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Grounding habits of mind and conceptual understandings in disciplinary practices: Putting the WPA Framework for Success in Post-Secondary Writing, the ACRL Framework for Information Literacy, and Decoding the Disciplines in conversation

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Researching and
Teaching the
FRAMEWORKS
for Writing and
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CHAPTER 5

Grounding Habits of Mind and Conceptual Understandings in Disciplinary Practices: Putting the Frameworks and *Decoding the Disciplines* in Conversation

Andrea Baer

Introduction

Over the past several decades, the interconnectedness of writing and information literacy has been a catalyst for an increasing number of collaborations between writing instructors and librarians. While such partnerships are hardly new, the 2011 *Framework for Success in Postsecondary Writing* of the Council of Writing Program Administrators (CWPA), National Council of Teachers of English (NCTE), and National Writing Project (NWP) 2011 (hereafter WPA Framework) and the 2015 *Framework for Information Literacy for Higher Education* of the Association of College and Research Libraries' (hereafter ACRL Framework) suggest that now is a significant moment in our intersecting work, as they illustrate a growing convergence in how many in our professions conceive of and approach teaching and learning. But at the same time that the theoretical and open-ended nature of the Frameworks presents opportunities for renewed conversations among writing instructors and librarians, the Frameworks' conceptual qualities also create the challenge of translating broader conceptual ideas into everyday teaching strategies. If the Frameworks are to further not only conversations, but also actions toward curricular change (both within and beyond writing and library instruction), concrete and diverse approaches to the Frameworks need to be developed, explored, and shared.

As I explore in this chapter, one possible approach to bridging the theoretical implications of the Frameworks and pedagogical practice is reflected in the *Decoding the Disciplines* (hereafter *Decoding*) model for instructional design, developed by David Pace and Joan Middendorf (2004) through their interdisciplinary work in faculty development. The *Decoding* process begins with teachers identifying where “bottlenecks” of student learning occur (i.e., moments in learning where students appear stuck). Instructors then consider how those challenges relate to disciplinary practices that often seem intuitive to “insiders” of a given field. After identifying troublesome areas of learning, instructors develop modeling and learning experiences to address these bottlenecks, to make disciplinary practices more transparent, and to provide students with opportunities to practice disciplinary tasks and to receive constructive feedback on their work. *Decoding* thus provides a structured but flexible process for educators to identify goals for particular teaching scenarios and to develop process-oriented instruction. *Decoding’s* emphasis on both cognitive and affective obstacles to learning and on explicit disciplinary practices and ways of knowing aligns well with philosophies that guide the Frameworks. *Decoding* thus appears particularly useful for teaching about the kinds of concepts and habits of mind outlined in the Frameworks.

At the same time, the commonalities between *Decoding* and the Frameworks suggest that the Frameworks can also enrich engagement in the *Decoding* process. The Frameworks not only propose particular concepts, processes, and learning experiences for writing instructors, librarians, and other educators to consider during the *Decoding* process. They also address affective dimensions of learning with which *Decoding* is also concerned, as the Frameworks point to a larger purpose in learning and in engaging with writing and information use within and beyond disciplinary contexts. Taken together, *Decoding the Disciplines*, the WPA Framework, and the ACRL Framework can provide rich openings for dialogue and instructional planning between writing instructors and instructional librarians, as well as among college instructors and administrators across a broad range of academic disciplines.

The *Decoding the Disciplines* Process: A Lens for Exploring the Frameworks

As previously noted, the *Decoding* process begins with identifying where students often struggle in their learning process and continues with unpacking the disciplinary concepts and processes that are key to overcoming those

difficulties. Teachers then develop instructional modeling and opportunities for student practice and for instructor feedback that support students in overcoming their challenges to learning. These “bottlenecks”—described as “points in a course where the learning of a significant number of students is interrupted” (Pace and Middendorf 2004, 4)—are most often related to disciplinary practices that while intuitive to “insiders” of a given field, need to be made explicit to those new to the discipline. Often because these disciplinary understandings and processes have become tacit knowledge for “experts” in the given field, the act of dissecting them can prove challenging (5–6).

Pace and Middendorf (2004) outline seven steps of *Decoding* that involve engaging in specific questions about student learning (paraphrased below):

1. In the context of this class, what is a bottleneck of learning?
2. How does an expert complete the tasks with which students are struggling?
3. How can these tasks be modeled and made explicit?
4. How will students gain practice with these tasks and receive feedback on them?
5. How will students be motivated?
6. How well are students engaging with and understanding these tasks?
7. How can the gained knowledge about student learning be shared?

These steps, the authors emphasize, are not “mechanical” or “deterministic,” but rather “serve as a series of questions that instructors can ask themselves as they work on responding to the specific challenges posed by learning in their disciplines” (4). In Pace and Middendorf’s model, these questions are explored through interviews with the instructor. As the authors explain, typically an instructor’s initial response during an interview includes undefined terms and processes that to her/him seem too obvious to need explanation. The interviewer’s role is to “probe beneath the surface” by asking for further clarification about how students are to do certain tasks or what abilities students must have in order to complete those tasks (6). The interviewer hereby acts as a disciplinary “outsider,” encouraging the teacher to dissect ways of thinking and doing that have become tacit to her/him but that may be unfamiliar to students.

The appeal of *Decoding the Disciplines* lies largely in its practical approach to demystifying academic practices. This pragmatism is something that the

Frameworks generally lack, though perhaps rightly so, given their scope, purpose, and audiences. While no single model for instructional planning will suit all uses of the Frameworks, their open-endedness suggests a need for flexible but (loosely) structured strategies for individual and collaborative instructional planning. Because *Decoding* begins not with a theoretical model (though it is informed by educational theory), but rather with a consideration of the more concrete tasks that students are asked to do, it may prove especially useful for developing practical approaches to instruction informed by the Frameworks.¹

As mentioned, the usefulness of *Decoding* in relation to the Frameworks is especially evident in the fact that key principles that inform *Decoding* align with concepts that appear to guide the authoring of the Frameworks. For example, an emphasis on “bottlenecks of learning” closely resembles the ACRL Framework’s idea of threshold concepts, defined in the ACRL Framework’s “Introduction” as “those ideas in any discipline that are passageways or portals to enlarged understanding or ways of thinking and practicing within that discipline” (ACRL 2015). *Decoding*’s stress on motivation might also be compared to the ACRL Framework’s “dispositions,” which “describe ways in which to address the affective, attitudinal, or valuing dimension of learning” (“Introduction”) along with the WPA Framework’s “habits of mind,” which include “ways of approaching learning” like curiosity, openness, engagement, and creativity (CWPA, NCTE, and NWP 2011, 3). Moreover, *Decoding*’s open-ended question prompts leave a great deal of flexibility for determining instructional priorities, content, and approaches for a given teaching context. The adaptability of *Decoding* aligns well with both Frameworks’ emphasis on adapting pedagogical approaches for local contexts.²

Another commonality between *Decoding* and the Frameworks is the attention they draw to context in relation to various knowledge practices. While the Frameworks similarly foreground the situatedness of writing and information practices within particular communities and discursive practices, Pace and Middendorf (2004) discuss how their work emerged from recognition of how distinctly different disciplinary practices are. *Decoding*, they explain, emerged through

a strong realization that the mental operations required of undergraduates differ enormously from discipline to discipline, that these ways of thinking are rarely presented to students explicitly, that students generally lack an opportunity to

practice and receive feedback on particular skills in isolation from others, and that there is rarely a systematic assessment of the extent to which students have mastered each of the ways of thinking that are essential to particular disciplines. (3)

This focus on providing opportunities for practice and feedback may remind one of the WPA Framework's (2011) descriptions of student experiences with writing, reading, and critical analysis (1, 6–10), all of which are intended to cultivate “critical habits of mind” (1), or of the ACRL Framework's (2015) descriptions of “knowledge practices” and “dispositions” related to each of its six threshold concepts.

The descriptions of learning experiences in *Decoding* and in the Frameworks also reflect a significant difference between them: the former consists mainly of open-ended questions that may be answered quite differently by individuals in different disciplines, while the Frameworks target more particular types of understandings and skills that may be relevant across many disciplines. As this difference suggests, *Decoding* and the Frameworks may be used as complementary works that generate discussion and curriculum planning within and across disciplines.

Bringing *Decoding the Disciplines* into Conversations about the Frameworks

The relevance of the *Decoding the Disciplines* model for writing and information literacy instruction will not be new to many librarians and writing instructors. Perhaps the most obvious link is in the strong parallels between *Decoding's* “bottlenecks of learning” and the ACRL Framework's (2015) “threshold concepts,” which serve as the main theoretical foundation and structuring element of the ACRL Framework.³

Because of the strong parallels between threshold concepts and *Decoding's* bottlenecks of learning, discussions about them have intersected. For example, Middendorf et al. (2012) have explored the similarities and differences between *Decoding* and threshold concepts that illustrate how they may be used in complementary ways.⁴ As the authors contend, *Decoding* may help in identifying threshold concepts and in determining how to help students grapple with those conceptual understandings. At the same time, threshold concepts can help instructors recognize areas of learning that are especially crucial to a discipline and to acknowledge the affective dimensions of learning about ideas that are especially challenging to grasp.

Leah Shopkow (2010) makes a similar argument in “What *Decoding the Disciplines* Can Offer Threshold Concepts.” As she explains, these two models “have in common a philosophy that sees ways of knowing as disciplinary” (317). Moreover, Shopkow continues, “both posit the goal of education as transforming students” (317). *Decoding* and threshold concepts also share a focus on “stuck places” in the learning process and on making disciplinary ways of knowing explicit, though they do so from somewhat different angles, with discussions about threshold concepts tending to be more theoretical and those about *Decoding* being more pedagogical. As Shopkow argues, because of *Decoding*’s practical focus, it may serve as “a methodology that may help to bridge the gap between the theory of Threshold Concepts and classroom practice” (317).

This view of *Decoding* as joining theory and practice can be extended to considerations of the Frameworks. Though the ACRL Framework does not directly discuss *Decoding*, the Association of College and Research Libraries (2015) is clearly aware of these connections: the Framework’s “Appendix 3: Sources for Further Reading” includes the introductory chapter of *Decoding the Disciplines*. Some advocates of the ACRL Framework have also suggested *Decoding*’s potential to inform teaching practices (Miller 2015; Townsend et al. 2015), though to my knowledge *Decoding* has not been discussed as a lens through which to consider the WPA Framework or the intersections between the WPA and ACRL Frameworks. Some work on information literacy integration that preceded the adoption of the ACRL Framework furthermore suggests the relevance of *Decoding* to instructor-librarian conversations about information literacy integration: At Utah State University, librarians and writing instructors have collaboratively developed student learning outcomes, lesson plans, and assessments that were informed by principles of *Decoding*, as well as by threshold concepts theory and backward instructional design (Lundstrom, Fagerheim, and Benson 2014).

Discussions among librarians and writing instructors about threshold concepts (a theory that has generally received more attention than has *Decoding*) also point to ways in which *Decoding* may be relevant to both fields. Within writing studies, a growing interest in threshold concepts is perhaps most apparent in the recent publication of the book *Naming What We Know: Threshold Concepts of Writing Studies* (Adler-Kassner and Wardle 2015), which includes chapters on 37 threshold concepts of writing studies that were identified through crowd-sourcing by a group of well-known writing researchers and instructors. As Kathleen Blake Yancey

explains in her introductory chapter, the thresholds outlined in *Naming What We Know* are not intended to present a canonical or dogmatic set of ideas agreed upon by all in the field, but rather are understood as largely “contingent” (xix). Instead, these conceptual understandings function “as articulation of shared beliefs providing multiple ways of helping us name what we know and how we can use what we know in the service of writing” (Yancey 2015, xix). *Naming What We Know* hereby addresses a common and valid critique of threshold concepts: that they imply that any one field can have uniformly accepted and uncontested core concepts. This response to anticipated critique shares similarities to the reply by librarians Lori Townsend, Silvia Lu, Amy R. Hofer, and Korey Brunetti (2015) to a similar critique of threshold concepts (and, by extension, of the ACRL Framework [2015]). As they argue,

Nobody asserts that the frames [of the ACRL Framework] are The Only Frames forever and ever. So please, engage with them. Think of new ones. Rewrite them to fit your context and your students. Think hard about what you teach and how you teach it. We have interesting, transformative, transferrable content to teach and it is grounded in our own disciplinary area — threshold concepts or no. (Townsend et al. 2015)

While the theory of threshold concepts is not perfect, publications like *Naming What We Know* (Adler-Kassner and Wardle 2015) and the ACRL Framework suggest that threshold concepts, when approached as contextual, can, much like *Decoding*, prove tremendously helpful in identifying instructional priorities and developing instruction that addresses common obstacles to learning.⁵

The Frameworks: Lenses for Exploring *Decoding the Disciplines*

As I have been arguing, *Decoding* offers a loosely structured process for instructional planning that can facilitate discussions and teaching related to both Frameworks. At the same time, the Frameworks may enrich the *Decoding* process for writing instructors and librarians, as well as for educators across subject areas. Perhaps the most apparent way in which the Frameworks may inform work with *Decoding* is reflected in their descriptions of key concepts, practices, and learning experiences related to writing and information use. These elements of the Frameworks may help

to shape one's responses to *Decoding's* open-ended questions. For example, the ACRL Framework's threshold concepts may help in the process of identifying bottlenecks of learning, while its knowledge practices and dispositions often reflect tasks that might be modeled and made explicit (ACRL 2015). The WPA Framework's section on "Experiences with Writing, Reading, and Critical Analysis" similarly outlines specific actions students might take to develop and demonstrate their learning (CWPA, NCTE, and NWP 2011, 6–10).

In addition to this more obvious connection, I would like to explore two specific qualities of the Frameworks that may be especially useful for work with the *Decoding* process: first, the Frameworks' emphasis on the contextual and constructed nature of discursive and information practices and, second, their concern with learning experiences that take place not only within but also beyond academic and disciplinary contexts. Both of these aspects of the Frameworks foreground to students the relevance of their learning experiences within and beyond the classroom. Thus, these qualities of the Frameworks are also key to the questions of student motivation that *Decoding* addresses in its fifth step, "What will motivate the students?" (8).

Foregrounding Discursive and Information Practices as Contextual and Constructed

One of *Decoding's* most powerful qualities is its invitation to instructors to consider how their own disciplinary thinking and practices can be made explicit to students so that students may engage more actively and consciously in disciplinary tasks. This strength, however, also reflects a limitation of *Decoding*: the potential for instruction to suggest that certain disciplinary practices and ways of thinking are "correct," uncontested, or superior to those of other discourse communities, including those home discourse communities to which students may more immediately relate. In other words, *Decoding* viewed alone could be interpreted as an uncritical acceptance of disciplinary knowledge and practices, rather than as a way of cultivating critical thinking that is not confined by disciplinary conventions or assumptions. This limitation may be of particular concern to our professions, as many writing specialists and a growing number of librarians engage the challenge of teaching academic discourse and disciplinary practices without devaluing students' home discourses. The Frameworks can help to address this concern, as at various points they foreground the idea that discursive and information practices are constructed and contextual. In so doing, the Frameworks challenge the notion of any disciplinary practice as correct or universal.

I will return to this last point, but first I wish to clarify that I do not intend to suggest that this possible shortcoming of the *Decoding* process is inevitable or intended. To the contrary, *Decoding's* strong emphasis on differences among disciplinary practices is an affirmation that epistemologies and discourses are constructions rather than universals. However, while *Decoding's* seven steps do ask teachers to reflect on disciplinary practices that may seem intuitive to them as disciplinary “insiders,” this model does not prompt teachers to emphasize to students the constructed and contextual nature of their disciplines’ ways of thinking or the reality that disciplinary practices are sometimes contested and evolving. With all that an instructor must think through during the *Decoding* process, this point about differences within and across disciplines—which I would argue is essential to a deeper understanding of academic practices—may be easily overlooked.

While many educators in writing studies have given a great deal of attention to the importance of appreciating students’ own home discourses, such a perspective may be less familiar to many in other disciplines. Moreover, when focusing on how an “expert” in one’s field does certain things and how students can be given modeling and opportunities to practice those tasks, it may be easy for instructors, regardless of subject area, to overlook the value of situating their own academic practices in relation to other communities of practice within and outside of academia. An instructor could nonetheless use the *Decoding* process to create curricula that address such issues. However, because there is no explicit prompt in *Decoding* to consider the constructed nature of disciplinary discourse and discursive practices, they may remain a common point of neglect in much of the instructional planning that is informed by *Decoding*.

Although the *Decoding* model, in not drawing explicit attention to the constructed and dynamic nature of discursive practices and discourse communities, may sometimes guide the development of curricula that reinforce the notion of certain disciplinary epistemes as correct or universal, this outcome appears contrary to *Decoding's* aims to foster cross-disciplinary dialogue. If, on the other hand, the *Decoding* process is accompanied by deliberate considerations of the constructed and contextual nature of discursive and information practices, this process may result in a much richer pedagogy that not only introduces students to disciplinary practices and ways of knowing, but also fosters the kinds of habits of mind and conceptual understandings that extend beyond disciplinary lines and that are described in the Frameworks. Thus, *Decoding*, viewed alongside the Frameworks,

may provide a structure for curricular development that encourages students to gain experience with disciplinary practices, while also considering them from a critically engaged perspective. As WPA Framework habits of mind like openness, engagement, curiosity, and metacognition and ACRL Framework conceptual understandings such as “Authority Is Constructed and Contextual” complicate an uncritical acceptance of all academic discourse, they suggest ways that *Decoding* and the Frameworks may function in complementary ways.

Consider, for example, the ACRL Framework’s description of “Authority as Constructed and Contextual,” which states that “various communities may recognize different types of authority” and that “the information need may help to determine the level of authority required” (ACRL 2015). The more detailed explanation of this frame stresses the potential for varying and changing perspectives and approaches within a discipline when it states not only that “authority is a type of influence recognized or exerted within a community,” but also that “[e]xperts view authority with an attitude of informed skepticism and an openness to new perspectives, additional voices, and changes in schools of thought.” This threshold concept furthermore addresses the importance of recognizing the biases that may influence the notion of authority and the privileging of certain types of information over others, particularly in relation to “others’ worldviews, gender, sexual orientation, and cultural orientations.” An understanding of the varying views of authority can enable students “to critically examine all evidence...and to ask relevant questions about origins, context, and suitability for the current information need.” Moreover, the ACRL Framework continues, “novice learners come to respect the expertise that authority represents while remaining skeptical of the systems that have elevated that authority and the information created by it” (“Authority Is Constructed and Contextual”). In other words, this recognition of the potential biases found within discourse communities can encourage students to think critically about various disciplinary practices and arguments rather than accepting them uncritically because of a scholar’s “expert” status.

The WPA Framework’s section on “Developing Critical Thinking Through Writing, Reading, and Research” similarly recognizes the constructed and contextual nature of various discourses when it describes students writing “about familiar or unfamiliar texts” and “examining assumptions about the texts held by different audiences” (CWPA, NCTE, and NWP 2011 7). It is through this critical writing and reading, the WPA Framework continues, that “writers think through ideas, problems,

and issues; identify and challenge assumptions; and explore multiple ways of understanding” (7). In examining assumptions and considering various ways of understanding, students are encouraged to think critically about how meaning is constructed and represented within and beyond disciplinary contexts.

The WPA Framework’s emphasis on writing for and understanding different audiences also draws attention to the fact that discursive practices vary among audiences and communities and that writing will ideally reflect a sensitivity to the rhetorical context in which one communicates. The habit of mind of curiosity, for example, involves “us[ing] inquiry as a process to develop questions relevant for authentic audiences within a variety of disciplines” (CWPA, NCTE, and NWP 2011, 4). Similarly, the WPA Framework points to the contextual nature of writing and rhetoric when it describes rhetorical knowledge as “the ability to analyze and act on understandings of audiences, purposes, and contexts in creating and comprehending texts” (6). The WPA Framework further underscores contextuality in its definition of writing conventions: “the formal rules and informal guidelines that define what is considered to be correct (or appropriate) and incorrect (or inappropriate) in a piece of writing,” which are “defined within specific contexts and genres” (9). This recognition of the range of rhetorical situations in which one might write or use information encourages students to consider the purposes and significance of their writing within particular contexts and helps to convey writing and information practices not as abstracted, but rather as serving particular social and communicative functions that are key to our experiences as human and social beings.

Such contextuality is, of course, relevant to writing, research, and information use in any situation, including across disciplines and beyond academic contexts. Because the Frameworks remind instructors to acknowledge the constructed nature of disciplinary practices and epistemes, educators who engage with both *Decoding* and the Frameworks may be better positioned to recognize how their disciplinary backgrounds influence their own assumptions about student learning and to develop instruction that acknowledges and perhaps analyzes those disciplinary contexts.

Learning Across and Beyond the Disciplines

At the same time that *Decoding* is focused on instructional planning for particular disciplines, both it and the Frameworks suggest useful pedagogical strategies that transcend disciplinary lines. While *Decoding* centers on

identifying disciplinary practices, the Frameworks frequently draw attention to learning that extends beyond the disciplines and beyond academia. Such an emphasis on the relevance of learning to a wide range of situations is key to communicating to students the larger significance of their learning and thus to addressing affective dimensions of student learning such as motivation and self-reflection. As the Frameworks prove especially useful for exploring how learning extends beyond individual subject areas and beyond scholarly practices, they may help educators to respond to *Decoding's* fifth question, "What will motivate the students?" (8), and to consider the affective bottlenecks of learning that may be addressed through the *Decoding* process.

The Frameworks articulate at various points the importance of learning in nonacademic settings and through engagement in a wider range of communities and experiences. And while *Decoding* foregrounds disciplinary learning, its seventh step—the question "How can the resulting knowledge about learning be shared?"—makes evident that what results from the *Decoding* process need not be limited to specific disciplines. As Pace and Middendorf (2004) explain, "[I]ronically, an approach that begins with an emphasis on the differences among disciplines can in the end provide a means to communicate across the chasms that separate academic fields" (10). Though *Decoding* appears to remain focused primarily if not solely on scholarly practices, the cross-disciplinary exchanges that Pace and Middendorf describe may also lead to fuller understandings of students in a wider range of learning contexts. The open-endedness of *Decoding's* steps can help to spur such discussions among educators, while the Frameworks' descriptions of student learning experiences, conceptual understandings, and habits of mind ask teachers and librarians to consider particular concepts and processes that may be especially relevant to curricula used across disciplines.

The ACRL Framework's "Research as Inquiry" frame is especially relevant to considering writing and information use beyond academic settings, as it describes research as something that "extends beyond the academic world to the community at large" and that "may focus upon personal, professional, or societal needs" (ACRL 2015). The WPA Framework similarly suggests that writing may occur in many settings and that writing in different rhetorical contexts may foster more meaningful learning. According to the WPA Framework, curiosity, "the desire to know more about the world," "is fostered when writers are encouraged to use inquiry as a process to develop questions relevant for authentic audiences within a variety

of disciplines” and to “communicate their findings in writing to multiple audiences inside and outside school using discipline-appropriate conventions” (CWPA, NCTE, and NWP 2011, 4).

Both Frameworks’ emphasis on the many environments in which writing, research, and information use occur may help students recognize the relevance of writing, research, and information use in their everyday lives and in their communities. As the Frameworks articulate connections between academic practices and students’ various experiences, and as they describe knowledge practices and learning experiences that are often rhetorically and socially situated, these documents suggest ways to help students recognize a larger purpose and meaning in their learning process. Underlining the diverse contexts in which ideas are developed and shared may also foster the learning transfer that is a central goal of not only college writing and information literacy instruction, but also of higher education more broadly.

The ability of students to find meaning in their learning is, of course, essential to the emotional dimensions of learning that also concern both the Frameworks and *Decoding*. This interest in the affective domain is especially evident, again, in the WPA Framework’s habits of mind, the ACRL Framework’s dispositions, and *Decoding*’s fifth step, the question “What will motivate the students?” (8). The importance of the affective domain to *Decoding* is further apparent in Pace and Middendorf’s (2004) acknowledgment that learning “bottlenecks” may involve both cognitive and affective elements (5). Pace and Middendorf note that in their initial development of *Decoding*, this fifth step was not included but that they later realized its importance, for “[i]f the students are not drawn actively into the modeling and the practice-and-feedback phases of the process, real learning is highly unlikely to occur” (8).

While *Decoding* asks educators to think about how to motivate students, it offers little guidance on how to explore or to respond to this question. This absence may be in part because more open-ended questions can be more readily applied to a variety of disciplines and learning environments, though many educators may nonetheless benefit from more guidance on how to motivate students. The Frameworks may help in this respect, as they suggest more particular ways to address the question of student motivation that may still be relevant to educators across subject areas. These documents broach the subject largely through their emphasis on rhetorical contexts and purposes for writing, research, and information use, as well as through their emphasis on dialogue and

meaning making. More specifically, the Frameworks repeatedly point to ways for students to explore questions, to develop their own perspectives on specific issues, and to contribute to conversations in various venues (including in online participatory environments within which many students may be more comfortable).

The importance of motivation is particularly notable in the WPA Framework's descriptions of the habits of mind of engagement and responsibility. Engagement, "a sense of investment and involvement in learning," note the authors, "is fostered when writers are encouraged to make connections between their own ideas and those of others; find meanings new to them or build on existing meanings as a result of new connections; and act upon the new knowledge that they have discovered" (CWPA, NCTE, and NWP 2011, 4). This engagement may be cultivated by a sense of responsibility, defined in the WPA Framework as "the ability to take ownership of one's actions and understand the consequences of those actions for oneself and others" (5). Responsibility may be present when, for example, students recognize the social nature of learning and the relevance beyond the classroom of issues with which they engage, and it is encouraged when students "act on the understanding that learning is shared among the writer and others—students, instructors, and the institution, as well as those engaged in the questions and/or fields in which the writer is interested"—and when students "engage and incorporate the ideas of others, giving credit to those ideas by using appropriate attribution" (5). This recognition of the social dimensions not only of learning, but also of writing and research, are further reflected in the WPA Framework's description of "Developing Rhetorical Knowledge," which occurs when students "contribute, through writing, their own ideas and opinions about a topic to an ongoing conversation" (6), and in the document's section on "Composing in Multiple Environments," which acknowledges the "extensive writing that students produce electronically," both in and outside of the classroom, experiences on which students and instructors can build (10).

The acts of engaging with others' ideas, developing one's own perspectives, and contributing to conversations in various communities and environments similarly are key to the kind of purposeful learning described in the ACRL Framework. Such an approach to learning is especially apparent in the "Scholarship as Conversation" frame, which presents scholarly discourse as open to students who "contribute to scholarly conversation at an appropriate level, such as local online community, guided discussion, undergraduate research journal, conference presentation/poster session"

or who “[r]ecognize they [students] are often entering into an ongoing scholarly conversation and not a finished conversation,” “[s]eek out conversations taking place in their research area,” and “[s]ee themselves as contributors to scholarship rather than only consumers of it” (ACRL 2015). The ACRL Framework also suggests that instruction can help students to become more skilled at engaging in scholarly dialogue when it asserts that “[d]eveloping familiarity with the sources of evidence, methods, and modes of discourse in the field assists novice learners to enter the conversation” (“Scholarship as Conversation”). Such statements again reflect an alignment with *Decoding*, which foregrounds the importance of providing opportunities for practice with disciplinary processes and epistemes.

Of course, the ability to engage in practices described in both Frameworks, for example, contributing to academic discourse or developing informed arguments, is far from simple. Though the Frameworks at moments address such challenges, this practical application is not their focus.⁶ *Decoding*’s emphasis on addressing both the cognitive and the affective barriers to learning is a helpful reminder to educators to consider what might get in the way of students engaging with the actions described in the Frameworks.

Although Pace and Middendorf’s (2004) explanation of the *Decoding* process does not focus specifically on emotional dimensions of learning, its implications for addressing the affective domain are significant. More recent work by Middendorf et al. (2015) has concentrated on applying the *Decoding* model to addressing affective obstacles, such as strong personal beliefs and emotionally charged preconceptions, to learning in the field of history. As educators continue to explore how teaching can better address emotional dimensions of student learning, the Frameworks and *Decoding* can continue to inform such work. While *Decoding* may be most helpful for identifying those areas where students struggle most and in developing modeling and learning experiences that help students to address such challenges, the Frameworks may serve as guides in identifying conceptual understandings and processes that students may engage in in reflective and personally meaningful ways.

Conclusion

I have sought to illustrate in this chapter how the distinct and the shared qualities of the Frameworks and *Decoding* reflect their complementary functions. While *Decoding the Disciplines* may offer a more concrete

structure through which to apply the more theoretically centered WPA Framework habits of mind and the ACRL Framework threshold concepts, the Frameworks encourage instructors to think deliberately about ways to foster critical thinking, including ideas and perspectives that may not occur to those disciplinary “insiders” who have been immersed in the discourse and practices of a given field. The Frameworks further share with *Decoding* the larger goal of creating meaningful learning experiences that encourage students to explore ideas and to construct new knowledge as participants in various communities of practice.

As these three models invite educators across subject areas to unpack concepts and processes that often are not explicitly addressed in the classroom, they offer openings for cross-disciplinary dialogue and collaboration. The doors that these approaches open for such conversations may help educators to understand how students learn both about their own areas of expertise and about other disciplines. As Leah Shopkow (2010) argues in “What Decoding the Disciplines Can Offer Threshold Concepts”:

We need collaboration within disciplines because we have a shared charge in educating our students and we need collaboration across disciplines not only because there are common problems we might confront...but also because it can clarify for us what thresholds our discipline might be constructing for our students as we consider other thresholds shaped by other disciplines within the shared architecture of higher education. (329)

In other words, in looking at our own disciplines in relation to those of others, we may recognize more clearly the ways in which our own fields follow constructed ways of thinking and of constructing knowledge. In acknowledging those disciplinary practices and epistemes, we may become more mindful about how to present them in the classroom.

Though Shopkow’s (2010) discussion refers specifically to the connections between *Decoding* and threshold concepts, her statement that these two views can serve as “a basis for collaboration” among educators also holds true for *Decoding* and the Frameworks. Although the Frameworks have strong relevance for writing instructors and librarians, because writing and information literacy are central to learning across disciplines, they offer rich possibilities for educational partnerships that extend far beyond these two professions. As articulated in the ACRL Framework, threshold concepts can create “a community of conversations” and offer “the

potential for collaboration among disciplinary faculty, librarians, teaching and learning center staff, and others” (ACRL 2015, “Appendix 1”). The WPA Framework similarly suggests its relevance across disciplines, as it states that its main audience is not only “instructors who teach writing,” but also those who include writing in their classes at all levels and in all subjects” (CWPA, NCTE, and NWP 2011, 2). Cross-disciplinary dialogue is similarly a vital component of *Decoding*, as reflected in its final step, 7, which asks, “How can the resulting knowledge about learning be shared?” (10). As Pace and Middendorf (2004) explain, through the work of the faculty learning communities (which consist of instructors from various disciplines), they came to realize that this sharing of knowledge is essential to the *Decoding* model, as it helps individuals to think about their own areas of expertise from other angles: “The process of sharing teaching goals and strategies forces us to make explicit elements that might otherwise have escaped our notice, to see possibilities that had previously escaped us, and to recognize inconsistencies or flawed logic. All of this can be cycled back into the process of course development to steadily increase learning in our classes” (10). *Decoding*, the WPA Framework, and the ACRL Framework can each serve such a process. Taken together, these three approaches can enrich our individual and our shared pedagogical practices, as we explore the teaching of writing and information literacy as a shared responsibility of all educators, students, and educational institutions.

Endnotes

1. Similar arguments have been made about how *Decoding the Disciplines* and threshold concepts theory may work complementarily (Middendorf et al. 2012; Shopkow 2010).
2. The WPA Framework asserts the importance of planning instruction and curriculum for local contexts in its introduction, which states that “writing activities and assignments should be designed with genuine purposes and audiences in mind (from teachers and other students to community groups, local or national officials, commercial interests, students’ friends and relatives, and other potential readers)” (CWPA, NCTE, and NWP 2011, 3). This approach is contrasted to “[s]tandardized writing curricula or assessment instruments that emphasize formulaic writing for nonauthentic audiences” (3). The ACRL Framework expresses a similar view in its introduction: “Neither the knowledge practices nor the dispositions that support each concept are intended to prescribe what local institutions should do in using the Framework; each library and its partners on campus will need to deploy these frames to best fit their own situation, including designing learning outcomes” (ACRL 2015, “Introduction”).

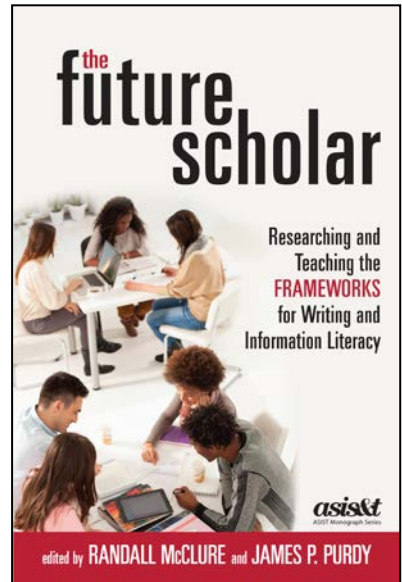
3. "Threshold concepts," closely akin to *Decoding's* bottlenecks, are conceptual understandings that are essential to a discipline's epistemologies and practices and that are initially difficult for students to grasp. A threshold concept, as first introduced by J. H. F. Meyer and R. Land (2003), represents "a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress" and functions like "a portal, opening up a new and previously inaccessible way of thinking about something" (1). Threshold concepts furthermore reflect "how people 'think' in a particular discipline, or how they perceive, apprehend, or experience particular phenomena within that discipline" (1).
4. Middendorf et al. (2012) identify some key distinctions between the two approaches, including that bottlenecks, in contrast to threshold concepts, are not necessarily transformative. Threshold concepts generally center on what students must know, whereas *Decoding* concentrates on what students must do. *Decoding* provides concrete steps for instructional planning, whereas threshold concepts only address the first step of *Decoding* (identifying bottlenecks of learning).
5. For a fuller critique of threshold concepts, see Lane Wilkinson's "The Problem with Threshold Concepts" (2014).
6. For example, the ACRL Framework's threshold concept "Scholarship as Conversation," which might be viewed as overly idealistic about students' abilities to contribute to scholarly dialogue, acknowledges to some extent the potential difficulty of doing so. This threshold concept includes the acknowledgment that "[e]ven though novice learners and experts at all levels can take part in the conversation, established power and authority structures may influence their ability to participate and can privilege certain voices and information" (ACRL 2015). Though many academic conversations may remain inaccessible to individuals who lack extensive experience in a given field, the idea that there are nonetheless still openings for student participation is suggested by the many ways in which such exchange may occur, not only through top-tier academic journals, but also through student research journals, online participatory environments, class blogs, and in-class discussions.

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