

Reflecting on the Past, Reconstructing the Future: Faculty Members' Threshold Concepts for Teaching Writing in the Disciplines¹

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Abstract: A growing body of scholarship in writing studies has started exploring threshold concepts for writing, providing a synoptic view of the transformations students undergo as they learn about writing. However, the field has not yet undertaken a systematic investigation of threshold concepts for the teaching of writing. A distinction between threshold concepts for writing and threshold concepts for the teaching of writing is especially important for WAC initiatives that work with faculty in the disciplines who may not have extensive training in writing pedagogy. Research into threshold concepts for the teaching of writing in the disciplines can help WAC professionals better understand the conceptual transformations these faculty experience as they participate in our programs. In this article, we present three threshold concepts for the teaching of writing in the disciplines that we identified: effective writing pedagogy involves iterative, multifaceted change; students' development as writers can be supported through scaffolded interventions; and genres can be taught as actions, not (just) as forms. To illustrate these concepts, we share faculty narratives from a survey and focus groups, which we analyze using a narrative framework for identifying threshold concepts derived from phenomenographic analysis. We conclude by suggesting additional candidates for threshold concepts for the teaching of writing in the disciplines, and commenting on the value of narrative for promoting faculty reflection and assessing WAC faculty development.

Introduction

The introduction to the 2014 "Statement of WAC Principles and Practices" asserts that writing across the curriculum (WAC) initiatives can be "transformative" when students learn to think critically about writing "across rhetorical situations"; when faculty learn "thoughtful pedagogy and curriculum design"; and when researchers participate in "cross-disciplinary scholarship" about the nature of teaching, learning, and communicating in the disciplines (p. 1). One way we can understand the transformative nature of WAC work is through the framework of threshold concepts, or the ideas, principles, or theories that serve a central epistemological role in a given field. They drive disciplinary knowledge and inquiry, and because they are often counterintuitive, they give learners particular trouble: learners need time and space to wrestle with conceptual transformations before they understand learning thresholds deeply (irreversibly, the literature says) and use them as a way of thinking. A growing body of scholarship in writing studies has started exploring threshold concepts

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for writing (Adler-Kassner & Wardle, 2015, 2019; Hall, Romo, & Wardle, 2018). To echo the “Statement of WAC Principles and Practices,” this work has resulted in a synoptic view of the transformations students undergo as they learn about writing.

However, the field has not yet undertaken a systematic investigation of threshold concepts for the teaching of writing in the disciplines. As we elaborate below, this distinction between threshold concepts for writing and threshold concepts for the *teaching* of writing in the disciplines is especially important for WAC initiatives that work with faculty in the disciplines who may not have extensive training in writing pedagogy. Research into threshold concepts for the teaching of writing in the disciplines can help WAC professionals better understand the conceptual transformations these faculty experience as they participate in our programs.

We saw a similar need in our work for the Office of University Writing (OUW), a comprehensive WAC/WID program at Auburn University (AU), a large, land-grant institution in the southeastern United States with a Carnegie classification of Doctoral Universities: Highest Research Activity. AU enrolls about 27,000 students and employs some 1,300 faculty across 13 colleges and schools. In 2010, the university made a commitment to integrate significant writing experiences across the undergraduate curriculum. Every undergraduate major now has a writing plan that includes more than one kind of writing, multiple audiences and purposes, more than one opportunity to practice, opportunities for feedback and revision, and programmatic assessment. To support these plans, the OUW offers workshops, consultations, seminars, and institutes to help faculty redesign assignments, reimagine curricula, and refresh their writing pedagogy.² Consistently, we found ourselves wondering how we could systematically gauge the depth of faculty members’ engagement and learning after they come to our programs in ways that are scalable for busy units like ours. We decided to study the threshold concepts faculty might wrestle with in their own teaching and use those concepts to craft tools for assessing our programs. In this article, we present three threshold concepts for the teaching of writing in the disciplines that we identified in this qualitative study: effective writing pedagogy involves iterative, multifaceted change; students’ development as writers can be supported through scaffolded interventions; and genres can be taught as actions, not (just) as forms. To illustrate these concepts, we share faculty narratives from a survey and focus groups, which we analyze using a narrative framework for identifying threshold concepts we derived using phenomenography (Basgier & Simpson, 2019). We conclude by suggesting additional candidates for threshold concepts for the teaching of writing in the disciplines, and commenting on the value of narrative for promoting faculty reflection and assessing WAC faculty development.

Defining Threshold Concepts in Writing and WAC

Originally developed by Jan H. F. Meyer and Ray Land (2003; 2005), the threshold concept framework holds that certain concepts are windows, or “portals” (to use Meyer and Land’s oft-quoted term), into the ways of thinking and being characteristic of communities of practice, which Adler-Kassner, et al. (2016), define as “the formally or informally defined sites where participants share common rituals, values, and stances” (p. 18).³ Although theorists have identified as many as eight features of threshold concepts (see Baillie, et al., 2013), most emphasize four ways they affect individual learners. They are:

- Troublesome: threshold concepts are often counterintuitive for learners; they disrupt learners’ usual ways of thinking
- Transformative: once encountered, threshold concepts change the ways learners think, and often change their sense of identity

- Integrative: they help learners see the relationships among phenomena that may have previously appeared disconnected, or even invisible
- Irreversible: learners may travel back and forth through the “portal” (shuttling between old and new understandings) while learning the concept, but once they internalize it, they never see things the same way again—they can never “un-learn” the concept

Essentially, the threshold concepts framework describes how learners change their ways of thinking and acting through their participation in communities of practice. When learners first encounter a threshold concept, they may find it alien because it upsets their commonplace ways of thinking about the world. However, once they wrestle with the concept and begin to internalize it, they may never see the world the same way again.

In writing studies, scholars have begun applying this framework as a heuristic for understanding the conceptual transformations students might experience as they learn about writing in postsecondary contexts. The most prominent articulations of threshold concepts in writing studies are Linda Adler-Kassner and Elizabeth Wardle’s (2015) *Naming What We Know: Threshold Concepts of Writing Studies* and their (2019) follow-up volume, *(Re)Considering What We Know: Learning Thresholds in Writing, Composition, Rhetoric, and Literacy*. The first book brings together 29 scholars from the field to define 37 concepts, grouped into five broad headings:

- Writing is a social and rhetorical activity
- Writing speaks to situations through recognizable forms
- Writing enacts and creates identities and ideologies
- All writers have more to learn
- Writing is (also always) a cognitive activity (Adler-Kassner & Wardle, 2015)

According to Adler-Kassner and Wardle (2015), these concepts are crucial to understanding writing as an activity and a subject of study—the field’s “metaconcept” (p. 15). These threshold concepts also have the potential to support transfer. According to Adler-Kassner, et al. (2016), threshold concepts “are critical for cultivating students’ abilities to assemble and reassemble knowledge-making practices within and across communities of practice” (p. 19; see also Adler-Kassner, Majewski, & Koshnick, 2012; Blaauw-Hara, 2014; Basgier, 2016; Hendrickson & García de Müeller, 2016). In other words, students can use these portable, flexible concepts for writing as they communicate across contexts. For example, a student who learns how repeated, recognizable forms—genres—grow out of and respond to recurring situations may be in a better position to communicate to an unfamiliar audience in new professional setting than a student who thinks all good writing is more or less the same regardless of context. The former student will have a transformed understanding of the activity of writing readily at hand, while the latter may continue to struggle.

However, the threshold concepts students need to learn are not the same ones faculty across the disciplines need in order to develop good writing pedagogies and curricula. When teaching, faculty necessarily operate in different, sometimes overlapping, communities of practice from students. Faculty across disciplines may also experience unique struggles when teaching writing in disciplinary courses compared to colleagues who teach writing in contexts like composition, creative writing, journalism, or writing centers (see chapters in Adler-Kassner & Wardle, 2019, for more on threshold concepts in these contexts). Because of the distinct role disciplinary faculty play when they teach writing, a different set of threshold concepts should characterize their thinking. Put differently, threshold concepts may manifest differently in instructional situations across the disciplines than

they do in learning situations, communicative situations, or even instructional situations that center on writing as the primary focus of teaching and learning.

Chris Anson (2015) articulates this distinction in his chapter (from Adler-Kassner & Wardle 2015) about threshold concepts for WAC. As he puts it, there is a key difference between “expert knowledge about writing—what faculty learn through repeated practice and slow enculturation into their fields—and expertise in the teaching or support of writing development, which is neither intuitive nor routinely introduced to most teachers in the disciplines” (p. 204). To describe expert knowledge about the teaching of writing, Anson offers several candidates for threshold concepts in WAC:

- Writing in a discipline reflects the ways knowledge is produced there (p. 205)
- Writing can be a tool for learning or communicating (p. 207)
- Improvement of writing is a shared responsibility (p. 209)
- Writing is highly developmental (p. 212)

Although we agree with Anson—and sometimes confirm the threshold concepts he names—we also believe the threshold concepts named by writing studies experts need to be complemented by the perspectives of faculty teaching writing in the disciplines (and students, when appropriate). According to Meyer (2012), researchers debate whether threshold concepts ought to be “determined by a community of scholars within the epistemology of the discipline” or whether they ought to be discovered “empirically from learner experiences” (p. 9). If we ask experienced insiders “who have long traversed the threshold” (Barradell, 2013, p. 267), they may not remember accurately which concepts were truly troublesome, or how, exactly, they were transformative. However, novice learners may not have the knowledge of which concepts represent the deep structure of a community’s ways of thinking and doing. We believe both perspectives are necessary for a sufficiently rich understanding of the threshold concepts in a given community of practice.

To complicate matters further, faculty can simultaneously be expert writers in their disciplinary fields and novices with respect to disciplinary writing pedagogy. Adler-Kassner (2019) and Wardle (2019) make similar points in separate chapters about WAC faculty development in *(Re)Considering What We Know*. According to Adler-Kassner (2019), “[W]riting facilitates, and, when it is perceived as accomplished, demonstrates *epistemological participation*—immersion in disciplinary perspectives of disciplines often reflected in threshold concepts and represented in constructions of genres” (p. 283). Because faculty are immersed in these disciplinary perspectives (threshold concepts) and their concomitant genre expectations, the features of “good writing” can come to seem natural and transparent when in fact they are highly localized to their community of practice. For this reason, Wardle (2019) urges WAC faculty developers to help disciplinary faculty “recognize what they already know and do (with both writing and with their disciplinary knowledge) and . . . bring those things to conscious awareness in order to teach about and with writing more effectively” (p. 302). We do not necessarily expect faculty in the disciplines to name recognizable threshold concepts independently (a point we elaborate below), nor do we suggest relying on their perspectives alone when identifying threshold concepts. We are reminded of a department that instituted a policy whereby students would automatically fail any writing assignment that included more than three grammatical errors. Arguably, their intervention represented a change in thought and action with respect to the teaching of writing in the discipline, but WAC experts would be hard pressed to endorse their approach as representing the kind of deeply transformative change posited by the threshold concepts framework. Experts in writing studies still need to interpret faculty members’ thoughts and actions with respect to the theories and concepts that circulate in our field in order to verify their threshold qualities.

Our study is designed to establish a systematic process for interpreting such threshold qualities as represented in faculty experiences with the teaching of writing in the disciplines. In so doing, we aim to expand the field's knowledge of threshold concepts for WAC and thereby better understand the kinds of transformations the "Statement of WAC Principles and Practices" suggests faculty undergo when participating in WAC initiatives. Our study is also distinctly cross-disciplinary, with faculty participants from a range of departments and programs; as such, we see ourselves enacting the kind of transformative research called for in the "Statement."

Methodological Overview: Threshold Concepts, Phenomenography, and Narrative Types

Threshold concepts researchers have drawn on a range of different methodologies to identify troublesome and transformative knowledge (Barradell, 2013; Quinlan, et al., 2013). We have provided a detailed overview of our methodological choices in a previous publication (Basgier & Simpson, 2019); here we summarize those choices in brief.

Scholars who research threshold concepts in various disciplines have raised questions about the best ways to discover and name them. As we explained above, threshold concepts may look different depending on whose experiences are prioritized—experts or novices. Additional complications include the way study participants sometimes name concepts that are merely difficult but not necessarily threshold concepts (Shinners-Kennedy & Fincher, 2013); the qualities of the threshold concepts that study participants name, perhaps focusing only on troublesomeness rather than other important features (Zander, et al., 2008); or mere differences among learners (Rowbottom, 2007). These issues point to the importance of eliciting narratives about learners' experiences without overcomplicating their conceptions of their experiences or the nature of threshold concepts, as well as eliciting narratives from learners at different levels of experience and knowledge acquisition.

In response to these challenges, and in an effort to create a useful and replicable means of both naming threshold concepts and assessing their acquisition, we turned to phenomenography, a methodology that has received little attention in writing studies. Unlike phenomenology, which emphasizes the systematic investigation into the structures of experience of a phenomenon, phenomenography centers on the variation in how people experience a given phenomenon. This approach also allowed us to closely consider the variation in experiences and provide interpretation of those experiences. Phenomenography enables us to interpret those experiences in light of expert knowledge in the field. Such interpretive practices—and the phenomenographical approach in general—facilitates collective knowledge-making by novices and experts together. In general, phenomenographers collect qualitative data from research participants; they then categorize those experiences and map them into an *outcome space*, which is a representation of categories and their (often hierarchical) relationships to one another (Marton & Booth, 1998, p. 112; Richardson, 1999; Alsop & Tompsett, 2006; Polat, 2013, p. 118).

We decided to use phenomenography because we hypothesized that faculty members' ways of articulating their experiences with teaching writing in their disciplines would vary from pre-threshold to threshold to transformed, and we wanted to map that variation in hopes of distinguishing among faculty's shifting conceptions. Taken together, phenomenography and threshold concepts 1) draw our attention to the aspects of teaching writing faculty find particularly troublesome and transformative and 2) allow us to map the qualitative distinctions in faculty's thinking.

Most phenomenographic research has used semi-structured interviews, although researchers occasionally use other methods such as focus groups or reflective writing (see Marton & Booth, 1997;

Male & Baillie, 2011; Quinlan, et al., 2013; Rands & Gansemer-Topf, 2016). Our study used surveys and focus groups. We began with a survey sent to all faculty at our institution (rather than semi-structured interviews) to maximize the variation in experiences gathered, which is a key goal of phenomenographic research. Additionally, we wanted responses from faculty who had participated in our programming and those who had not, again so that we could capture the most variation in experiences and conceptions for the teaching of writing in the disciplines. Previous threshold concepts research suggests that participants can be confused or distracted by the threshold concepts framework and what “counts” as a threshold concept (Zander, et al., 2008, p. 109; Male & Baillie, 2011, p. 255). Additionally, participants who had not yet acquired a threshold concept or who were not immersed in the disciplinary terminology of writing studies would not necessarily have the language to name concepts. They might use a set of key terms to describe the features of writing or disciplinary writing pedagogy; as Chris Anson, Chen Chen, and Ian G. Anson (2019) point out, key terms are not the same as threshold concepts, but they might signal a “lexicon surrounding threshold concepts” (p. 315). For these reasons, we designed instruments that would surface threshold thinking without requiring participants to name concepts explicitly. Survey participants answered demographic questions and responded to an open-ended question:

Write about a time when you tried to teach writing, or an aspect of writing, in your discipline, and it didn't go as planned. What happened? What did you learn? What did (or might) you try differently to address what happened?

By design, these questions elicited narratives that told of trouble and transformation—two key features in identifying threshold concepts. We were able to glimpse other features of threshold concepts through our analysis. The first question prompted participants to describe a problem as well as their solution(s) to that problem. By asking for careful consideration of the past (“What did you learn?”) as well as potential restructuring of the event (“What did [or might] you try differently to address what happened?”), the survey question prompted reflection from participants and also gave them an opportunity to showcase what they knew about teaching writing, even if they had not implemented changes.

Because we did not want to lose the depth proffered by semi-structured interviews, we also offered survey respondents the opportunity to participate in focus groups, where we asked more probing questions about their experiences with the teaching of writing. Focus groups shared and discussed the challenges they had encountered in the teaching of writing, as well as some of their solutions—both successful and unsuccessful. (See Appendix A for the focus groups' guiding questions.)

Demographic Results

We received 85 complete survey responses to the open-ended question in the survey, and 95 responses to the demographic portion; as Figure 1 (below) indicates, those 95 responses represented all 13 colleges and schools at the university. The Harrison School of Pharmacy, Samuel Ginn College of Engineering, and the College of Sciences and Mathematics were underrepresented compared to university demographics, whereas all other colleges were at or above the university totals. The Office of Institutional Research does not keep records for faculty in the University College because those faculty have their primary appointment in another college or school; therefore, we cannot indicate whether the number of respondents is representative of University College faculty.

As Figure 2 (below) shows, faculty respondents came from across the ranks, with a slightly higher percentage of full professors, lecturers/instructors, and visiting faculty compared to university demographics, and a slightly lower percentage of associate and assistant professors. A number of respondents reported participation in professional development with units across AU, including the

Biggio Center for the Enhancement of Teaching and Learning (37.5%), the OUW (23.6%), the Office of Academic Assessment (13.2%), Human Resources (10.4%), and the Office of Inclusion and Diversity (7.6%). These percentages do not appear to differ substantially by rank. Because we collected demographic data separately from survey responses, we cannot make conclusions about the relationship between our respondents' participation and their level of threshold concept acquisition.

Figure 1. Respondents and All Faculty by College

College or School	Survey Responses	%	Full-Time Faculty as of Fall 2017	%
College of Liberal Arts	26	27.37%	336	25.5%
College of Agriculture	14	14.74%	131	9.9%
Samuel Ginn College of Engineering	8	8.42%	169	12.8%
College of Sciences & Mathematics	8	8.42%	165	12.5%
College of Education	8	8.42%	102	7.7%
Harbert College of Business	7	7.37%	77	5.9%
College of Veterinary Medicine	7	7.37%	104	7.9%
College of Human Sciences	5	5.26%	57	4.3%
School of Nursing	3	3.16%	29	2.1%
School of Forestry & Wildlife Sciences	3	3.16%	30	2.2%
College of Arch., Design & Construction	3	3.16%	62	4.7%
University College	2	2.11%	N/A	N/A
Harrison School of Pharmacy	1	1.05%	60	4.5%
Total	95	100%	1322	100%

Figure 2. Respondents and All Faculty by Rank

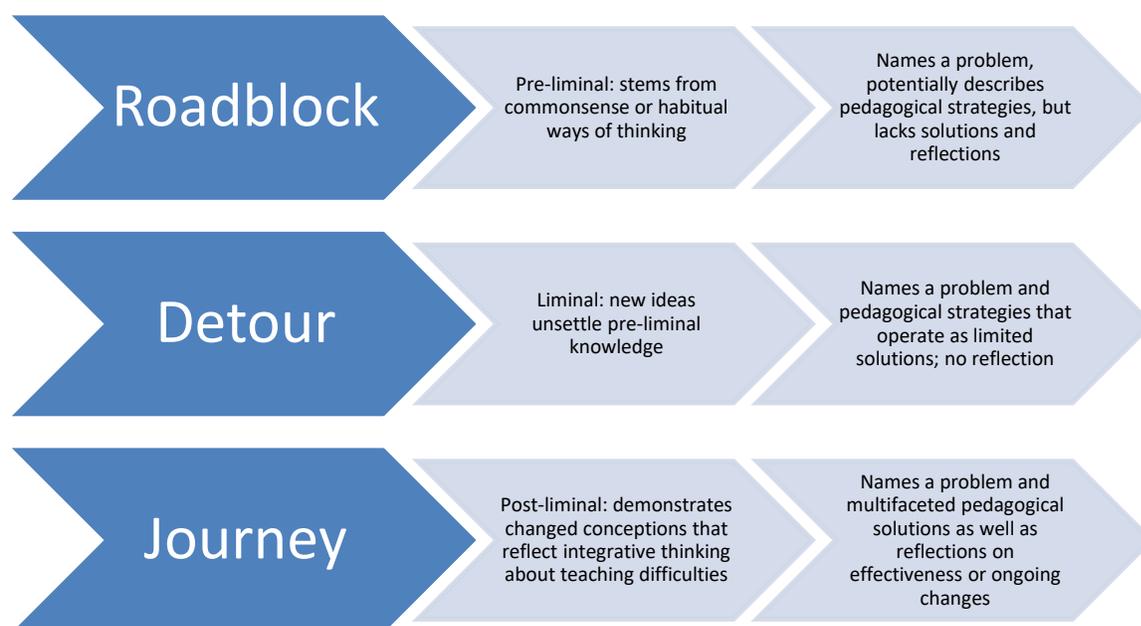
Rank	Survey Responses	% of Rank	Full-Time Faculty as of 2018-19	% of Total
Professor/Clinical Professor	29	30.5%	403	28.3%
Associate Professor	23	24.2%	394	27.6%

Assistant Professor	21	22.1%	375	26.3%
Instructor/Lecturer	19	20%	221	15.5%
Visiting/Other	3	3.2%	33	2.3%
Total	95	100%	1,426	100%

Phenomenographic Analysis

We began our phenomenographic analysis by reading through survey and focus group responses several times, and we identified five broad categories of experience related to the teaching of writing in the disciplines: (1) why faculty assign writing, (2) their assignment designs, (3) their pedagogical practices, (4) their approaches to feedback, and (5) how they teach writing to their students. Individually, we used inductive coding (Haas, Takayoshi, & Carr, 2012) to identify each category’s constitutive elements, after which we worked together to refine our final list of codes, which is included in Appendix B. We also noticed consistent variations in the narrative form of faculty’s responses. Some stories included a problem but not solution; some named a challenge and imagined a solution they had not implemented; and some described complex changes to their teaching of disciplinary writing. To represent the movement involved when acquiring new knowledge, we used a traffic metaphor when categorizing narratives: “roadblocks,” “detours,” and “journeys,” which correspond to pre-liminal, liminal, and post-liminal stages of threshold concept acquisition (Figure 3; see also Basgier & Simpson, 2019, for more detail on each type). We coded as many survey and focus group responses as possible using these categories, given each response’s identifiable narrative structure. In what follows, we summarize each narrative type in brief.

Figure 3. Structural Components of Faculty Participants’ Narratives for Teaching Writing in the Disciplines



Roadblocks

Roadblock narratives are comprised largely of the difficulty that the participant encountered with the teaching of writing in the disciplines. Additionally, they sometimes (but not always) named a characteristic pedagogy or pedagogical technique; when they did so, that pedagogy often comprised part of the problem. Faculty participants who told roadblock narratives rarely reflected on the successes and limitations of their teaching practices; more often, they located the source of the problem in students' (in)ability to write. For example, one faculty member told a focus group:

I'm always surprised when students are offended by my comments. And I try to tell them about differences in genre and expectations. I'm not saying "you're a bad writer," but "you just have some work to do." They don't believe me and think I'm incorrect about them. A student came to me and wasn't sure what to do with positive feedback. And they are resistant to negative ones. Our comments create so much anxiety. I was trying to be positive, and it was still interpreted in a negative way!

This participant encountered a moment of difficulty in helping students understand what to do with comments and cannot see a way forward, in large part because of what she described as students' inability to understand feedback. She did not yet have pedagogical conceptions for working through this difficulty. In our framework, roadblocks like this one demonstrate pre-threshold thinking (Meyer, Land, & Baillie, 2010), as they rely on ways of knowing and/or doing that may be ineffective, at least for the specific scenario for which they have identified a problem. We identified 64 roadblocks in our dataset.

Detours

Detour narratives also articulated a problem; unlike roadblocks, they also posed a solution. Such solutions may have addressed the problem, but they were often single interventions that left faculty *dissatisfied*. We also used this designation for solutions that participants imagined but had not yet implemented. An illustrative example came from a faculty member in the sciences who described new difficulties getting graduate students to meet expectations for writing after several years of successful papers:

[W]e started seeing 2 serious problems. The first was a failure to understand what was meant by "primary references," which typically resulted in the students citing review papers, rather than the actual research article, upon which the review was based. In addition, we started seeing significant sections of text being repeated as verbatim quotes (appropriately set off in quotation marks and referenced). I was never really sure why this happened, although I suspect that it might be a consequence of recruiting students with less exposure as undergraduates to reading or writing scientific style papers. Ultimately, we learned that we cannot assume that our students are familiar with scientific prose and that we needed to provide them with additional guidance, which we now do in the materials that describe the paper assignment.

The solution—"materials that describe the paper assignment"—could represent a substantive change to pedagogy, depending on how detailed those materials are. However, we believe this participant likely had not made the kinds of deep changes that would signal conceptual transformation because they were so aware of the limits of their knowledge ("I was never really sure why this happened") and because they passed the blame onto students. That said, this faculty member seemed to be developing an awareness of the need for disciplinary enculturation through

immersion in relevant discourses. A deeper encounter with that concept may lead them to consider additional pedagogical strategies. Detour narratives like this one indicated liminal thinking, in that participants were considering solutions to their problems in ways that were potentially transformative; however, the participant sometimes moved between old and new concepts. This liminality shows the beginning of conceptual shifts that lead to a transformed way of thinking about the teaching of writing in the disciplines (Meyer, Land, & Baillie, 2010). We identified 50 detours in our dataset.

Journeys

Like the other two narrative types, journeys articulated a problem, but they also offered fuller narratives of change. Journeys were distinct from roadblocks and detours in that participants posed multifaceted solutions to pedagogical problems. These narratives also frequently included elements of reflection, wherein the participants considered the effectiveness of their teaching practices and potential future actions. For example, a survey respondent from Biosystems Engineering described his early disappointment with the quality of students' writing and their struggles to incorporate feedback in lab reports. He took a 50-slide PowerPoint presentation on technical writing that he had inherited and ditched in favor of "an active workshop style lecture." However, even that lecture was not enough:

Unfortunately, it was still only a single lecture period and it was more than halfway through the semester. It was almost too late to do any good. The students already had a negative view of writing and many of them expressed clear hatred for my class. I felt terrible about it and proceeded to tear up the entire curriculum of my course for the next semester. I moved technical writing to the beginning of the semester before they wrote even a single report. I included multiple workshop-style lecture and lab sessions dedicated to articulating expectations for writing, practicing writing, and peer-reviewing each others work using a rubric. The outcome was a vast improvement in student attitudes and outcomes with regard to writing.

This faculty member's narrative moved from early assumptions, through disappointment, past a minor change (which otherwise would be a roadblock), and to a menu of changes that worked in tandem to guide students toward successful writing. We cannot tell from this narrative how he learned about interventions like low-stakes practice or peer review, although the OUW has had substantial participation from faculty in this department. But we can see how this thinking about his teaching of writing in the discipline transformed in response to the troubles he encountered. Participants telling these kinds of "journey" narratives encountered problems similar to those described by participants who told detour and roadblock narratives (note how this faculty member also laments students' attitudes), but their responses to those problems demonstrated post-liminal thinking and ultimately changes to their conceptions of the teaching of writing in the disciplines (Meyer, Land, & Baillie, 2010). We identified 28 journeys in our dataset.

Through these narrative types, researchers can identify knowledge and practices that signal threshold concepts. We identified the three threshold concepts for the teaching of writing that we discuss below by cross-referencing each response's narrative type with the codes we had originally identified during the first phase of our phenomenographic analysis. When a code appeared across each narrative type, we examined the associated responses to see whether we could identify pre-liminal, liminal, and post-liminal thinking with respect to the code. When we were able to map these different ways of thinking, we then used the threshold concepts framework as an additional interpretive tool to ensure that the narratives represented epistemological or ontological changes,

integration, boundedness, or other elements of the framework. The three threshold concepts for the teaching of writing in the disciplines named below represent the richest range of conceptual orientations we were able to identify using this process. In our conclusion, we describe additional concepts that were suggested in our data but did not have enough narratives to support a full analysis.

Threshold Concepts for the Teaching of Writing in the Disciplines

Our research helped us better understand how faculty experience the troublesome aspects of teaching disciplinary writing, as well as the ways they transformed their thinking and practice. Through our analysis of these narratives, we identified three threshold concepts that were particularly important to the faculty in our study. We recognize that these threshold concepts are not necessarily new. In some ways, they resemble ones already articulated by writing studies scholars; we note such connections below.

That said, the threshold concepts we name here have some distinctive features that likely arose from our local context. For instance, OUW faculty development workshops have focused extensively on scaffolding assignments and curricula since the beginning. Anecdotally, we believed faculty were using these concepts more regularly—they were “in the air” around campus—and even though we cannot verify which of our participants came to our events, the prevalence of scaffolding in our findings support our hunch. In contrast, participants in our study rarely mentioned writing-to-learn, a staple in other WAC programs that had not received as much play in our program until after this study was completed. Therefore, we caution that these threshold concepts, and perhaps all threshold concepts, are not necessarily universal. Rather, they are owned by local communities of practice. We also caution that individual faculty members may express a range of orientations to various threshold concepts at the same time, depending on instructional context. For instance, a faculty member may use writing-to-learn across all her undergraduate courses, having experienced the journey to understanding that concept, even as she struggles to understand why students wait until the last minute on major assignments, suggesting a roadblock is also at play. Just as “all writers have more to learn” (Rose, 2015, p. 59), so, too, do all teachers of writing.

Metaconcept: Effective writing pedagogy involves iterative, multifaceted change

The faculty members in our study who made the deepest changes to their teaching of writing often addressed their struggles by continually, *iteratively* reviewing their assumptions about the role of writing in a given course. They described not the *addition of writing* to a course, but rather *multifaceted changes* to pedagogy. The changes they made often spread across their motivations for assigning writing at all, their assignment designs, and their pedagogical choices to support their goals for students’ writing.

This concept may be particularly troublesome to faculty members who believe writing assignments will detract from content coverage. Some participants in our study worried that any attention to writing necessarily meant sacrificing subject matter. They were reluctant to make any change at all, which prevented them from seeing the capacity of writing to be a means for teaching and learning course content, not a replacement for it.

Faculty who implemented isolated pedagogical changes may also struggle to understand the integrative potential of deep transformations. Those who told detour narratives responded to difficulties with a singular, minor or imagined, intervention. They took an additive attitude toward pedagogical change. For example, one faculty member assigned drafts and peer review—certainly

effective pedagogical tools—but her primary motivation was to keep students accountable, rather than engage them in the kinds of professional communicative activities characteristic of her profession. This faculty member added features of writing pedagogy to her course, and she saw some improvement; however, she did not necessarily see a need to make additional, ongoing changes to other elements of her pedagogical repertoire.

Other faculty participants made deeper changes to their teaching. A faculty member from graphic design assigned drafts and peer review to facilitate students' writing process, provided them with valuable feedback during the writing process, and finally aimed to help them engage in a socially-informed writing practice resembling realistic writing contexts. Unlike the first, this faculty member more wholly modified the role writing played in her course, bolstered its potential to facilitate students' learning, and supported students' engagement with disciplinary conversations or professional practice, all through a process of iterative change. (See Basgier & Simpson, 2019 for a fuller analysis of this faculty member's narrative.)

We can see these kinds of multifaceted changes in aggregate data from our study. The most common changes in journeys layered feedback and pedagogy together. Despite the fewer number of journeys (28, versus 50 detours), more of those responses included the implementation of multiple, intentional, integrative solutions for an issue. Indeed, a commonly-named feature of threshold concepts is their integrative nature (Meyer & Land, 2005, Adler-Kassner & Wardle, 2015). They help learners see connections, in this case among the objectives of writing assignments, assignment design, and feedback, which might not otherwise be apparent to those who have not encountered the concept.

Students' development as writers can be supported through scaffolded interventions

The first concept we encountered extends Anson's (2015) concept that learning to write is a "highly developmental" process (p. 212). Consistently, we found faculty both struggling and realizing that a range of interventions can provide a scaffolding that supports students in their growth as writers. For some faculty, this concept was troublesome. For example, in his survey response, a faculty member in chemical engineering shared a narrative we coded as a roadblock. Essentially he believed his students made errors because "they save the writing until the last minute, preferring to do one more calculation or analyze one more case, not realizing that the loss of credit for a poor report significantly outweighs the benefit of that last calculation." A scaffolded approach to this course—a senior capstone—that includes opportunities for feedback and revision might help students compose polished final products. As it stands, this faculty member appears to be in the pre-liminal stage with respect to this threshold concept: he has encountered a difficulty that upsets his expectations, but does not have an effective strategy for counteracting what he sees as students' unproductive writing habits.

Anson (2015) offers a possible explanation for this way of thinking, describing it as "an ideology of learning in which most of the responsibility falls on students to perform well rather than on teachers to support them" (p. 2013). Some faculty members may start to realize the power that interventions can have on students' development as writers, even as they remain in a liminal state of threshold concept acquisition in which they still attribute difficulties to students' own attitudes and practices. For example, another faculty member told a relevant narrative that we coded as a detour. He expected students to write in APA format and recognized that some of them needed additional support: "I will take time to walk a struggling student through the APA format and will use visuals, videos, whatever helps." This faculty member offered extra instruction and materials to help students learn, and even attempted to differentiate these additional resources for individual students. "Some

students,” this individual wrote, “really do want to learn APA or MLA and are afraid to ask but those barriers can be overcome. I will ask how they learn best and adjust my method of teaching.” However, this individual did not seem to believe that scaffolded interventions can benefit all students when they are deliberately integrated into a course. Instead, this faculty member maintained, “Some students do not connect with the instruction,” which meant “I will not walk them through the process unless I see a change in dedication to the class/assignment.” To be sure, students’ dispositions can play a large role in their engagement and success with writing. According to Dana Lynn Driscoll and Jennifer Wells (2012), students’ perceptions of value, their sense of self-efficacy (their beliefs about their own ability to succeed), the extent to which they attribute success or struggle to themselves or others, and their ability to regulate their own behavior all play a fundamental role in their abilities to learn about writing and transfer knowledge across contexts. But faculty who have internalized this threshold concept come to understand that working with students’ “experiences, their diverse learning styles, their manifold prior experiences, both good and bad, both instructive and wrong” (Anson, 2015, p. 212) does not mean blaming students for their failures.

Rather, courses and curricula in which writing assignments are structured intentionally and transparently can lead students to greater success. Two narratives that we coded as journeys illustrate the difference. In response to students’ poor performance on design reports from a lab course, a systems engineering faculty member “moved the report assignment earlier in the semester, and required a draft report, with the instructor providing feedback, and then a final version of the report, addressing that feedback.” These interventions, combined with rubrics, led this faculty member to report better quality writing. To a WAC expert, these changes may appear commonsense, but to faculty not trained in writing pedagogy, they may not be. More extensive interactions with this individual, such as teaching consultations or semi-structured interviews, would reveal whether he had learned a concept that he could apply consistently to new instructional situations. Phenomenography provides an additional means for understanding the depth of conceptual change. When viewed in the context of other narratives about scaffolding and student development, his pedagogy appears more aligned with responses that represent post-liminal thinking than ones that are pre-liminal or liminal. For instance, he appears to be conceptually closer to another faculty member in literary studies who moved away from this draft-revision model and instead “tried breaking the draft assignment for a long essay into distinct tasks,” beginning with “a brief but coherent description of the [literary] text,” then moving through developing claims and analyses in order “to generate material which they would then, benefitting from my feedback along the way, craft into a final essay.” This faculty member went on to name a number of additional scaffolding strategies that helped students build towards final products iteratively. In both cases, these faculty members recognized that the instructional context is a fundamental locus of control, one that can be designed to guide students towards effective writing. They appeared to see the classroom, and their students, differently from their faculty colleagues. They recognized that scaffolded instructional interventions, and not just students’ choices or dispositions, play a key role in students’ success.

Genres can be taught as actions, not (just) forms

In our dataset, faculty named disciplinary genres and forms as sources of difficulty more than any other element that we coded. Anson (2015) discusses genre most directly when he names situated learning as a threshold concept for WAC. He argues that faculty need to support students’ learning to write at every curricular turn, “especially courses that involve unfamiliar genres and methods of discourse production” (p. 211). While the situated nature of learning is certainly an obstacle for many faculty members teaching with writing, so, too, is the notion that genre is more than a formal container or set of conventions, but rather a dynamic construct that emerges and is recreated at the nexus of specific, recurring, material situations; larger cultural contexts; and a network of

intersecting genres (Devitt, 2004, p. 25; see also Bawarshi, 2003; Miller, 1984; Russell, 1997). Many of our respondents named genres—with the literature review coming up consistently—but a subset only described a pedagogical interest in those genres' forms. In a survey response we coded as a roadblock, for example, one faculty member saw consistent “issues with creating the content of the review, formatting the review, and citing sources for the review.” This individual’s solution was “a course where I lectured on the proper form, content, and structure for citations,” but despite these efforts, “the results were disappointing, to say the least.” According to Amy J. Devitt (2004), “The formal regularities we can observe in genres do not alone create the genres; they result from the genres” (p. 12). With a focus on those formal regularities in a single lecture, this faculty member was left frustrated with students’ performance; a more multifaceted pedagogy might have helped students acquire the genre more successfully.

Other faculty members, operating in the liminal state of acquiring this threshold concept, began addressing their concerns with genre by providing students with a broader range of resources and opportunities for learning. A faculty member who initially assigned “diversity statements,” for example, “received disjointed reflection papers instead.” To address students’ misconception of the genre, this individual offered students clarifying examples, sample diversity statements, and opportunities to peer review each other’s statements. These kinds of interventions intersect with the scaffolded approach to teaching discussed above, as well as the need for situated teaching and learning described by Anson (2015). For that reason, we initially coded this brief survey response as a journey, one characterized by multifaceted changes. However, given its brevity, we could not tell whether this faculty member also worked with students to understand the cultural and rhetorical situations in which diversity statements are produced and circulated, so it is possible that they are still operating in a liminal stage with regard to genre as a pedagogical concept.

Some faculty more clearly came to see genre not just as a type of text or a form, but rather as a way of enacting disciplinarity. One survey respondent described a curriculum with very little writing and undergraduates who “don't see themselves as writers or struggle to communicate in a written format rather than a visual format.” To engage these students in writing, the faculty member started assigning reflective writing in support of ePortfolios, as well as genres like resumes, cover letters, and project briefs. According to the faculty member, these genres speak to students who “are very practical in mindset” because the assignments “make sense to them on a practical level,” speaking to their sense of disciplinary selves. Writers’ use of individual genres can also operate as representations of identity (Tardy, 2005). Through her selection of genres, this faculty member also uses genre to help her students own and shape their budding disciplinary identities within the culture of their field.

Two other faculty members, both of whom shared journey narratives, told us about teaching literature reviews as instantiations of particular actions, as ways of working with the materials of academic life—in this case academic literature. One respondent started with a formal approach to the literature review and then expanded upon it:

They start with an article that is a lit review, and they have to pick it apart and then understand what the components of a lit review are. And then when they identify their sources, they identify the main points of those and then get feedback. The hope is that they can go across those 3 articles and improve. A combination of in-class and then smaller assignments that they eventually incorporate into the larger whole.

By focusing students’ attention on the main ideas in three articles, this faculty member hoped students would learn not just the content of the review, or even its form, but also the intellectual work of synthesis entailed in the genre. In a focus group, another faculty member described a similar

mindset in the way she taught graduate students to write literature reviews: “I use a synthesis matrix so that they have to write a narrative that describes the trend they see in the chart, and it prevents them from talking about them individually and discretely. In the end they have a much more cohesive lit review.” Specific invention tools like matrices can help students engage with the activity entailed in genre acquisition. As Bawarshi (2004) explains, writing “begins when a writer locates himself or herself within the discursive and ideological formation of a genre and its system of related genres” (p. 72). This faculty member’s approach to the literature review engages students in that system of genres, including other literature but also the matrix as a genre that represents a particular way of thinking about academic literature and the enterprise of scholarship—an ideology—with disciplinary inflections. In the end, when faculty such as these latter ones assign a genre, they not only teach the formal features that represent these kinds of fossilizations, but also the actions, beliefs, and identities those genres entail.

Conclusion: Threshold Concepts, Narrative Types, and the Assessment of Faculty Development

Most readers will probably find these three threshold concepts familiar. Notions of iterative pedagogical change, scaffolded support of writing development, or genre as action have a long pedigree in our field. We saw equally familiar candidates for additional threshold concepts in our surveys and focus groups. For instance, the faculty member who lamented that her weaker students struggled to draw connections across experiences and “learn from mistakes and weaknesses” suggested to us that the notion that critical reflection can support transfer might be a threshold concept for teaching writing in the disciplines. Similarly, the survey respondent who noted that “students will invest in a topic/assignment if we offer them a meaningful context within which to explore it” got us thinking that designing assignments around realistic situations may be another. In these cases and others, however, we did not have enough responses to demonstrate pre-liminal, liminal, and post-liminal thinking; we could not say for certain that they were in fact threshold concepts in their own right, or else components of other threshold concepts for the teaching of writing in the disciplines. The concepts we share here demonstrate how faculty members encounter and enact these concepts (or do not enact them) at varying levels of understanding, and that those concepts are inflected by their instructional contexts. For that reason, we see a continued need to name threshold concepts for the teaching of writing in the disciplines whose characteristics are distinct from threshold concepts for writing. To do so, we either need to engage in detailed case study research or collect additional qualitative data from a broad range of participants to contextualize their responses, as in phenomenography.

A risk in naming any threshold concepts is that they might become ossified into curricular check marks (Adler-Kassner & Wardle, 2019). They may also lead to intellectual gatekeeping: although disciplinary knowledge is dynamic, scholars exploring new conceptual territory may find it difficult to challenge accepted concepts when they have been defined as core disciplinary ways of thinking. Experts in the field also have a role to play in mediating the experiences of novices in order to interpret their threshold thinking, which may limit our ability to see what “counts” as a threshold concept—particularly a new or emerging one. That said, scholars investigating threshold concepts are not necessarily interested in pinning down what we know. Adler-Kassner and Wardle (2015) remind readers, “[W]e do not believe it is possible or desirable to try to name, once and for all, all such concepts” (p. 8; see also Adler-Kassner & Wardle, 2019). Likewise, our goal is to open up new avenues for faculty learning by helping them see more productive conceptions of the role writing can play in teaching and learning across disciplines, but without fossilizing knowledge of disciplinary writing pedagogy.

Our narrative methodology is key to keeping the conceptual territory open. Narratives can help us recognize the shape and depth of the conceptual changes that may result from faculty members' learning. With narrative, we can place threshold concepts in a context and acknowledge pedagogical thinking as a process. Using the narrative categories of roadblocks, detours, and journeys, WAC specialists can assess how faculty wrestle with threshold concepts—especially those we have described here—and shifts in understanding in process. In advocating for the role of narrative in assessing faculty learning, we echo scholars who have foregrounded the role of reflection in professional development for faculty and WAC work (Bain, Ballantyne, Mills, & Lester, 2002; Flash, 2016; Yancey, 2016; Moon, et al., 2017). Through narrative, we give faculty the opportunity to tell their stories as teachers of writing, regardless of discipline, to think critically about their experiences, and to reimagine the future by envisioning pedagogical changes. When we give merit to faculty's reflective narratives of experience, we allow for conceptual reconstruction, or, in a word, learning.

Appendix A: Focus Group Questions

- What does it mean to write successfully in your discipline, and how do you teach that knowledge about writing to your students?
- Where did you first learn about these strategies?
- To what extent did that experience change the way you thought about your teaching?
- Why do you assign writing and what purpose does it serve in your course?
- What are your best students able to do with writing, and how do you try to get other students to do the same? How do you talk about writing with your students?
- What strategies do you use to teach disciplinary content to your students? To what extent are those strategies applicable to teaching writing in your discipline?
- Have your successes and struggles with teaching writing in your discipline affected how you see yourself as a teacher, scholar, and/or professional?

Appendix B: Code Lists

Readers may contact the lead author for definitions of these codes.

- **Codes for Why Faculty Assign Writing**
 - Critical Engagement in Support of Transfer
 - Immerse Students in an Intellectual Process
 - Enter a Conversation
 - Apply Course Concepts
 - Make Personal Connection to the Discipline
 - Test Understanding of Course Content
 - Respond to Institutional/Professional Exigence
 - Don't Teach Writing
- **Codes for Assignment Design**
 - Create a Realistic Context for Writing
 - Scaffold Assignments for Content Knowledge
 - Scaffold Assignments to Teach Genre Knowledge
 - Scaffold Assignments to Manage the Writing Process
- **Codes for Pedagogy**
 - Provide External Resources

- Provide Models
- Immerse Students in Models
- Reflective Writing Practice
- Invention Activities
- Teacher-Oriented Pedagogy
- In-Class Practice/Active Learning
- Clearly Communicate Expectations
- Collaborate with Campus Partners
- Provide Rationale for Assignment
- Close Engagement Between Students or Between Instructor and Student
- **Codes for Feedback**
 - In-Process Instructor Feedback
 - Peer Review
 - Sharing a Rubric
 - Feedback – General
 - Editing and Correction
 - Grading Papers
 - Inadequate Time/Means to Provide
- **Codes for Disciplinary Writing**
 - Citation Style
 - Disciplinary Difference
 - Disciplinary Knowledge
 - Disciplinary Language
 - Disciplinary Reading
 - Ways of Knowing and Doing
 - Disciplinary Genre or Form
 - Publication

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Notes

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² The OUW also oversees the writing center, supports faculty as writers, teaches writing courses for human resources, and helps graduate students in their development as writers and teachers of writing in the disciplines.

³ Traditionally, scholars have located threshold concepts in academic disciplines: Meyer and Land (2006) began with economics, and scholars across the globe have since examined threshold concepts in fields like engineering (Male & Baillie, 2011), agriculture (Bungsu, 2014), and physics (Harrison & Serbanescu, 2017). However, not all threshold concepts are strictly disciplinary; some may be shared by disciplines, especially kindred ones (see Adler-Kassner, Majewski, & Koshnick, 2012; Basgier, 2016; White, Olsen, & Schuman, 2016; Huq, Nichols, & Aryal, 2016). A shift from disciplines to communities of practice as articulated by Adler-Kassner, et al. (2016) allows researchers to avoid insular notions of disciplinarity and instead focus on communities who develop, contest, and use threshold concepts in dynamic fashion.

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