters of survey respondents spending one to five hours researching before turning to writing and editing.⁶ Additionally, Lee suggests students see research paper assignments as focused on informing more than analyzing,⁷ further supporting the notion that classroom research, for many students, has a different focus than research in the discipline.

Dan Melzer’s recent analysis of 2,101 college-level writing assignments across the curriculum updates the information presented by Lee. His study found a continuing tendency toward informative, transaction assignments, often focused on “an extremely limited view of academic discourse ... asking [students] to simply display the ‘right’ answer or the ‘correct’ definition to the instructor.”⁸ Even at the upper level, Melzer found 61 percent of assignments were directed to “teacher-as-examiner.”⁹ Despite these statistics depicting an artificial process in which students prematurely settle on their stance without engaging their curiosity, Project Information Literacy’s 2010 survey also determined “carrying out comprehensive research of a topic (78%) and learning something new (78%) [were] of importance to [students] too.”¹⁰

Students appear to believe lack of clear instruction about research hinders those goals. For example, Alison Head’s 2007 survey of humanities and social science majors found “nearly half of the survey sample strongly agreed with the statement that a lack of information from the assigning professor stymied them the most, sometimes keeping them from beginning an assignment at all (48%).”¹¹ Specifically, Head’s analysis of research assignment descriptions showed “a lack of detail and guidance in many research assignment handouts. As a whole, the handouts offered little direction about (1) plotting the course for research, (2) crafting a quality paper, and (3) preparing a paper that adheres to a grading rubric of some kind.”¹² She reports “[f]ew of the handouts analyzed mentioned where students were to look for research resources,” and “when provided, the guidelines for crafting a quality research paper were often terse and formulaic.”¹³

Additionally, the 2010 Project Information Literacy study indicates lack of clarity—both during the initial stages and during evaluation—was frustrating to students: “For over three-fourths (84%) of the students surveyed, the most difficult step of the course-related research process was getting started. Defining a topic (66%), narrowing it down (62%), and filtering through irrelevant

results (61%) frequently hampered students in the sample.”¹⁴ And, nearly half of survey respondents (46 percent) said simply knowing whether they had done a good job was a struggle¹⁵—a percentage indicating clarity of expectations remains a significant problem for many classroom research assignments.

The lack of guidance may be explained, in part, by Michelle Simmons, who suggests faculty may struggle to make research expectations clear because they have internalized those processes and tasks: “domain-specific rhetorical processes are seen by the faculty members who work within the domain as the ‘normal’ or ‘natural’ or ‘correct’ way of writing, reading, or researching; and they expect their undergraduate students to be able to learn and adopt these ways of communicating without explicit instruction.”¹⁶ In other words, Simmons suggests faculty have acquired an implicit sense of good research for their discipline, but do not realize they need to unpack those assumptions about normal or correct research for their students.

Some Positive Indicators

Despite the depiction of classroom research as artificial and arhetorical, other studies provide a more positive perspective. Lee acknowledges more recent research—such as that by Melzer, Cara Hood, and James Strickland—indicates movement towards activity theory-based orientations to research, resulting in assignments engaging students in more disciplinary, discovery-based projects.¹⁷ Additionally, Melzer characterized 17 percent of the transactional writing in his study as persuasive assignments moving students closer to working inside the discourse and often providing an audience beyond the instructor.¹⁸ Melzer also found courses affiliated in some way with an institutional WAC program or initiative were more likely to assign a wider variety of purposes, audiences, and genres; provide interesting rhetorical situations beyond traditional exam writing; and incorporate a process approach to writing (including self-reflective writing).¹⁹

Specifically, in analyzing research papers as a genre, Melzer contests Russell’s claim that research papers have become ubiquitous and relatively uniform;²⁰ in contrast, Melzer found a wide variety of genre conventions among the research-writing assignments he collected. Following Robert Davis and Mark Shadle’s model, Melzer divided that variety into two general categories: the modernist paper (traditional, informative, thesis-driven, objective) and the alternative paper (which values creation of new knowledge, exploration, and originality of thought and format). Melzer reports, despite his expectations, “most of the researched writing in the study asked students to create knowledge and perform the meaning-making work of a discipline.”²¹ Melzer concludes with a view of the research paper genre as

one of the most complex and dynamic genres in college writing, and one that instructors assign as a tool to encourage students to think critically, to introduce them to ways of thinking in the discipline, and to prepare them for the workforce.²²

Thus, this component of Melzer's analysis highlights the ways research paper assignments, despite their flaws, may indeed promote creativity, critical thinking, and initiate students into the work of the disciplines.

In sum, the existing research on research presents a complicated, sometimes discouraging picture, but not a hopeless one. For many students, research continues to feel frustrating, artificial, and transactional; Lee ultimately claims criticisms of research assignments suggest students can find information but not “uncover new insights...as the [research] assignment was intended to do since its inception in the mid-19th century.”²³ Yet, in at least some classes, faculty are developing assignments that encourage students to develop and deepen their information literacy in ways that will serve them well in their disciplinary futures.

A Brief Analysis of the Frameworks

If the previous section describes the existing situation in terms of faculty research assignments, then the two national frameworks define what it should be. Those frameworks—the *Framework for Information Literacy for Higher Education*,²⁴ from the Association of College and Research Libraries (ACRL), and the *Framework for Success in Postsecondary Writing*,²⁵ jointly developed by the Council of Writing Program Administrators (WPA), National Council of Teachers of English (NCTE), and the National Writing Project (NWP)—describe librarians' and compositionists' notions of the preferred intersections of writing and research. Thus, these Frameworks serve as aspirational documents describing how faculty should construct research for their students. Specifically, we believe the Frameworks reveal a set of shared values, including the following points of convergence:

1. Skills are subordinated to larger definitions of successful, transdisciplinary discourse practices. Both Frameworks identify concrete actions, skills, and experiences, but are situated in service to larger, more holistic goals. Thus, both documents establish claims about what academic discourse is or should be.
2. While both Frameworks are presented as transdisciplinary, each acknowledge implementation will necessarily have disciplinary differences; different disciplines will enact writing and research in different ways.

3. Researching and writing are continually developing abilities. The ACRL Framework differentiates novice and expert practices, while the WPA Framework less explicitly states “experiences are a way to foster habits of mind.”²⁶
4. Researching and writing are iterative, problem-based processes rather than rigid, linear pathways to re-assembling content.
5. Researching and writing are driven by rhetorical purposes and contexts. Researching and writing are conversations with others over time.
6. Researching and writing are multimodal and take place in a variety of environments.
7. Successful writing and researching involves metaliteracies/metacognition. The ACRL Framework for Information Literacy takes a metaliteracy approach which articulates IL as “an overarching set of abilities in which students are both consumers and creators of information” and who can exercise “behavioral, affective, cognitive, and metacognitive [or critical self-reflective] engagement with the information ecosystem.”²⁷ Similarly, the WPA Framework identifies metacognition—“the ability to reflect on one’s own thinking as well as on the individual and cultural processes used to structure knowledge—as an essential habit of mind for success in college writing.”²⁸

To sum, both the ACRL Framework and the WPA Framework value research instruction that embeds skills within larger disciplinary frames, sees information-gathering and -communicating along a continuum of expertise, acknowledges the importance of process, places research tasks in contexts of audience, purpose, and modality, and engages learners in metacognition.

Methods

Our study has the benefit of a complete but limited sample: we were able to access documentary materials for all approved COM3 courses submitted during the initial approval process (through May 2015), for a total of sixty-seven courses. Departments from all six of our university’s undergraduate colleges submitted courses for review. Each course submission required a common application form and a course syllabus; in many cases, faculty included course assignment descriptions and/or assessment rubrics. These documents formed the foundation of our research.

We chose to investigate the advanced communication course in more detail because, as a course typically occurring in a student’s final year, we believed it would reveal disciplinary-based assumptions about students’ knowledge,

skills, and habits of mind regarding information literacy. We also believe our institution's COM3 courses serve to illuminate trends likely to exist at other institutions with similar general-education courses.

While we already had access to these documents for internal assessment and planning processes, we sought and received IRB approval to use these documents for research purposes as well. We quote from application materials only in cases where we received consent to provide potentially identifiable information; in other cases, we refer to courses by general discipline or program markers.

Our Contextual Identities

Rather than claiming an objective stance for this research, we believe it important to explicitly acknowledge our invested perspectives and positions in the analytic process.²⁹ Though we jointly coded all data as a method to increase reliability, in this research we are not disinterested scholars; our institutional roles mean we will continue to be directly involved in curricular and faculty support activities related to COM courses in admittedly value-directed ways. Rick Fisher, at the time of writing, is the coordinator for the COM sequence and has had a substantial role guiding faculty understanding and development of the curricula reflected in the application materials being analyzed. Additionally, he teaches in the English Department, including courses in the COM sequence. Kaijsa Calkins is a subject liaison librarian for English (including the first-year writing program) whose work includes partnering with faculty to develop information literacy instruction and activities.

Theoretical Framework and Approach to Coding

At our institution, the COM application document represents what might be considered a collision of discourses: within the application materials, faculty members were asked to complete the task of synthesizing multiple discursive conceptualizations of communication and writing, research, learning/pedagogy, and performance/assessment. Thus, we saw the documents as a worthwhile site for exploring constructions of reality as well as of social roles. Our focus was less on the social roles faculty construct for themselves and instead on the ways their descriptions of research created and restricted appropriate student roles as researchers. As qualitative health-science researchers Daniel Singer and Myra Hunter define them, discourses are

conversations or talk with an agenda. They are orientated towards action, aimed at establishing a particular prevailing view or social reality. Discourses govern what it is possible to think. They produce knowledge which in turn functions to maintain certain power relationships within society and influences how individuals make sense of experience.³⁰

Thus, we see faculty efforts to describe research as discursive moments that can reveal subtle ways these descriptions reinforce, as well as challenge and contradict, expert ways of acting, thinking, valuing, and interacting.

Codes

Based on our interest in the construction and circulation of discourses within this set of extant texts, we inductively developed a coding scheme for this analysis. After reviewing the data, we noticed a set of emergent tensions; through further discussion, we identified three rough binaries for our coding: skills vs. discourse focus, telling vs. transforming purpose, and content vs issue orientation. Additionally, as we reviewed the ACRL and WPA Frameworks, we decided to add a process component; given the importance of process in both Frameworks, we coded the data to indicate whether a course had a primarily linear vs. iterative approach to research. We felt this binary versus coding³¹ would allow us to see relationships across these perspectives.

Our binaries took vague shapes that were refined as we moved back and forth through the data. The following definitions were produced as a result of the research process, including both primary analysis and further research.

Skills vs. Discourse Focus

Many faculty who operate outside a discourse-based orientation to teaching continue to frame literacy skills as neutral, instrumental skills that can be taught in decontextualized, generalizable ways rather than skills embedded in the ideologies and epistemologies of groups operating in specific times and places. By adopting a discourse analysis perspective, we acknowledge this first binary is a false one: we see all skills as embedded in social practice of discourses.³² But we were interested to see whether faculty representations of research provided disciplinary contextualizations for those skills and processes or whether they described research in general ways.

For example, one art course provides a number of skills tips for students as they work on their research paper/presentation; however, the instructor frames the course as an introduction to “complexities and problems of art

and photography as it relates to the American West” that will lead to a “nuanced understanding of western art production.” Additionally, the instructor provides guidelines for thesis statements that ground the assignment in disciplinary focuses on “historical textual evidence (historical or cultural context, historiography, biography, theory, etc.)” and/or visual analysis, and she notes the assignment thesis, structure, and research strategies will emerge through consultation with instructor and peers. Given these descriptions about what counts as evidence, and given a description of process that includes social interaction with others in the field, we categorized this class as having a discourse focus. Had the course provided only general tips for locating sources (e.g., use the library databases to locate relevant materials), we would have categorized the course as skills focused.

Telling vs. Transforming Purpose and Content vs. Issue Orientation

Both the telling vs. transforming binary and content vs. issue binary were suggested by references in Lee’s chapter to previous scholarship;³³ additionally, these binaries are informed by research in problem-based learning as well as the theoretical underpinnings of Writing Across the Curriculum (WAC). Instructional technology scholar, John Savery, and cognitive psychologist, Thomas Duffy, for example, describe problem-based learning as an attempt “to relate constructivism as a theory of learning to the practice of instruction.”³⁴ For them, this approach enacts constructivism in relationship to three propositions: (1) understanding comes through interaction with one’s environment, (2) puzzlement drives learning and the cognitive representation of what is learned, and (3) knowledge evolves through social negotiations that allow individual understandings to be evaluated.³⁵

Within the field of composition and rhetoric, constructivist views of writing are reflected in Writing Across the Curriculum pedagogy; as John Bean notes, WAC pedagogy “encourages the messy process whereby writers become engaged with a problem and, once engaged, formulate, develop, complicate, and clarify their ideas.”³⁶ Bean suggests this stands in opposition to the view of writing as “information rather than as argument or analysis,”³⁷ and in opposition to Paulo Freire’s theory of the mono-logic banking model, in which research and writing serve primarily as ways to collect and re-present objective facts.³⁸

These code sets give us insight into whether research projects are problematized for students (issue orientation) and whether they encourage students to make meaning (transforming purpose) rather than reproduce accepted knowledge.

Linear vs. Iterative Process

The last code pair was motivated by the importance, in both Frameworks, of process in research-writing tasks. If these Frameworks can be taken as speaking for their professional organizations, it is evident both professions value writing and research as iterative processes. The WPA Framework identifies “developing flexible writing process” as an essential experience for post-secondary writing success: “Writing processes are not linear... Writers learn to move back and forth through different stages of writing, adapting those stages to the situation.”³⁹ Similarly, the ACRL’s description of research as inquiry,⁴⁰ conversation,⁴¹ and strategic exploration⁴² suggests a non-linear pathway requiring iterative refinement; specifically, the ACRL Framework notes, “Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field.”⁴³ Yet, as Lee has pointed out, a continuing problem with research assignments is they simplify the rich iterative processes of experts to a linear march through stages that poorly mimic what the ACRL Framework refers to as the “contextualized, complex experience” of non-classroom research.⁴⁴ While composition and rhetoric scholar Jennie Nelson found 95 percent of first-year composition students followed approaches she categorized as “compile information,” “premature thesis,” and “linear research,”⁴⁵ she argues few first-year students follow the recursive approach that aligns with the way academics describe their own approaches to research, “perhaps because few [students] have had an opportunity to experience research in this way.”⁴⁶

With this coding set, we wanted to distinguish courses/assignments that clearly encouraged students to engage in the iterative process of research and writing from those that locked students into a linear, stage-driven approach.

Limitations

Of the sixty-seven courses we reviewed, we ultimately marked twenty-two as uncategorizable. Though the application materials clearly asked faculty to describe their activities, assignments, and assessments for the COM3 research/information literacy student learning outcome, nearly a third of the courses provided so little information about research-writing that we could not assign appropriate codes. Because we were specifically analyzing faculty representations of research, some courses simply didn’t include enough explanation of the research process/project for us to identify the orientation as discourse or skills. One example is a capstone course in the humanities in which the applicant described types of assignments (i.e., annotated bibliography and critical research essay) without explaining how faculty intended to facilitate/guide the research activity.

We also acknowledge some limitations to the generalizability of our analysis. First, because the primary approval document asked faculty to directly identify assignments, activities, and instruction addressing the research outcome for their advanced communication courses, we acknowledge the approval process itself may have encouraged a decontextualized approach to some descriptions of research.

Second, we cannot draw conclusions about the full framing of research activities in the courses we analyzed. Instead, we have only a snapshot of the way faculty framed research for an external approval process. However, because that process included submission of course syllabi, we believe our analysis provides important information about the ways faculty articulate the relationship of research activities to other aspects of the course. We acknowledge many of the courses that include little initial framing of disciplinary-appropriate research may ultimately provide substantial guidance in later class discussions and assignment descriptions. A syllabus can only do so much—but as an important interaction between teacher and students, the syllabus still carries a great deal of discursive power to shape students' perspectives on the purpose, nature, and value of research within the course. For the next stage of this project, we plan to conduct a number of follow-up interviews in order to gather more contextual information about perspectives revealed in the documents themselves.

Results and Discussion

Given the focus of COM3 on communication in disciplinary settings, we expected the courses we analyzed would advance students' understanding of disciplinary discourses. Our analysis reveals, however, in some cases instructors present a generalized (i.e., not discipline-specific) description of research tasks, even while other explanations of communication activity are more discourse-based.

Table 2.01 provides a graphic representation of our results. We developed this table during later stages of analysis as we struggled to meaningfully represent the results of our binary coding in a single graphic. Columns indicate purpose (i.e., telling or transforming) while rows indicate focus (i.e., discourse or skills). We found that most courses with a telling purpose viewed research with a content orientation; likewise, we found that courses with a transforming purpose would be likely to characterize research as issue-oriented. The table uses boldface to mark the few courses that didn't fit this pattern. Additionally, asterisks indicate the courses that suggested an iterative approach to research. Given the values implied in the Frameworks, we feel the asterisked courses in the top-right quadrant represent the ideal representation of research, since these courses take an iterative, discourse-based approach and ask students to

do something with their research beyond merely reporting it. To maintain confidentiality of participants, we list courses by their general department/field rather than by specific course title/number.

Table 2.01

Course-by-Course Analysis of Focus, Purpose, Orientation, and Process

	Purpose: Telling	Purpose: Transforming
Focus: Discourse	Chemistry,* Communication, Geography, Life Sciences, Life Sciences, Theatre, Education (7)	Economics, Art, Art*, Communication*, Econ*, Engineering, English/Writing, English/Writing, Family/Consumer Science*, History*, Political Science*, Languages, Life Sciences*, Health Sciences*, Political Science, Political Science, Religion*, Agriculture, Sociology*, Health Sciences, Education, Education, Education*, Energy Resources (24)
Focus: Skills	Accounting, Agriculture, Agriculture, Anthropology, Geology, Social Work, Theatre, Theatre, Zoology (9)	Economics, Agriculture, Political Science, Sociology (5)
<p>*Asterisks indicate courses that included an iterative research component. Boldface indicates courses with a telling + issue (column 1) or transforming + content (column 2) purpose and orientation.</p>		

In addition to analysis focused on our original binaries, we also sought to identify trends related both to points of convergence between the Frameworks and to findings from previous scholarship. We provide descriptive detail about five such trends.

Overall Focus and Purpose

We were pleased more than half of the courses we analyzed (24 of 45) frame research as discourse-focused and transformative in purpose. (See the top right, shaded quadrant in Table 2.01). Many of these courses include clear rhetorical settings for the research project as well, such as this business course:

In this senior capstone course, [business] majors interested in owning and operating their own business will develop a full-length strategic business plan for that business. This involves

writing a business plan and presenting it in-class to colleagues and faculty at the end of the semester. Students will be introduced to library databases, business resources, and course materials that will provide information and guide their strategic business plan development. The final strategic business plan will be focused on communicating each students' business idea and plan to prospective industry and financial investors.

Similarly, a capstone in life sciences provided language throughout the syllabus to frame research as central to the real work of the discipline; in the course, students produce a mock NSF-style research proposal based on service-learning projects exploring genuine field-based problems in the community. Additionally, the course included three course outcomes focused on advanced aspects of information literacy:

- Perform a thorough overview of a topic (access and assess literature) without being overwhelmed by the extent of available resources.
- Understand when and how to reference source material and recognize this process as an important part of communicating with other scholars.
- Value scientific knowledge as a tool to enact change.

In courses like these, we see instructors' descriptions of research aligning with a number of WPA and ACRL concerns. Both of these courses, for example, try to provide contexts to move students towards "genuine purposes and audiences... in order to foster flexibility and rhetorical versatility"⁴⁷ as well as encourage habits of mind like openness and persistence. The projects as described may also encourage students to consider "different types of [information] authority"⁴⁸ and engage in the process of "matching information products with their information needs."⁴⁹ Finally, in terms of establishing a discourse orientation to research, the rhetorical context of these courses affords students the opportunity to understand their research as embedded in larger conversations of and about scholarship.

In contrast, one health sciences research methods course—which we coded as skills-focused—provided extensive discourse on the overall course, but assigned activities not explicitly connected to the issues and practices of the field. Though the course requires students to collect data for statistical analysis, the prompt for this assignment does not guide students to disciplinary topics for investigation: "You could, for example, develop a Likert scale on a political topic coming out of the last election." Additionally, this course required a literature review for another, more disciplinary-focused assignment, yet provided no guidance to accomplish that review; instead, the applicant seemed to assume students have the skills for developing a lit review as well as knowledge of the disciplinary expectations for a review in this field.

In a political science course that provided clear guidance on the type of thesis/issue appropriate for the course term paper, expectations for collecting and evaluating references were less forthcoming. Despite an annotated bibliography assignment and a syllabus section labeled “research expectations,” the course instructor provided primarily quantitative requirements (“8–10 scholarly sources”) and general evaluative criteria (“Is the research appropriate and of high quality? Are the sources relevant and authoritative?”).

Inauthentic/Incomplete Research Processes

While more than half of submissions indicate a discourse focus and a transforming purpose, far fewer faculty directly frame course research in an iterative way. This finding seems especially problematic given Lee’s previous criticism of research assignments as overly static and simplified, as well as the WPA and ACRL Frameworks’ emphasis on iterative composing processes.

In many courses, discussion of process addressed writing but not researching. This trend may shed light on Project Information Literacy’s findings about the gap between students’ writing processes and research processes in which “students had fewer techniques for conducting research and finding information than for writing papers.”⁵⁰ Our analysis may explain: overall, faculty provided less explicit information for students about approaches appropriate to the research aspects of communication projects than they did about expected writing processes. In many cases, even the language around expected writing process was limited, focusing primarily on discrete activities rather than underlying goals for the process, as in this life sciences course:

Students will be required to select and research a topic pertinent to the course and will present it in written and oral form before the end of the semester. This project should reinforce themes covered during the course (e.g., specific aspects of inflammation, degeneration, neoplasia, etc.)...Once a topic has been approved, students should prepare a written abstract of their proposed topic to be evaluated [and] present a 5 minute talk...Feedback received from the abstract and talk should be used to improve the final paper and presentation...Points will be lost for spelling or grammatical errors, and failure to cover the topic comprehensively.

Despite ACRL’s assertion that “research is iterative”⁵¹ and WPA’s assertion that “writing processes are not linear,”⁵² descriptions like this present the

feedback stage as relatively unproblematic. In terms of WPA habits of mind, the description of research here focuses on responsibility—with heavy emphasis on requirements and expectations—and pays little attention to curiosity, openness, engagement, creativity, or flexibility that might encourage students in a more iterative exploration of their topic. In a similar way, the expectation that feedback will be “used to improve the final paper and presentation” asserts the authority of the unnamed feedback-giver(s) (the instructor? peers?) rather than drawing students into an inquiry-driven, iterative consideration of the ways “authority is constructed and contextual.”⁵³

Though a limited number of courses point students towards an iterative research process, the variety and creativity of non-linear processes is noteworthy. In a political science course, for example, the instructor asks students to practice, in short responses, the research writing skills they are expected to use in a final briefing paper; additionally, he requires students to revise a group research project based on feedback from disciplinary audience members during a mid-semester presentation. In another course, the instructor encourages an iterative perspective on research by asking students to update an existing article:

All students will be provided with one journal article related to the textile industry and the environment, which may include such topics as recycling of textile materials, new technologies to cause less damage to the environment during production, etc. Each student will be expected to find a research-based article on the same/similar topic which is more current. You will write an abstract (summary) of the major points of each article, and a brief comparison summary of the two articles, indicating what changes have occurred in this topic over the last few years.

This course presents a rare case in which expectations for the writing task are not necessarily iterative (or explicitly process-based at all), but in which students are nonetheless invited to investigate the unstable nature of disciplinary knowledge.

Cases of Transforming Content and Telling Issues

In general, we found orientation (telling vs. transforming) and focus (content vs. issue) were tightly connected; in all but three cases, we coded courses as telling-content or transforming-issue. One foreign language course illustrates the type assignment we considered to be focused on transforming content:

Prepare a biography (2–3pp.) of one of the authors on or relevant to the syllabus [as a way] to familiarize yourselves with [...] biographical dictionaries, to think about what goes into a biography, and about the difficulties of writing a biography that is both reliable and interesting.

On the surface, this description is focused on content—information *about* an author or historical figure without direct concern for issues connected to that individual. Yet, that students are asked to think about matters of convention and rhetoric indicate they are nonetheless being invited to transform their research in relationship to rhetorical considerations of the genre.

In contrast, one agriculture course clearly focuses on issues in natural resource management; specifically, the syllabus indicates the course helps students “become familiar with the main concepts and concerns that shape current debates in agriculture” in order to “familiarize students with science- and practice-based information acquisition, analysis, and synthesis of possible solutions.” Yet, in the minimal information provided about research in the course, the main assignments—a literature review, a group solution paper and accompanying presentation—do not indicate students are asked to transform the information they collect.

We find these few exceptions to telling-content or transforming-issue notable because we wonder whether they reveal larger disciplinary mindsets that resist assumptions about what students should *do* with content. Additionally, we suspect our coding reveals some disciplines (or instructors) may not see the content of undergraduate education as issue-based in a way requiring students to interact with previous and current debates of the field. Yet, clearly, both Frameworks emphasize the goal of transformative meaning-making. The WPA Framework, for example, suggests the habits of mind crucial to college-level learners must push the learner past merely “knowing particular facts”⁵⁴ and should promote an “active stance”⁵⁵ for learning. More forcefully, the ACRL Framework takes the position “experts see inquiry as a process that focuses on problems or questions in a discipline or between disciplines that are open or unresolved.... Many times, this process includes points of disagreement where debate and dialogue work to deepen the conversations around knowledge.”⁵⁶ In both Frameworks, students are encouraged to think of information and knowledge as embedded in contextual or rhetorical settings, not as neutral content; however, our analysis suggests a number of courses we analyzed (9 of 45) take a skills-based, topic-based perspective that de-emphasizes the complexity of research activity.

Research as an (Often Implicit) Instructor-Level/ Course-Level Construct

Because the course approval process asked applicants to address seven course outcomes—only one directly focused on research—we are not entirely surprised many of the courses provided limited information about how students should approach research. Yet, the fact many of the syllabi we analyzed provided little direct framing for research processes is still important: students may have difficulty starting their research projects precisely because faculty either fail to provide clear disciplinary goals and expectations or because they assume students already know them.⁵⁷

Further compounding this problem, expectations of the research paper genre may often be defined at the classroom discourse-community level, our findings show, which may make it hard for students to identify broader disciplinary-level expectations. Thus, our research confirms Melzer's earlier finding:

Differences within and among disciplines—and even among instructors within the same discipline and sub-discipline—in terms of purpose, audience, research methods, what counts as evidence, how research papers are structured, and the persona that the writer is asked to take on make it difficult to generalize about the research paper.⁵⁸

Melzer's claim, as well as Project Information Literacy data presented earlier, explains why students may struggle to adapt to new research tasks as they move between courses. Importantly, neither the WPA nor the ACRL Framework suggests schools or programs should standardize research instruction; instead, the Frameworks accept that research processes are always contextual. The ACRL encourages a flexible research approach in which learners "use various research methods, based on need, circumstance, and type of inquiry,"⁵⁹ while the WPA's goals of openness⁶⁰ and flexibility⁶¹ similarly promote different ways of gathering information⁶² as well as awareness that evidence and citation (among other conventions) depend on discipline and context.

Our analysis suggests faculty may not fully recognize the broad range of research contexts students encounter throughout their undergraduate experience, nor fully recognize or articulate their own assumptions about what is appropriate for research tasks within their courses. These are problems that libraries, writing programs, and teaching-and-learning centers will want to address.

Implications: Guidance for Faculty

Ultimately, we believe our analysis points to several implications that can promote more effective approaches to research in advanced disciplinary courses. These suggestions shed light on the ways points of convergence between the WPA and ACRL Frameworks are not being fully extended into undergraduate research experiences.

Our analysis reveals a sizeable proportion of the courses we studied do not encourage students to see research as an ongoing, disciplinarily-embedded, socially-constructed, iterative, problem-based, and metacognitive process of growth and refinement. Thus, we provide these possible pathways for encouraging faculty to adjust their notions and representations of research in line with the WPA's and ACRL's perspectives of research-writing:

1. We need to help faculty identify the specific disciplinary skills and expectations of research writing in their fields. Achieving the goal of research metaliteracy for students requires metaliteracy of faculty. While several courses in our study require a literature review, a term paper, or an annotated bibliography, for example, far fewer spell out the disciplinary goals or conventions for those documents. Especially at the advanced undergraduate level, we believe students should be developing a clear awareness of field-specific sources, evaluation methods, and functions for the research they are asked to conduct. Transdisciplinary discussion groups may help faculty explore differences among research texts across fields and recognize the peculiarities of their disciplinary research conventions.
2. We should encourage programs to articulate programmatic pathways and parameters for research activity. While there may be good reasons for individual course experiences to expose students to a variety of sub-disciplinary differences in research tasks and approaches, it should nonetheless be possible for departments and programs to describe (and justify) research skills and values central to the discipline or professional field. Students should not complete an undergraduate degree with a vague sense that research is an arbitrary, instructor-level set of preferences or requirements. Curriculum revision/redesign processes could directly invite departments and programs to articulate specific research skills, tasks, and values they expect their students to develop throughout the major curriculum.
3. We should encourage faculty members to provide a purpose and justification for research assignments in their syllabi. When students are asked to undertake research for a course, the value of that research in relationship to other course content and outcomes should be made clear. On a larger scale, faculty should also be encouraged to make

research activities of course texts more visible to students by engaging them in discussion about the types of inquiry, sources, and skills hidden in texts that may otherwise seem objective and naturalized.

4. We must help faculty understand and extend the value of transformative and persuasive research tasks. A number of assignments we analyzed made little effort to locate students in a clear rhetorical setting. Yet, as the WPA Framework argues, writing assignments that emphasize formulaic writing for non-authentic audiences will not reinforce the habits of mind and the experiences necessary for success. [Instead,] writing activities and assignments should be designed with genuine purposes and audiences in mind ... in order to foster flexibility and rhetorical versatility.⁶³
5. We should coordinate efforts among libraries, teaching/learning centers, and writing programs. As Simmons has argued, “Librarians are simultaneously insiders and outsiders of the classroom and of the academic disciplines in which they specialize, placing them in a unique position that allows mediation between the non-academic discourse of entering undergraduates and the specialized discourse of disciplinary faculty.”⁶⁴ While she argues informational literacy has much to learn from the field of Writing Across the Curriculum, some of our analysis suggests faculty do not yet see the ways both writing and research are disciplinary tasks. Coordinated efforts to provide faculty development that builds on the expertise of writing studies, information science, and learning theory can help faculty craft assignments that draw students into rich, iterative, discourse-based experiences with researching and representing the knowledge of their fields of study.

In this study, we were impressed and heartened to find many faculty at our institution teaching research in ways aligned with the values offered in the ACRL and WPA Frameworks. The ACRL describes its Framework as a holistic set of foundational ideas that provide “conceptual understandings that organize many other concepts and ideas about information, research, and scholarship into a coherent whole,” and it argues “teaching faculty have a greater responsibility in designing curricula and assignments that foster enhanced engagement with the core ideas about information and scholarship within their disciplines.”⁶⁵ While the WPA Framework obviously addresses research as a component of writing, this Framework also sees an essential role for research in fostering critical thinking, as well as flexible composing processes. Together, the Frameworks assert students should be encountering and conducting research in ways that move them beyond skills toward a discursive, metaliterate mindset “in which students are consumers and creators of information who can participate successfully in collaborative spaces.”⁶⁶

While we were pleased the majority of courses we studied exhibited some characteristics aligned with the ACRL and WPA Frameworks, we felt students could be further supported in internalizing the threshold concepts, habits of mind, and experiences underpinning these documents. While the majority of courses have discourse orientations, we identified a need to extend the process orientation many faculty have for writing not only to research, but also to models incorporating multiple channels of feedback that drive revision of research and writing activities. Faculty should articulate and model their own research methods and processes for their students and reveal the messy, problem-based nature of authentic scholarly research. Faculty should also discuss issues in their fields with students, as well as issues related to information, research, and communication. Those conversations should be driven by concepts from the Frameworks such as authority is constructed and contextual; there are social and financial implications of information access, particularly access to the scholarly record in a given field; and scholarship is, by its nature, made up of conversations over time (and who and how one participates in these conversations is worthy of contemplation).

Our analysis reveals the need for faculty to better frame research-writing as an opportunity to make meaning, not just assemble others' ideas into a new package, and, perhaps most importantly, to connect this purpose in all research-writing assignments with authentic and appropriate audiences.

Notes

1. Lee, "The Research Paper Project in the Undergraduate Writing Course," 59.
2. *Ibid.*, 44–45.
3. *Ibid.*, 45.
4. Russell, *Writing in the Academic Disciplines: A Curricular History*, 99–100.
5. Head and Eisenberg, "Truth Be Told: How College Students Seek Information in the Digital Age," 20.
6. Head, "Information Literacy from the Trenches: How do Humanities and Social Science Majors Conduct Academic Research?"
7. Lee, "The Research Paper Project," 59.
8. Melzer, "Writing Assignments Across the Curriculum: A National Study of College Writing," 22.
9. *Ibid.*, 28.
10. Head and Eisenberg, "Truth Be Told," 4. Admittedly, these goals were less important than the pragmatic concerns with getting a good grade, finishing the assignment, passing the class, and meeting page and citation requirements.
11. Head, "Information Literacy from the Trenches," 435.
12. *Ibid.*
13. *Ibid.*, 436.
14. Head and Eisenberg, "Truth Be Told," 3.
15. *Ibid.*, 25. This struggle seemed especially problematic in the big-picture stage of task-development, see page 29.

16. Simmons, "Librarians as Disciplinary Discourse Mediators: Using Genre Theory to Move Toward Critical Information Literacy," 298.
17. Lee, "The Research Paper Project in the Undergraduate Writing Course," 56–57.
18. Melzer, "Writing Assignments Across the Curriculum," 22.
19. *Ibid.*, see chapter 5.
20. *Ibid.*, 43. See also Russell, *Writing in the Academic Disciplines*, 78.
21. *Ibid.*, 49.
22. *Ibid.*, 51.
23. Lee, "The Research Paper Project," 47.
24. ACRL, Framework.
25. WPA, Framework.
26. *Ibid.*, 1.
27. ACRL, Framework, 2.
28. WPA, Framework, 1.
29. Starks and Trinidad. "Choose Your Method: A Comparison of Phenomenology, Discourse Analysis, and Grounded Theory."
30. Singer and Hunter, "The Experience of Premature Menopause: A Thematic Discourse Analysis," 66.
31. See, for example, Saldaña, Johnny, "Coding and Analysis Strategies" and *The Coding Manual for Qualitative Researchers*, Second Edition.
32. For further discussion of autonomous and instrumentalist views of literacy, see Street, *Literacy in Theory and Practice* and Macelo, *Literacies of Power: What Americans are Not Permitted to Know*.
33. I.e., Scardamalia and Bereiter's 1987 work on knowledge telling and knowledge transforming as two models of composing, and Nelson and Hayes's 1988 article about first-year students' content-driven vs. issue-driven approaches to research. For Scardamalia and Bereiter, knowledge transforming emerges from a composition process that pushes a writer beyond content space into rhetorical space where the writer must use the knowledge strategically. In their model, knowledge telling is a precursor to the ability to transform knowledge.
34. Savery and Duffy, "Problem-Based Learning: An Instructional Model and its Constructivist Framework," 135.
35. *Ibid.*
36. Bean, *Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom*, 20.
37. *Ibid.*, 18.
38. Freire, *Pedagogy of the Oppressed*.
39. WPA, Framework, 8.
40. ACRL, Framework, 7.
41. *Ibid.*, 8.
42. *Ibid.*, 9.
43. *Ibid.*, 7.
44. *Ibid.*, 9.
45. Nelson, "The Research Paper: 'A Rhetoric of Doing' or a 'Rhetoric of the Finished Word?'" 65–75.
46. Nelson, "The Scandalous Research Paper and Exorcising Ghosts," 10.
47. WPA, Framework, 3.

48. ACRL, Framework, 4.
49. Ibid., 5.
50. Head and Eisenberg, "Truth Be Told," 19.
51. ACRL, Framework, 7.
52. WPA, Framework, 8.
53. Ibid., 4.
54. Ibid., 4.
55. Ibid.
56. ACRL, Framework, 7.
57. Head and Eisenberg, *Assigning Inquiry: How Handouts for Research Assignments Guide Today's College Students*.
58. Melzer, "Writing Assignments Across the Curriculum," 62.
59. ACRL, Framework, 7.
60. WPA, Framework, 4.
61. Ibid., 5.
62. Ibid., 6.
63. WPA, Framework, 3. Additionally, the practice of asking students to simply re-present accepted facts (ie, telling content) can be alienating; in contrast, LeCourt argues, "Making a space for the personal... counteracts the students' perceptions that their alternative voices must be silenced within a disciplinary discourse." In "WAC as Critical Pedagogy: The Third Stage?" 401.
64. Simmons, "Librarians as Disciplinary Discourse Mediators," 298.
65. ACRL, Framework, 2.
66. Ibid.

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