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Threshold Concepts and Student Learning Outcomes

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THRESHOLD CONCEPTS AND STUDENT LEARNING OUTCOMES

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One of the premises of this edited collection is that descriptions of writing matter, and matter deeply. Writing—for reasons articulated throughout this collection—is particularly vulnerable to uneven or problematic portrayals. In higher education, it has become common practice to characterize student learning about writing via identified learning outcomes that students are to meet by the end of a course or program; more recently, entire undergraduate degree experiences are described through an outcomes framework. For example, postsecondary educational reform efforts like the American Association of Colleges and Universities' Liberal Education, America's Promise (LEAP) Initiative structure the undergraduate degree experience around identified "essential learning outcomes," one of which is "written and oral communication" ("LEAP" 2013). Outcomes offer a way to articulate more clearly what shared values for learning might be and how courses support those values; further, they provide an entry point for meaningful assessment. As Jeremy Penn explains, educational outcomes, when employed within a university context and through extensive faculty and student engagement, can "exhibit learning and achievements that are unique to each of our institutions" and "[facilitate] a dialogue about what we expect students to learn in our institutions" (Penn 2011, 12). Working to describe what students should learn as undergraduates is, of course, a worthy goal. The challenge is to ensure writing development is depicted in meaningful ways.

Generalized, outcomes-based depictions of student learning about writing hold two immediate challenges: (1) they locate evidence of learning at the *end* of key experiences—certainly one valuable place to begin understanding learning, but not the only place; and (2) they

often depict writing as only a skill (albeit an “intellectual” or at least “practical” one) (AAC&U 2013). While outcomes-based depictions hold a certain kind of currency and explanatory power in educational reform efforts and will likely continue to do so, a threshold concepts approach provides a differently meaningful framework for intervening in commonplace understandings about writing. Threshold concepts offer a mechanism for faculty to articulate the content of their courses, identify student learning throughout the course experience, and create shared values for writing in a way that a focus on end products—on outcomes—cannot.

This chapter thus explores the implications of using a threshold-concepts approach to articulate shared understandings of student learning about writing. It does so in the interest of speaking back to an outcomes-based framework for undergraduate education. I first briefly examine some of the challenges that outcomes-based depictions of student learning raise, particularly when they are used to describe writing development. Then, to ground an exploration of how threshold concepts for writing might offer different possibilities for depicting undergraduate student learning, I examine a particular location where shared, university-wide student learning outcomes for writing have been newly ascribed to particular courses through a restructuring of undergraduate education at Boise State University. Specifically, I draw on interviews with faculty who teach what are called *communication in the disciplines courses* here, courses housed in departments, taught by departmental faculty, and also now linked to a new, university-wide Writing Undergraduate Learning Outcome. The interview data contribute to the broader case that threshold concepts might provide a generative lens through which to both understand student learning about writing *and* to begin developing a shared knowledge base of *learning about writing* that spans disciplines and contexts, thus enriching outcomes-based depictions of student learning.

MAPPING STUDENT LEARNING VIA OUTCOMES: NEW POSSIBILITIES, NEW CHALLENGES

Before describing the potential a threshold concepts approach offers (particularly for writing instruction), it is worth briefly considering the powerful frame outcomes-based education has become within higher education. In addition to being employed for campus-wide, undergraduate-degree reform efforts, outcomes-based frameworks are increasingly encouraged, if not required, by disciplinary accreditation

bodies and other external stakeholders, who see outcomes as a way to understand and assess student learning across courses. Reform-based initiatives like AAC&U's LEAP project use outcomes to create "a guiding vision and national benchmarks for college student learning" (AAC&U 2013), for instance. Regional accreditation bodies like the Northwest Commission on Colleges and Universities (NWCCU) require each college and university under their jurisdiction to state student learning outcomes at the course, program, and degree level (Northwest Commission on Colleges and Universities 2010). In addition, accreditation programs for specific degrees, like engineering's Accreditation Board for Engineering and Technology (2010), also require student learning outcomes to be defined and assessed throughout the curriculum. They are nearly ubiquitous for good reasons: they make expectations for student learning more visible; they foster curricular connections and cohesiveness; and they offer productive possibilities for assessment.

As a faculty member, I have seen firsthand how productive it can be to rearticulate course content as *objectives* or *outcomes* that can be identified to students and to which course materials are explicitly linked. On our campus, our reform of undergraduate education engaged faculty and other stakeholders in lively, interdisciplinary discussions that eventually resulted in the creation of university-wide learning outcomes. Working together to articulate what our shared values for student learning were was productive and fulfilling (see Boise State University 2013). Outcomes-based approaches can be enormously useful tools for curricular development in higher education, then, particularly when no prior curricular framework existed.

Outcomes-based approaches also offer a way to tie assessment to a specific, meaningful goal. As Amy Driscoll and Swarup Wood explain, outcomes-based education is inextricably linked with assessment because it seeks to "[foster] continuous attention to student learning and [promote] institutional accountability based on student learning" (Driscoll and Wood 2007, 4). On our campus, our new university-level outcomes provide a new and clear mechanism for collecting and assessing student work. One rationale for the University Learning Outcomes refers to richer assessment:

Active and authentic assessment of student learning is guided by the ULOs. Connections between student assessment in courses to the broader institutional outcomes also provides a way to contextualize students' learning in broader contexts: each of our outcomes has a rubric which describes the behaviors and levels of proficiency we expect from our

students. This allows faculty to determine when, where, and to what extent students are demonstrating the kinds of learning that will transfer from one class to another and from Boise State to the world 'beyond the blue' [beyond our campus, a reference to this university's blue football field]. (Boise State University 2013b).

These macrolevel outcomes assessments, then, give universities and programs ways to document student learning across courses. These assessments can address the interests of stakeholders from outside the academy who are looking for some way to understand learning development over time. An outcomes-based curriculum can thus provide a useful entry point for students, faculty, and administrators to help shape and learn from assessment while also responding to these external parties' interest in documenting and understanding student growth.

At the same time, the oversimplification of outcomes-based depictions of student learning raises challenges, particularly for writing instruction. Because they *are* assessable in some way beyond the context of the course, outcomes can quite seamlessly become competencies, which can be used in turn to give college credit for student learning in ways beyond the course credit hour. In an era of significantly declining funding, higher education in general and state institutions in particular face additional pressures to certify student learning by means other than actual college classes. Even at traditional universities, which are still largely driven by the Carnegie credit hour, there is an increased expectation that faculty will provide ways to give credit for student learning beyond course credit hours (see Kamanetz 2013 for a recent report on the rise of programs and entire universities that certify learning through outcomes assessments).

The expectation that learning can be assessed solely through outcomes is a particular pressure faced by introductory university courses like those that teach writing and other "intellectual skills." Describing our first-year writing courses at Boise State via outcomes (something we have had in place for years) has, in fact, led to very real local pressures to certify learning based on those outcomes; I have been asked by an administrator why our first-year writing courses, which seek to orient students to writing as an area of study and practice within our university context, need to be taught on our campus and by our program faculty. Since we have outcomes for the courses, the logic goes, then we should be able to assess whether students (regardless of age, location, or context) have met those outcomes. So while outcomes-based depictions of student learning can be productive, they make student learning vulnerable to this kind of decontextualization.

Even within our field, we have been complicit in moves to document student learning about writing at specific stopping points along a trajectory. We have generated productive and rich documents—those I have used extensively and admire, like the Framework for Success in Postsecondary Writing and the CWPA Outcomes for First-Year Writing—that have put us in a bind by representing writing as a trajectory from one place—one location—to the next. In fact, the CWPA Outcomes Statement played a central role in our on-campus educational reform discussions related to our university-wide learning outcome for writing, now called the Writing Undergraduate Learning Outcome. There were several times I was deeply grateful for the existence of the Outcomes Statement, for it spoke to national understandings of writing that complemented my (and my colleagues’) own arguments about how best to depict writing development. However, our field’s focus on signposts (frameworks, benchmarks, outcomes) also leaves us entangled in a model that conceives of learning as a straight line (from framework at the beginning to outcome at the end) when we know learning is much more like scrambling across rocky terrain: learners make progress, slip back, try again, get a little higher, slip back again.

So, as useful as outcomes are, they can’t account for the messy, hard, uneven work of learning. They can provide useful snapshots of end points, of what students are *able to do* at different curricular moments. What a threshold concepts approach has the potential to do, if we can create professional development to engage faculty and students with this way of thinking about learning, is provide students with a purposeful cross-curricular writing curriculum that reflects two critical ideas: (1) that threshold concepts for writing (and perhaps other kinds of learning) *across* courses and disciplines may exist; and (2) that when these threshold concepts are made more explicit, students may be more likely to at least recognize, and perhaps even access, aspects of those concepts or the threshold capabilities that lead to them.

MAKING WRITING VISIBLE ACROSS THE UNDERGRADUATE EXPERIENCE

To examine this potential, I will next focus on Boise State’s current undergraduate context, the place of writing within it, and how a threshold concepts framework might foster richer understandings and more intentional descriptions of student learning about writing. Until 2012, our campus had no meaningful depictions of student learning at the undergraduate level. Each department, of course, depicted programs of

study for their majors, while our general education program (introductory courses) was significantly underdescribed. Instead, it presented students with a smorgasbord of introductory courses in several categories simply called *areas* with no descriptors at all—Area 1, Area 2, and so on. First-year writing courses (English 101 and 102) were not in these introductory areas but were literally a sidebar in the catalog, a requirement separate from the rest of general education. The implication was that these introductory gen ed courses provided some kind of introduction to disciplinary learning across campus—but what kind, exactly, wasn't at all clear. In addition, writing instruction wasn't located in any particular disciplinary area but was a skill to be developed outside of other contexts for student learning and only in one place: English 101 and 102. Of course, this message is in direct contradiction to some of the central threshold concepts described in part 1 of this book: that Writing is a Social and Rhetorical Activity (1.0) and that All Writers Have More to Learn (4.0) as they work with writing in specific contexts. Therefore, taking this first campus-wide step to developing learning outcomes for writing that span the undergraduate experience—even having conversations about what students should learn and experience—was tremendously valuable. Our outcomes are now described as creating the “glue” that “holds together the academic and social learning across courses, disciplines, academic classes and general University experiences,” in addition to “represent[ing] the general knowledge and skills that business and community leaders as well as graduate schools expect from our graduates” (Boise State University 2013a, 2013b).

The development of University Learning Outcomes also gave new visibility to writing, which is now reflected in what has become known on campus as “*the Writing ULO*” (my emphasis). This outcome states only that students will be able to “write effectively in multiple contexts, for a variety of audiences” (Boise State University, 2013b):

Table 6.1 Boise State University undergraduate learning outcomes

| University Learning Outcomes | Cluster Name |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 1. Write effectively in multiple contexts, for a variety of audiences. | Writing |
| 2. Communicate effectively in speech, both as speaker and listener. | Oral Communication |
| 3. Engage in effective critical inquiry by defining problems, gathering and evaluating evidence, and determining the adequacy of argumentative discourse. | Critical Inquiry |

continued on next page

Table 6.1—Continued

| University Learning Outcomes | Cluster Name |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| 4. Think creatively about complex problems in order to produce, evaluate, and implement innovative possible solutions, often as one member of a team. | Innovation and Teamwork |
| 5. Analyze ethical issues in personal, professional, and civic life and produce reasoned evaluations of competing value systems and ethical claims. | Ethics |
| 6. Apply knowledge of cultural differences to matters of local, regional, national, and international importance, including political, economic, and environmental issues. | Diversity and Internationalization |
| 7. Disciplinary Lens: Mathematics. Apply knowledge and the methods of reasoning characteristic of mathematics, statistics, and other formal systems to solve complex problems. | Mathematics (DLM) |
| 8. Disciplinary Lens: Natural, Physical, and Applied Sciences. Apply knowledge and methods characteristic of scientific inquiry to think critically about and solve theoretical and practical problems about physical structures and processes. | Natural, Physical, and Engineering Sciences (DLN) |
| 9. Disciplinary Lens: Visual and Performing Arts. Apply knowledge and methods characteristic of the visual and performing arts to explain and appreciate the significance of aesthetic products and creative activities. | Visual and Performing Arts (DLV) |
| 10. Disciplinary Lens: Literature and Humanities. Apply knowledge and the methods of inquiry characteristic of literature and other humanities disciplines to interpret and produce texts expressive of the human condition. | Literature and Humanities (DLL) |
| 11. Disciplinary Lens: Social Sciences. Apply knowledge and the methods of inquiry characteristic of the social sciences to explain and evaluate human behavior and institutions. | Social Sciences (DLS) |

The new institution-wide writing University Learning Outcome is operationalized through four specific kinds of courses. Two are positioned in what historically would have been identified as general education: first-year writing (English 101 and 102) and a new 200-level interdisciplinary Intellectual Foundations course. Then, two additional courses—housed in departments and taught by disciplinary faculty across campus—are identified with the Writing ULO: newly reconfigured communication in the disciplines (CID) courses, housed within each discipline across campus, and finishing foundations courses, capstone courses in each discipline across campus. The communication in the disciplines courses must include both the Writing ULO and the Oral Communication ULO; finishing foundations courses can include either the Writing ULO or the Oral Communication ULO (see fig. 6.1).

In this new structure, writing instruction is no longer depicted as one set of first-year courses separate even from general education. Instead, writing is explicitly mapped into the student experience in specified

| | | UNIVERSITY LEARNING OUTCOMES | | | | | |
|---------------------|-----------|---------------------------------------------|----------------------------------------|---------------------------------------------|---------------------------------------------|------------------------------------------------|----------------------------------------------------|
| | | Written Comm 1 | Oral Comm 2 | Critical Inquiry 3 | Innovation Teamwork 4 | Ethics & Diversity 5 & 6 | Disciplinary Outcomes 7-11 |
| UNDERGRADUATE YEARS | Freshman | ENGL 101, 102 | Intellectual Foundations UF 100* | Intellectual Foundations UF 100, 300* | Intellectual Foundations UF 100, 300* | | Disciplinary Lens Courses across the Curriculum |
| | Sophomore | Civic & Ethical Foundations UF 200 | COMM. in the Discipline | Throughout the cocurriculum | Throughout the cocurriculum | Civic & Ethical Foundations UF 200 | |
| | Junior | Comm. in the Discipline | | | | Throughout the Curriculum & cocurriculum | |
| | Senior | Finishing Foundations | Finishing Foundations | Finishing Foundations | Finishing Foundations | | |

*Students who enter Boise State University as "core certified" or with an AA or AS degree enroll in UF 300, which meets the learning outcomes as above.

Figure 6.1. Undergraduate learning outcomes over time (Boise State University 2013b).

courses and through the university learning outcomes. This refiguring represents a substantial improvement from its significant underrepresentation in the previous general education plan. Yet this new depiction of writing via outcomes is also a macrolevel description in real need of deepening if it is to be of value to faculty across campus. If our shared campus vision of writing remains at the outcome level, writing remains a decontextualized skill (albeit one given attention in specific courses). But a threshold concepts framework offers a particularly powerful way to begin documenting what student learning looks like and to develop a shared, cross-disciplinary vocabulary that might support meaningful student writing development over time.

ENRICHING DEPICTIONS OF STUDENT LEARNING ABOUT WRITING WITHIN THE WRITING ULO

While Meyer and Land note that threshold concepts might be easier to identify "within disciplinary contexts where there is a relatively greater degree of consensus on what constitutes a body of knowledge," I found that this process can work just as well in reverse: the threshold concepts framework is particularly powerful in helping faculty *begin to generate a shared body of knowledge* (Meyer and Land 2003, 9). Within our new learning-outcomes framework, the communication in the disciplines (CID) courses are both discipline specific (housed in departments, taught by

departmental faculty) *and* explicitly linked to the Writing Undergraduate Learning Outcome. In these courses, then, writing is taught not as an isolated skill but as disciplinary practice, an embodiment of “how people ‘think’ within a discipline” (Meyer and Land 2003, 1). The CID courses are thus a particularly rich site for considering (1) what the threshold concepts for writing *at the introduction to the discipline* might be; (2) how they illuminate or complicate the Writing University Learning Outcome; and (3) how their depiction might begin to foster particular kinds of identification and alliance, both vertically along the Writing Undergraduate Learning Outcome trajectory (how might threshold concepts for writing connect from English 101 and 102, UF 200, CID, and Finishing Foundations courses?) *and* horizontally, among faculty who teach communication in the disciplines courses across campus (how might these courses with substantially different content and focus foster student writing development in appropriate ways?).

Threshold concepts for initial disciplinary writing as evident in the CID courses emerged from interviews with faculty teaching CID courses across majors and course contexts. These threshold concepts were: (1) writing is an act of disciplinary identity; (2) disciplinary writing requires rhetorical flexibility and increasing meta-awareness, or discernment; and (3) disciplinary writing is not necessarily mastered in one particular course. These threshold concepts as identified at the midway point of CID courses offer us the potential to now build a more complex picture of the student learning that might enrich the as-of-now brief description used for the Writing ULO (see table 6.1).

The first threshold concept for writing within CID courses that emerged from the interview data focused on how writing is not just about transcribing thought but about enacting a discipline. In their CID courses, faculty witness how students begin to shift in identity through their writing—professionally and personally (see 2.3, “Writing Is a Way of Enacting Disciplinary”; 3.1, “Writing Is Linked to Identity”; and 3.4, “Disciplinary and Professional Identities Are Constructed Through Writing”). Students struggle to see writing as a more complex act of communication rather than a kind of display—and it is this deeper understanding faculty see as critical. Al Heathrow¹ draws on a metaphor to describe this critical shift in understanding: “A big thing that I talk about quite a bit in talking about writing in the health sciences is that you very rarely quote. You just don’t. Especially if you’re reviewing studies you focus on the findings and it’s almost just a stylistic thing. It looks tacky. I mean the analogy I give is like wearing cutoffs to a cocktail party. You just don’t do it. Part of it is just understanding the

conventions of the discipline and you just don't do it." Heathrow's comments can elucidate the struggle students sometimes have understanding that even citation conventions can "tell us something about the discipline's values and practices while also recreating them by enacting them" (see 2.3, "Writing Is a Way of Enacting Disciplinarity").

In a different way, Brian Tollefson, an English education professor, also notes how students must move from a passive perspective to actively identifying with their chosen profession in texts they write. He notes how aspiring teachers often assume they'll be delivering prepackaged material and they don't realize, even in the current educational climate, how much they'll be responsible for. He says, "A lot of them come in [to the CID course] thinking, 'Well there's a recipe book that you follow, isn't there?' That's what they think. [I tell them,] 'No, you're writing a book yourself.'" So first a shift in psychological orientation is needed: future teachers must begin to accept their identity as teachers. Then they realize, eventually, that they will be able to "write the book" themselves—and that that act of writing is an act of embracing a teaching identity. Indeed, at the thresholds of their teaching professions, these writers begin to realize how they are "socialized, changed, through their writing in new environments"; they also begin to see how "these changes can have deep implications" (see 3.0, "Writing Enacts and Creates Identities and Ideologies").

Another consistent threshold concept for learning about writing within CID courses is developing meta-awareness and greater discernment about writing situations within the discipline (see 4.0, "All Writers Have More to Learn," and 5.0, "Writing Is [Also Always] a Cognitive Activity"). These concepts are articulated in one way by Camilla Bennett, a kinesiology professor, describing how she helps students see where writing is at work in their careers ahead:

We look at the various responsibilities, and communication and advocacy is one of our responsibilities. So then how does the communication tie in? What are the kinds of jobs? So they all have to go and interview somebody to see, 'Oh, so how is communication used?' So we look at the various settings where health educators work, so how does a work-site health educator communicate versus somebody in a health care setting versus in a public health setting?

She contends, then, that students need a strong sense of rhetorical flexibility if they are to be successful writers within the discipline.

Other faculty describe the idea of meta-awareness as a kind of rhetorical attunement; they saw students struggling to develop what Sawyer Glover, from philosophy, described as a different level of "accuracy" and

what Evan Mattison, from psychology, named “precision”: the growing ability to see perhaps-subtle but important textual distinctions (see 4.0, “All Writers Have More to Learn”). Ralph Sylvester, a civil-engineering professor, notes that for many students, “writing is one category [of generic school writing] for them. And that’s it. And some students, frankly, don’t move away from that mindset no matter what we do.” His frustration also speaks to what faculty in Linda Adler-Kassner and John Majewski’s study noted: disciplinary practices that seem “obvious” to experts—that technical reports are completely different from research-based essays, for example—are not so obvious to students. Sawyer Glover describes the novice moves students make as writers in philosophy. They are learning how to summarize what theorists say, but that’s no longer enough. He tells students, “Then I want you to say something new and interesting. . . . There’s this notion of accuracy which we struggle to convey.” He describes how students engage with philosophical theorists by just pointing out something they *disagree* with, and he wants them to push for *why*. This is difficult work; he says,

I think people are still struggling to recognize that or to get comfortable with that demand and [struggling] to work out when it’s okay to sort of gloss the hand wave a bit to motivate and when precision is required. So I think part of what’s making it difficult for them to do, it’s like it’s hard to—something like the following. It’s hard to improve your dance skills if you can’t hear the beat.

Helping students recognize that a “beat” exists is a matter of tuning that attention to discourse differences that aren’t immediately evident for those new to the discipline. Glover is depicting a kind of meta-awareness—an attunement to ways of writing one’s self into those contextualized practices.

In this depiction of student writers learning to hear the beat, we see threshold concepts overlapping and interacting. Learning to do a disciplinary dance well is both about identity—about understanding how to navigate *as* a philosopher, in this case—and about the ongoing reorientation to the “beat” of the discipline’s language, orientations, beliefs, and values. As students struggle to tune their ear to a different beat within written work, they begin to engage in a meta-awareness about disciplinary writing. Important for faculty, recognizing that All Writers Have More to Learn (see 4.0), while also understanding the roles of meta-cognition and reflection (see 5.2, “Metacognition Is Not Cognition,” and 5.4, “Reflection Is Critical for Writers’ Development”) helps illuminate why and how the Writing ULO is distributed throughout the university experience. Further, it helps faculty consider how they might help raise students’ attunement

to important textual differences within their disciplines that are often familiar enough to be invisible to expert writers like themselves.

The final threshold concept for writing that emerged from these interviews is this idea: learning to write within a discipline is an extended process that will not be mastered within one course. In their chapter, Adler-Kassner and Majewski describe how their interviews led faculty to consider the ways in which student learning “can be supported through deliberately sequenced learning opportunities” (187). Simply discussing the CID courses both in terms of threshold concepts and with the vertical writing strand in mind led faculty to recognize the possibilities for student development over time; we began to see the vertical writing strand as a meaningful context in itself. At the same time, faculty also often understood how uneven the progression in writing strategies might be for students. First, there are inevitable challenges related to how students encounter courses. As Al Heathrow (health sciences) was describing the placement of his department’s CID course in the curriculum, he noted, “We’re focusing on junior level [for the CID course] but that said . . . it’s probably not a bridge to nowhere but that’s got to be a really long bridge [between first-year writing, CID, and later writing-focused courses].” Then, there are the realities of how learning occurs for individual students. When discussing student learning within the one CID course he teaches in engineering, Ralph Sylvester describes how uneven it can be: the semester’s work includes intensive and extensive lab reports, and he notes that “by the end of the semester . . . there is some backsliding. They kind of—it’s like they’re exhausted and they don’t even think about it anymore.” Sylvester’s conception of student learning here is useful: he sees that progress is not an even uphill climb but a messy, troublesome process, and his course is one location in that journey for students. Pointing to the unstable and complex journey this kind of new understanding about writing needs, Evan Mattison notes, “It takes a while for them to really absorb that, and they may not, even by the end of the semester.” With these conversations about the threshold concepts not of their disciplines but of *writing in the CID course*, about a course both part of their disciplines and responsive to the new Writing Undergraduate Learning Outcome, these faculty are able to begin conceptualizing students’ journey along the vertical writing strand, from first-year writing to CID and later finishing-foundations courses, as a context in which they now teach. These conversations make visible how writing is not perfectible (see 4.0, “All Writers Have More to Learn”). A threshold concepts approach, then, helps illuminate new and overlapping contexts for courses labeled *communication in the disciplines* at Boise

State. These courses can now begin to be identified (1) along the trajectory of courses aligned under the Writing Undergraduate Learning Outcome; (2) with other communication-in-the-disciplines courses across campus, where these collected depictions of student learning about writing overlap in thought-provoking ways; and (3) within their disciplines, as they had always (and previously, only) been aligned.

One immediate benefit of holding interviews with communication in the disciplines (CID) faculty was our shared realization that any meaningful connection of courses within the vertical writing strand, from English 101 and 102 and into CID courses, was going to be challenging. While our courses were newly networked through the Writing ULO, students encounter them years apart, the point Al Heathrow made in discussing that “really long bridge.” If we were going to build any bridge at all, we needed to understand what the meaningful possibilities for connection might be; the CID threshold concepts offer one avenue for continuing conversations.

Second, focusing on what student learning really looks like *in the struggle, in that uneven climb across rocky terrain*, enabled these faculty to begin seeing their courses not only as one in a vertical series of courses aligned under the Writing ULO but also as a CID course, a kind of threshold experience we are now providing more systematically across campus. The threshold concepts framework enabled faculty to see the *content* of teaching (disciplinary) writing, a shared knowledge base we might build across campus. Instead of focusing only on what students are able to do by the end of a course, as a productive outcomes-based discussion would have enabled us to do, a threshold concepts-grounded discussion—and the explicit embrace of struggle, difficulty, and uneven uptake—led these faculty to depictions of what student learning looks like throughout a course. When we collectively begin to understand (or remind ourselves) that learning is uneven and complicated, that understanding can inform the neat story the Writing ULO seems to tell.

CONCLUSION: KEEPING STUDENT LEARNING IN THE PICTURE

While these initial depictions of threshold concepts for writing at a particular curricular moment are only “partially articulated notion[s] of thresholds,” they offer depictions of student learning that are, as Patrick Carmichael found, “more wide ranging and exploratory than the conventional professional development” might evoke (Carmichael 2012, 39). Describing how students experience learning about writing through these interviews also pushes at the threshold aspect of the

threshold concepts framework: working to articulate student learning throughout an undergraduate experience highlights the “protracted,” uneven journey that learning really is (Meyer and Land 2006, 3). As such, the description of threshold concepts for *writing* can provide a meaningful entry point for describing the rich student learning that lies between course names and beneath “The Writing ULO” on a chart.

Perhaps serendipitously, these faculty depictions of threshold concepts of writing map quite nicely onto our field’s threshold concepts for writing, as depicted in part I of this book. These shared understandings, once articulated, then make visible how encountering “learning thresholds,” as Ray Land recently described them, might occur within a vertical writing curriculum (Rehm 2013). For example, it’s quite possible to see how the first-year writing curriculum, which seeks to help students interrogate genre, purpose, and audience in specific rhetorical situations (see 2.0, “Writing Speaks to Situations through Recognizable Forms”), could then lead to CID faculty developing approaches within those courses that help students in turn interrogate disciplinary rhetorical contexts and develop strategies for moving among them. In addition, the ways in which the CID faculty describe the importance of understanding disciplinary writing as an act of identification with that discipline usefully echo the work of first-year writing: in English 101, our curriculum asks students to interrogate their assumptions about who and what a writer is (see 3.0, “Writing Enacts and Creates Identities and Ideologies,” and 2.3, “Writing Is a Way of Enacting Disciplinarity”). Working together to analyze threshold concepts for writing as identified by faculty at different points in the curriculum (English 101/102, UF 200, CID, FF) could, in turn, provide a meaningful campus-wide depiction of student learning over time. In other words, TCs can be employed as a way to *develop* the “shared knowledge base” around a cross- and interdisciplinary attribute like writing.

As we begin to map out productive ways to both facilitate student learning and then assess student learning across the undergraduate experience via the Foundational Studies Program, these faculty depictions of learning about writing provide an additional perspective to bring to discussions of enhancing connections between courses and meaningful assessment—key areas where faculty have begun raising questions now as the new program is enacted. Assessing student uptake of threshold concepts across CID courses, for example, or along the Writing Undergraduate Learning Outcome trajectory could both create a useful picture of student learning and account for learning contexts in a way that outcomes-based assessments might not.

Threshold concepts provide an alternative perspective on the neat vision set forth by the use of learning outcomes alone, reminding us that the actual learning happens between these signposts and outcomes. If we agree that our courses are not only content to describe and skills to certify, then working with faculty to articulate what threshold concepts for learning might be at various points along a curriculum offers a two-fold benefit. First and most importantly, describing threshold concepts for writing offers new opportunities for cross-course connections and intentional sequencing of key concepts across spans of time and student development. Second, threshold concepts provide another way to communicate to external audiences (on campus and beyond) how and why student learning is debased—and the college experience devalued—when it is broken down into discrete skills. Threshold concepts articulate the messiness of student learning in a way outcomes alone won't. They help faculty, students, and, potentially, external stakeholders focus on the “long tunnels”² of learning difficult and critical concepts now visible through a structure like the vertical writing curriculum. They now provide a map of student learning that gets closer to acknowledging, more honestly, the uncertain and uneven work of learning about writing that has the potential to be supported and developed more meaningfully across the curriculum.

Notes

1. All names are pseudonyms
2. Thanks to John Majewski for this additional metaphor.

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