WAC Seminar Participants as Surrogate WAC Consultants: Disciplinary Faculty Developing and Deploying WAC Expertise

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For decades, writing across the curriculum (WAC) programs have aimed to open up conversations with disciplinary faculty across the curriculum about teaching with writing, and various researchers-including Anderson, Anson, Gonyea, and Payne (2015); Eodice, Geller, and Lerner (2017); Melzer (2014); and Walvoord, Hunt, Dowling, and McMahon (1997)-have studied the effects of those efforts and identified the characteristics of successful writing assignments in the disciplines.^{1,2} In this article, we present new research about what instructors learned from participating in a semester-long faculty development seminar and learning community that our WAC program has led for the past six years at a large public research university. This research study offers both a way to define WAC knowledge for disciplinary faculty and a mixed-methods approach for discerning that kind of knowledge in action. In its findings, this study offers a powerful form of program assessment, providing evidence that the investment WAC programs and disciplinary faculty make in creating faculty learning communities pays off. At the same time, this research reveals some limits of what disciplinary faculty learn, reinforcing the value of the deep, specialized knowledge that WAC specialists possess.

The seminar in our research study, "Expeditions in Learning: Exploring How Students Learn with WAC," enrolls ten to twelve faculty, post-docs, and graduate teaching assistants—intentionally from diverse disciplines and various stages in their teaching careers. In addition to discussions of foundational WAC readings, this seminar engages participants in "expeditions," or active learning experiences, which range from observing peer workshops in an intermediate, writing-intensive biology course to talking in-depth with faculty across campus who teach writing-intensive courses in the arts and humanities, sciences, and social sciences. In the spring of 2015, we collected three kinds of data to help us understand what instructors learned from that particular seminar, especially from its unusual combination of learning activities. Using a mixed-methods design, we gathered (a) surveys of participants explaining what they learned and evaluating various components of the seminar; (b) draft assignment sequences they developed for a course they will teach; and (c) videos of their small-group peer-review discussions about those draft assignments with other seminar participants.

To understand what instructors across the disciplines learned from participating in this ten-week WAC seminar, in this article we view our data through three analytical lenses: first, Anderson, Anson, Gonyea, and Paine's (2015, 2016) extensive empirical work identifying key features of WAC assignments that engage students; second, Anson's (2015) six threshold concepts for WAC from the much-discussed collection Naming What We Know (Adler-Kassner & Wardle, 2015), concepts that offer an ambitious measure of learning goals for WAC faculty development; and third, an analysis of the interaction occurring in these peer workshops-the ways that faculty communicate and take on what we call "consulting methods." Through that analysis, we show how the instructors in our study demonstrated-at the end of this ten-week WAC seminar-some impressive understanding of Anderson et al.'s assignment principles that engage students and an understanding of many of what Anson identifies as the threshold concepts of WAC. With that knowledge, disciplinary faculty participating in this study practiced within their peer discussions some interactions characteristic of WAC consultants. From our analysis, we argue that these immersive learning contexts and peer-to-peer learning engage disciplinary faculty in surrogate WAC consulting roles, deepening their understanding of key WAC concepts and their commitment to teaching with writing. In this article, we first offer an overview of our seminar's "expedition" model, review literature that situates our study in work on faculty learning and learning about WAC, and sketch the research design for our study. We then analyze our survey data and the small-group discussions of draft assignments through the three lenses. We close by complicating these findingsinterrogating what these surrogate consultants may overlook when a WAC specialist leaves the room.

The Expedition Model

This article focuses on one of the University of Wisconsin-Madison's longer-term WAC seminars, "Expeditions in Learning: Exploring How Students Learn with Writing Across the Curriculum." We offer this seminar every spring semester, and we're discussing one iteration of the seminar facilitated by one of the co-authors when she was in the graduate-student leadership role of assistant director of writing across the curriculum, in Spring 2015. As illustrated in the syllabus (see Appendix A), this seminar takes place over ten meetings with roughly ten participants. We deliberately want the group to be small to encourage discussion and community-building. We conduct this particular seminar in partnership with our university's Delta Program, a well-established and highly successful professional development program focused on teaching. The Delta Program is one of the founding members of the national Center for the Integration of Research, Teaching, and Learning (CIRTL) network. This program works especially with graduate students and faculty in the sciences to help them develop and prepare as teachers in their faculty careers. For that reason, our participants skewed toward graduate students and the sciences, but not exclusively. We did not offer financial incentives to participants. They participated for a variety of reasons-above all, because they wanted to learn more about teaching with writing. Some graduate student teaching assistants (TAs) joined our seminar to fulfill requirements for a teaching-focused certificate offered through the Delta Program (the seminar now offers one graduate credit). Many of the faculty and academic staff had consulted already with our WAC program or attended other WAC events, and they wanted to participate in a faculty learning community, exploring WAC more extensively and developing writing activities that aligned with teaching and learning goals in their courses.

Several of the topics featured on our syllabus look familiar from most WAC seminars, with readings from Bean (2011) and other favorites from WAC faculty development programming focused on understanding connections between writing and learning and on principles for designing effective writing assignments, giving feedback on student writing, exploring best practices for peer review and conferencing, supporting multilingual writers—and more. With such a small group of participants, much of what we do is discussion based. As a group, we also analyze successful assignments and series of assignments from courses across the curriculum at our own campus.

One of the most distinctive features of the seminar is what the Delta Program calls "expeditions"—active, immersive learning opportunities for participants. In our seminar, those expeditions offer participants chances to observe writing-intensive courses as they're being taught across the curriculum. They include four "mini field trips" to observe and experience WAC work firsthand:

- 1. Attending a TA meeting for a writing-intensive course or interviewing a professor or course coordinator for a writing-intensive course across the curriculum;
- 2. Observing in the Writing Center;
- 3. Watching some videotaped student writing conferences with instructors from writing-intensive courses;
- 4. Observing a class session focused on writing—a peer review session or writing workshop, for example.

Our seminar culminates with participants designing or revising and developing their own writing assignment or sequence of assignments for a course they are teaching or would like to teach in the future—to try to apply some of what we've talked about throughout the seminar. Participants workshop those assignments in groups of three and then integrate that feedback into a revised assignment that they submit to the seminar instructor in the final session. Throughout, we aim to expand instructors' perspectives about teaching with writing and to build their teaching repertoires. Our expedition model is intended to go beyond theory and advice in readings, examples, and discussions—to see and experience how writing instruction works on campus.

Faculty Learning and WAC Knowledge: A Brief Review of the Literature

Our research study builds upon important previous research about two key concepts. The first is faculty learning about teaching in general and about WAC in particular—what do faculty learn from participating in WAC faculty development programs? The second area of research that informs ours is what we call "WAC knowledge and

practice"—that is, what constitutes key WAC instructional concepts and WAC consulting methods?

Even though one-time workshops about teaching and learning have long been staples in faculty development programs, including WAC programs, the semester- or year-long faculty learning community (FLC) model has proven to lead to far more learning and more change in actual teaching practices (Desrochers, 2010). As Beach and Cox (2009) defined them, "FLCs consist of a cross-disciplinary community of 8-12 faculty (and, sometimes, professional staff and graduate students) engaged in an active, collaborative, yearlong curriculum focused on enhancing and assessing undergraduate learning with frequent activities that promote learning, development, SoTL, and community" (p. 9). From a dissemination study about FLCs across six researchintensive or -extensive universities, Beach and Cox offered persuasive evidence that as a result of participating in a FLC, faculty incorporated into their teaching, for example, more active learning activities, student-centered learning, discussion, cooperative or collaborative learning, and writing. The faculty participants in FLCs reported gains in their own attitudes about teaching and in their students' learning and improvement in their own attitudes about teaching. Our research study gives us a chance to assess the power of a faculty learning community with a more specific WAC focus.

In what is still one of the most important research studies about faculty learning within and knowledge about WAC specifically, Walvoord, Hunt, Dowling, and McMahon (1997) conducted a groundbreaking longitudinal study of what faculty learned from participating in WAC programs. Walvoord et al. asked an open-ended question about what "WAC's role [is] in teacher-directed, multi-faceted, career-long development" (p. 16) of teachers. Built on deep respect for the complex career paths of disciplinary faculty, this study reminded us of the many factors that influence how WAC affects faculty. Because of those complex factors (for example, competing priorities for time, shifting teaching assignments, family responsibilities), we should never expect all instructors who participate in WAC programming to implement WAC principles and methods quickly and according to a particular orthodoxy. Thaiss and Zawacki (2006), too, examined the perspectives of faculty and students across disciplines as they learned to write within their disciplines and as they learned to teach writing. Their insights deepened our understanding of WAC learning in multiple sites, including the observation that disciplinary faculty often use the same terms, but mean radically different things.

In order to analyze the video data to see which WAC concepts our research participants demonstrated that they understood, we turned to both research and theory from the past decade that offered some clear centers of gravity about what constitutes core WAC principles and knowledge. In his study of 2101 assignments from courses across the disciplines at one hundred colleges and universities, Melzer (2014), for example, identified core WAC knowledge when he chose to analyze three main features of disciplinary assignments: rhetorical situation, genre, and discourse community. For most assignments in his sample, Melzer found limited purposes and audiences and genres (most often research papers or exams). As we will describe, our

research participants had much more varied purposes and audiences and genres for the assignments they designed and discussed. Using data from the National Survey of Student Engagement, Anderson et al. (2015) identified three keys to designing WAC assignments that engage students: (1) "interactive writing processes," (2) "meaningmaking tasks," and (3) "clear writing expectations" (pp. 206-07). As we will describe, the instructors in our study consistently focused on all three of these elements in the assignments they designed and discussed. In an important new study, The Meaningful Writing Project, Eodice, Geller, and Lerner (2017) also focused on students' experiences with writing assignments, asking students to describe a meaningful writing project and to explain what made that project meaningful to them. From 707 survey responses from seniors at three different universities, interviews with 27 of those seniors, surveys from 160 faculty who taught the courses for which those students wrote the projects, and interviews with 60 of those faculty, Eodice, Geller, and Lerner found that "meaningful writing projects offer students opportunities for agency; for engagement with instructors, peers, and materials; and for learning that connects to previous experiences and passions and to future aspirations and identities" (p. 4). The fact that in both Anderson et al. and in Eodice et al. students, from such a large number of universities, confirmed these hallmarks of engaging WAC assignments in these studies gives us confidence that these are important elements of core WAC knowledge for faculty to learn.

For a more theoretical perspective on WAC knowledge, we draw from Anson's (2015) "Crossing Thresholds: What's to Know about Writing Across the Curriculum." Anson identified six threshold or foundational concepts for WAC knowledge and practice, "concepts critical for continued learning and participation in an area or within a community of practice" (Adler-Kassner & Wardle, 2015, p. 2). The metaphor of threshold concepts, which by definition are initially troublesome and then transformative for those entering a new discipline, offers a powerful lens to analyze the multiple ways that our research participants demonstrated their understanding and application of core WAC knowledge. Anson drew his six WAC threshold concepts from "both the scholarly and the instructional literature on WAC" (p. 204). Within that literature these ideas appear so often, Anson explained, that "they have risen to the level of threshold concepts" (p. 204). Characteristic of WAC threshold concepts is a "metaknowledge that brings together fundamental principles of discipline-based communication with principles of writing instruction and support" (p. 204). According to Anson, understanding these intersections of knowledge requires:

- 1. defining writing as a disciplinary activity;
- 2. reconceptualizing the social and rhetorical nature of writing;
- 3. distinguishing between writing to learn and writing to communicate;
- 4. establishing shared goals and responsibilities for improvement;
- 5. understanding the situated nature of writing and the problem of transfer; and
- 6. viewing student writing developmentally. (p. 205)

We found that these specific WAC threshold concepts, which we explain in detail in our analysis below, offer a persuasive distillation of key WAC knowledge and a compelling way to interpret the rich data in our study.

In addition to knowledge about writing and teaching with writing embodied in Anderson et al. (2015, 2016) and in Anson's (2015) WAC threshold concepts, WAC consultants amass and hone expertise in the methods of consulting with others about writing and teaching. A range of work supports WAC practitioners as they develop this expertise (e.g., Anson, 2002; Bazerman et al., 2005; McLeod, 1988; McLeod et al., 2001). Among this work, Jablonski's Academic Writing and Consulting in WAC: Methods and Models for Guiding Cross-Curricular Literacy Work (2006) focused on developing "a systematic body of knowledge on how writing specialists actually negotiate, sustain, and assess successful relationships in CCL [cross-curricular literacy] contexts" (p. 4). Jablonski argued that WAC experts' skills at working across disciplines go beyond being friendly and collaborative and constitute a broader "procedural knowledge" that brings together knowledge of writing and rhetoric with pedagogical contexts across disciplines. What defines and complicates such consulting work is what Sandra Tarabochia (2013, 2016) examined in a number of studies of the interaction that occurs between WAC consultants and disciplinary faculty. Tarabochia focused on the role that language, power, and gender plays in the collaboration between disciplinary faculty and WAC experts. In her extensive study of and theorizing about CCL consulting work, Reframing the Relational, Tarabochia (2017) offered a powerful argument for basing that work on a pedagogical ethic, one that involves reflexive practice, reciprocal learning, negotiated expertise, change, and play. Our study follows both Jablonski and Tarabochia, focusing on interdisciplinary collaboration and interaction between the disciplinary faculty themselves as they participated in our ten-week seminar.

Research Design

In designing this IRB-approved study, we aimed to deepen our understanding of what works in interdisciplinary WAC faculty development. Analyzing seminar participants' survey responses and their interaction as they workshopped drafts of assignments, we sought to answer the following interrelated questions:

- 1. Which WAC concepts from the seminar do instructors report that they have learned?
- 2. Which WAC concepts do they apply in their assignment designs and in their discussion of instructor-peers' assignments?
- 3. What characterizes instructors' interaction in the workshops as they offer each other advice about draft writing assignments?
- 4. What are some of the limits of instructors' WAC knowledge?

This research design raises the important question of whether or not disciplinary instructor-participants in fact already knew these concepts before the seminar. We did not conduct a pre- and post-test to assess learning, and admittedly participants

were likely to be motivated by a genuine interest in or even prior knowledge about teaching with writing that may have led them to enroll in this seminar in the first place. Although one of the participants was already familiar with John Bean's *Engaging Ideas*, almost all of the others were entirely new to these concepts. The instructor in this seminar clearly remembers from the weekly discussions that many of the principles participants reported learning were new to them. We also deliberately framed our first survey question to ask what participants believe they learned from the seminar and expeditions.

Participants

Table 1 provides basic demographic information about the ten participants in the seminar and research study. Participants came from a range of disciplines and phases of careers. Two of the participants were faculty (one in the Medical School and one in Astronomy), one a post-doc in biology, and one an instructional staff member in technology support services. Six were doctoral students (five of them teaching assistants—one was not yet teaching).

Table 1

Instructors Participating in This WAC Seminar and Research Study

Department	Teaching Position	Course Topic	Course Level	Course Size (# of Students)	Brief Description of Their Draft Writing Assignment
Comparative Literature	Graduate student	Literature & Theory	Advanced undergraduate	25	Exploratory paper: pose questions and explore answers by applying a theory to literary works; invites creative approaches and non- linear arguments
Biology	Post-doc	Science & Society	Intermediate undergraduate	20-25	Present both sides of a current scientific controversy and offer your opinion for an audience of scientists; then revised into a letter to the student newspaper
OBGYN, Medicine	Faculty	Disparities in health care	Introductory- level undergraduate	15	Critical thinking paper: evaluating factors that account for diverse opinions about what is fair and equal, fair and unequal

Department	Teaching Position	Course Topic	Course Level	Course Size (# of Students)	Brief Description of Their Draft Writing Assignment
Communication Arts	Graduate TA	Digital Design	Introductory- level undergraduate	20	Creating GIFs, memes, and posters using Photoshop—with critical reflection
Ethnobotany	Graduate TA	Ethnobotany	Advanced undergraduate	100	Scholarly literature review
Biology	Graduate TA	Environmental Toxicology	Graduate	15-20	Government report
Astronomy	Faculty	Intro to Astronomy	Introductory- level Undergraduate	30	Letter to students' home-town school board, urging that their high school incorporate the origin and evolution of the universe into the curriculum
Zoology	Graduate TA	Intro to Animal Development	Intermediate Undergraduate	115	Short reading responses and explanations of course concepts addressed to various audiences
Environmental Studies	Graduate TA	Environmental Studies Capstone	Advanced undergraduate	15	Critical reflections, addressed to next year's students
Academic Technology	Instructional staff	N/A—did not participate in workshop	N/A	N/A	N/A

Data Collection

We designed a mixed-methods study to triangulate toward understanding the knowledge that faculty develop from participating in a WAC seminar and the ways they use that knowledge (Johnson & Onwuegbuzie, 2004). To collect participants' self-reports of learning—including what they say they learned from, and thought of, the various learning activities in the seminar—we gave participants a brief survey (nine participants completed the survey) two weeks after completing the WAC seminar. We also videotaped the roughly one-hour peer workshops in which participants engaged in this workshopping: three groups of three participants each, resulting in approximately three hours of video for analysis. This video data offers us insight into not only self-reported learning (as in the surveys) or the perceived products of learning (the assignment drafts themselves), but also the in-practice ways that groups of crossdisciplinary faculty talk about their own teaching with writing and how they engage with other faculty talking about writing. That is, the video allows us to interrogate how faculty put WAC knowledge into practice within interaction.

Data Analysis

In this article, we analyze (a) participants' self-reports of learning provided by the surveys and (b) the interaction around teaching with writing and designing writing assignments featured in the workshop video data. To analyze both the survey and video data, we first followed the open coding practices of grounded theory (Charmaz, 2006). We coded for WAC knowledge and interaction, including codes such as those we feature in the survey analysis section below: incorporating talk, process, and instruction; expanding repertoire and awareness of the variety of ways to incorporate writing; importance of and methods for giving effective feedback; understanding connections between writing and learning goals; incorporating peer review; learning about and using WAC resources; and discussing the importance of individual conferences. This open coding of survey results allowed us to offer a picture of instructors' self-reported learning (see Table 2)—and to keep those perceptions of learning grounded closely to participants' own responses. After performing open coding of our three hours of video from the assignment design workshops, we decided to further analyze the workshopping video by using Andersen et al.'s (2015, 2016) three major findings and Anson's (2015) six WAC threshold concepts. We organize our analysis into these categories-which represent centers of gravity in current WAC research. These categories offered an effective way to analyze much, but not all, of our data. For instance, to account for how some of our data exceeded categories developed from the WAC literature, our open coding approach led us to add the sections "WAC Consulting Methods" and "Complicating Our Claims: Why We Need a WAC Expert in the Room."

It is important to note that in our analysis of the video data, we focused on what we both perceived to be interesting trends in learning or implementation of WAC principles. These trends and moments from the workshops are not intended to represent learning for all seminar participants. Instead, they are compelling examples that most clearly reveal particularly evocative moments when participants draw on knowledge of WAC principles or use effective consulting methods. In our analysis, we did not pursue inter-rater reliability, but shared our open coding, came to agreements about survey codes, and then collaboratively determined that we would analyze the video using Andersen et al.'s (2015, 2016) and Anson's (2015) categories.

Survey Results: Instructors' Self-Reports of WAC Learning

One approach we took to answering our first research question was a straightforward one: after the seminar was over, participants responded to a twelve-item online survey (see Appendix B). After gathering some demographic information—about faculty roles and academic discipline, for example—the survey zeroed in on our primary research question, asking directly what participants had learned, from the seminar, about teaching with writing and which of these concepts, practices, or theories they planned to implement in future teaching. Other questions asked participants to evaluate how effective the design and various elements of the seminar were in helping them learn—we asked about particular readings, about the learning activities in the seminar, including the expeditions, and about the interdisciplinary group of participants. Nine of the ten participants who participated in the seminar completed surveys, and their responses to open-ended questions totaled about eleven pages of single-spaced text.

Concepts and Methods Learned

Table 2 summarizes, following our coding system, the responses to the first two questions—"What are 3 or 4 important things you've learned about teaching with writing through this course?" and "What are 2 or 3 concepts, practices, or theories from this course that you plan to implement in your future teaching?"

Table 2

Responses from Participants about What They Had Learned from the Seminar and Expeditions, Combining Responses to Survey Qs 1 and 2

Торіся	Explanation and Sample Language from Respondents	# of responses across 2 questions
building process, interaction, and instruction into writing assignments	scaffolding assignments, outlining, incorporating rewrites, intervening early, giving formative feedback, having discussions "to further projects"; "teaching with writing should be teaching the process of writing" (14 responses) peer review (5 responses) conferences (4 responses)	23
expanding repertoire of assignments	awareness of the great variety of ways to incorporate writing, especially short, low-stakes writing ("Writing assignments don't have to be long"); also writing for pre-discussion, multimodal assignments, discipline- specific assignments like posters and medical pamphlets	11
giving effective, efficient feedback	differentiating between broad and local issues, managing time, avoiding counter-productive feedback, developing a rubric in advance	6
understanding connections between writing and learning goals and student engagement	"I first learned that writing is one of the most important course components leading to student engagement"	5

discovering and using WAC resources	for assignment design and WAC teaching (UW- Madison WAC faculty sourcebook, locally developed software for designing close-reading activities, Bean's <u>Engaging Ideas</u>)	4
considering cultural dimensions of writing	awareness of contrastive rhetoric, for example, from Robertson (2005), <u>Writing Across Borders</u>	2
developing rhetorical understanding	understanding the importance of audience and purpose in writing	2

As shown in Table 2, in what were by far their most frequent responses, participants emphasized that they had learned how important it is to integrate process, interaction, and instruction into writing assignments, reflecting how central those topics were to the readings and discussions in the seminar and how visible these practices were in the expeditions. This strong emphasis on an interactive writing process aligns powerfully with findings from Anderson et al. (2015), which we discuss below in the analysis of video data. Given that the survey questions asked participants to identify the most important things they had learned from the seminar and the top concepts, practices, and theories that they planned to implement in their teaching, these responses clearly signal participants' growing understanding of process and social models of writing. Although they mentioned it less than half as often as the most common category of responses (11 times compared to 23), in their next most frequent responses, participants explained that they had expanded their repertoire of possible kinds of writing they can assign, including low-stakes WTL, WAC, WID, and multimodal assignments. A smaller number of responses (6) focused on feedback: respondents reported that they not only learned methods for developing evaluation criteria and responding to and evaluating student writing effectively but also learned to re-conceptualize feedback as a way to help students learn. And in five responses, seminar participants focused on something more theoretical that they had learned from the seminar and expeditions-they had learned to see writing activities as a means to help students learn the content of a course. As one instructor explained, "Teaching writing doesn't have to come at the expense of teaching material"; another asserted, "[W]riting greatly improves student engagement." In their lists, a few participants also reported that they had discovered a wealth of local and published resources for learning more about WAC and had come to appreciate cultural and rhetorical dimensions of writing. Taken as a whole, these survey responses create a vivid image of seminar participants' taking on some of the knowledge and the language of WAC consultants, which is especially impressive given that they are responding in their own words to open-ended questions, not choosing from a menu of options. In fact, many of their comments and explanations sound strikingly like the discourse of WAC professionals.

Valuing the WAC Expeditions

To understand how the WAC expeditions may have contributed to learning in the seminar, we asked participants which of the four expeditions-(a) interviewing a course coordinator or instructor in a writing-intensive course across the curriculum, (b) observing a writing center session, (c) watching video of one-to-one conferences of writing-intensive course instructors across the curriculum meeting with studentwriters, or (d) observing a writing instructional session (e.g., peer-review workshop) within a writing-intensive course across the curriculum-was most beneficial and why. Respondents identified the interview with a writing-intensive course instructor as the most beneficial (5 responses), then the observation of writing instruction within a writing-intensive course (3 responses), and then the observation of a writing center tutorial (2 responses). One respondent said that all four were beneficial and "showed me new things." Their explanations of their rankings reveal genuine enthusiasm for what they learned from the expeditions and a variety of reasons for their rankings, illuminating just how varied learning goals can be for participants in a WAC seminar. One participant who identified observing a writing-intensive biology course session as the most beneficial explained, "Seeing Biocore [a writing-intensive honors biology sequence of three courses] in session was great. They seem to have a welloiled machine of a class that actually teaches writing in an extremely integrated way." Another participant noted how crucial it is to have a discussion with an experienced course instructor in addition to visiting a class: "I liked having a discussion [with the course instructors] rather than just observing. The others were valuable, but without having read the assignment that was being discussed it was difficult to have the context to fully understand what was going on." A respondent who chose the observation of a writing center tutorial as the most beneficial explained why: "I really found the writing center session observation to be helpful. I plan to do a lot of one-on-one conferencing with students in the future, and it provided a really useful model (e.g., having the client read their writing out loud, and identify what they did well and what they could have done better)."

Valuing the Mixed Group of WAC Co-learners

When we asked how the mix and range of participants (graduate students, instructional staff, postdocs, and faculty from a variety of disciplines) influenced learning in the seminar, the respondents universally and enthusiastically endorsed having such a variety of participants in the WAC seminar. Most focused on the benefits of having participants with a wide range of teaching experience (from none to decades of experience), while a few focused on the benefits of cross-disciplinary discussion. As one respondent explained, "Multiple perspectives and a diversity of experience are key to enriching the types of discussions that we had. I didn't always agree with every view shared, but I appreciated them all." Another identified a valuable difference from discussions among instructors within a department: "It [the WAC seminar] disrupted the group-think that occurs in departments (i.e., this is how you teach this class—that's how we've always done it). The people in our course didn't have those assumptions, so it really opened up discussion." Several respondents explained how the mix of seminar participants mirrored the diversity of student perspectives within the courses they teach and how, within seminar discussions, instructors could be surrogates for varied student perspectives: ". . . [Having people from a variety of disciplines was useful because] we got to hear a wider variety of assignment planning ideas and think about how they would work in different types of classes (STEM people have to teach to a broad audience sometimes, like in a freshman seminar, and humanities people may have to discuss STEM-related topics)." "This [the varied levels and disciplines represented by seminar participants] was great. I teach students who tend to come from a variety of disciplines (and therefore a variety of writing styles/expectations), so having natural scientists and other non-humanists provided an opportunity to more deeply understand how different disciplines—and different minds—approach the writing task."

The Video Data: WAC Concepts and Methods in Interaction

The survey responses helped us answer our first research question in clear and convincing ways-the seminar participants reported that they had learned key WAC principles and methods. But too often in our experience survey responses are disappointingly thin. As researchers and as WAC professionals, we wanted to probe beyond brief written responses, to explore the depth and the limits of disciplinary instructors' knowledge of WAC. We wanted to explore how this developing WAC knowledge manifests itself through interaction among disciplinary instructors. We wondered how deeply our research participants had taken up these concepts, how they applied that knowledge in planning their courses and assignments, and how they used that knowledge as they interacted with each other in discussions about WAC assignments. To answer those additional research questions, we wanted to have a window into the unstructured talk of disciplinary instructors discussing their draft assignments and assignment sequences with seminar colleagues. To analyze this video data, we first used research findings from Anderson et al. (2015) to see which of their WAC constructs were in evidence in the workshop conversations. We then further analyzed the content of the video data through the lens of Anson's (2015) threshold concepts of WAC. We focused on the interactions among disciplinary instructors using concepts about procedural WAC knowledge from Jablonski (2006), and we close by analyzing some of the limitations of the WAC knowledge that disciplinary instructors displayed in these workshop conversations.

Evidence of WAC Knowledge: NSSE Findings

Recent WAC research based on student-engagement surveys offers an important lens for viewing what our WAC seminar participants learned from their seminar. From their extensive study of 72,000 students' responses to the writing questions in the National Survey of Student Engagement, Anderson, Anson, Gonyea, and Paine (2015, 2016) identified three keys—what they call "constructs"—for designing effective writing activities across the curriculum. Assignments engage undergraduate students and enhance student learning when they involve (a) "interactive writing processes" (Anderson, Anson, Gonyea, & Paine, 2015, p. 206); (b) "meaning-making tasks, such as ones that ask students to analyze, synthesize, apply or otherwise do more than just report" (p. 207); and (c) "clear writing expectations" (p. 207). To enhance student learning and development, Anderson, Anson, Gonyea, and Paine (2016) urge WAC/ WID specialists to emphasize these three empirically supported strategies—over other familiar WAC principles—in their work with disciplinary faculty.

Anyone analyzing the workshop discussions of our WAC seminar participants could not miss how central all three of these constructs were within the discussions. The draft assignments themselves sounded, in fact, much like Anderson et al's (2015) "meaning-making tasks," and the instructors talked frequently about the challenging learning goals they had for their assignments, using the language of analysis, synthesis, application, argument, and critical thinking. One of the draft assignments from an introductory astronomy course, for example, called for students to persuade a skeptical public school board to incorporate into the high-school curriculum some instruction about the big bang, dark matter, and black holes. As they offered advice to each other about ways to revise draft assignments and as instructors planned their revisions, the seminar participants frequently talked about incorporating into their assignments more interactive writing processes, such as in-class workshops about preliminary ideas, conferences with the instructor, or peer reviews. For an assignment in a toxicology course, workshop participants suggested that the instructor incorporate a complex two-stage peer review with different kinds of readers who represent different audiences for the paper assignment. No doubt echoing readings from the seminar and discussions, seminar participants frequently used an umbrella term-"scaffolding"—as a shorthand to refer to the stages, instruction, and interaction they were building into their writing activities.

The third construct—clear writing expectations (Anderson et al., 2015)—also figured prominently in their workshop discussions: the participants consistently asked questions about what instructors were looking for in an assignment, and they pushed each other to clarify instructions in assignments. In one workshop group, for example, a medical professor asked a biology instructor whose draft assignments required students to revise a six-page scientific paper into a two-page letter, "In going from the 6-page down to the letter, can you enunciate what you're looking for?" In another workshop group, as they discussed a series of reflection assignments for a senior capstone course in environmental studies, a colleague pushed for more precision in the assignments, suggesting a much clearer and more focused central question. In response to such questions and suggestions from colleagues, instructors regularly articulated plans for revising their assignments to clarify their expectations for students, to add examples to illustrate what they were asking for, to add additional questions to promote the kind of analysis they wanted, and to make their rubrics more specific in order to convey their expectations more explicitly. Given the variety of topics and the fluid movement among them within such long conversations, it's difficult to say for sure that they learned to prioritize those constructs above all other kinds of WAC knowledge and expertise, but those three constructs were cardinal topics throughout the workshop discussions.

Evidence of WAC Knowledge: WAC Threshold Concepts

"Writing in a discipline reflects the ways that knowledge is produced there" (Anson, 2015, p. 205). Of Anson's six WAC threshold concepts, "writing as a disciplinary activity" is one of the most salient within the workshop discussions. We found no shortage of examples of this disciplinary awareness. For example, when a postdoc in biology was designing an assignment for intermediate biology students to translate scientific concepts to public audiences, she explicitly identified a goal to bridge the gap between sciences and the public—highlighting her awareness of disciplines' insider language. Similarly, a medical school professor workshopping assignments with a humanities graduate student new to teaching referred to the writing center tutorial she observed in Expedition #2 for our seminar to make sense of disciplinary differences in writing assignments. The professor observed a philosophy student discussing a "non-traditional format" that she thought might be a model for the humanities graduate student instructor's assignment development.

While these are important moments of disciplinary awareness, we observed that workshop participants did not always fully or explicitly grapple with what disciplinary differences show up in writing—or consider how we may support students writing in our respective disciplines. As WAC experts know, making disciplinary differences in discourse apparent to disciplinary faculty is one of our primary challenges. Anson reminded us that this process is so challenging because much of "faculty members' extensive discourse knowledge resides at a level of behavioral consciousness" (p. 206). That is, "many faculty in academic disciplines don't routinely reflect on what they do to perform effectively: they 'know how' but don't always 'know that' (Ryle, 1949)" (as cited in Anson, 2015, p. 206)—that is, they don't explicitly know that writing relies on disciplinary conventions and epistemologies. One problem with disciplinary writing knowledge and conventions remaining tacit, of course, is the unchecked assumption of "good writing" being constant across disciplines and contexts.

The following excerpt features steps toward understanding this foundational threshold concept, but also some limits of that understanding. This discussion occurred between three teaching assistant instructors across disciplines (A in communication arts; B in ethnobotany; C in toxicology):

B: Something that I struggle with . . . inevitably students submit these "paper-parade" papers where it's just chronological introducing papers they've reviewed. So, teaching them to synthesize this stuff, I don't know how to effectively do that.

A: Cool. Right. And synthesis is kind of the core part of the assignment because it's, it's mostly lit review, or?

B: Yeah.

A: Okay, okay.

B: Yeah, but it's like they're completely oblivious to that even if we say it. Because it's just, maybe they don't know what it looks like to do.

A: Yeah.

C: Would it help to have them submit some kind of, like, thesis statement that forces them into some sort of synthesis instead of just, like, "Here's everything we know about this topic"?

B: Mmm ... hmmm ... "the data dump" [reference to Bean]

C: Yeah

A: I'll add, for me as an undergrad, I mean, I was in the social sciences. So this might be different, but it was helpful just to get, just to hear, number one that I wasn't supposed to just list it and number two, just to kind of like say like I have all of these articles and then to group them, so that each paragraph was like a group—so just looking for commonalities in your articles, like these four talk about this, but these four plus one mentioned in this group talk about this.

B: Oh yeah. I like that. [writes down notes]

A: Because then maybe it kind of gets you to the point where you're ready to make an argument. You start to see patterns emerging.

C: That might be a good like alternative to the outline.

A: Oh yeah! Totally.

C: Or, like, a version of an outline that's different than just, like, introduction, first point about whatever. Because I know that Bean was not really a big fan of starting out with an outline.

B: Oh yeah.

C: And I know that as a student, I don't like being told I have to start with an outline because I have to know what the paper's going to look like before I write it. So, if it was like starting out with grouping your different resources somehow...

B: That's a good idea [nodding, writing down notes]

C:... like concept mapping. Instead of an a, b, c outline.

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When Instructor B noted that "maybe they just don't know what it looks like" to synthesize published articles in a review like the one he assigns, he importantly challenged the notion that writing moves are transparent and equivalent across disciplines and contexts. From there, the three instructors worked together to strategize how to make synthesis attainable for student writers: that is, they emphasized how to support students "knowing how" and "knowing that." Much more than a transparent skill, synthesis, Instructor A clarified, is a "core part"—or a learning goal of the genre of a literature review that requires scaffolded support. Instructor C suggested guiding students toward synthesis by having them submit "some kind of like thesis statement," moving them from what Instructor B earlier referred to as John Bean's (2011) "all about" or "data dump" versions of papers (p. 27). Instructor A drew on her experience as a student herself, receiving explicit instruction in how to write literature reviews by grouping and making connections between various sources.

Beyond making writing moves like synthesis understandable to students, Instructor A encouraged the group to consider how synthesis is specific to disciplines, noting her own experience as an undergraduate "in the social sciences"—which, she reasoned, "might be different" than Instructor B's context of ethnobotany. Instructor A's suggestion of disciplinary differences is not one the group takes up explicitly: they do not discuss how their relative disciplines define "synthesis" or the genre of the literature review. Still, the three instructors are clearly talking about the kind of rhetorical work that needs to be done in effective writing and communication in the sciences and social sciences.

"Writing is a social and rhetorical activity" (Anson, 2015, p. 206). As Anson explains, WAC faculty as professionals within a discipline "know tacitly that when they write, they are usually participating in a socially rich activity system designed to convey and negotiate meaning" (pp. 206-207). But because of the imperatives for assessment within higher education, Anson argues, these same faculty often strip rhetorical context out of the assignments they give students. In response, "WAC leaders take great pains to help faculty to imagine more authentic kinds of writing situations and audiences" (p. 205) for their students' assignments. Within the draft assignments and the workshop discussions in our study, authentic writing situations and sophisticated discussions of audiences abounded. Instructors in this WAC seminar chose particular situations in order to focus communication tasks and to give students opportunities to use their developing expertise about course content to communicate what they know with non-expert audiences, as recommended in the Boyer Commission report on Reinventing Undergraduate Education (1998). They also created specific rhetorical situations to motivate students to care about their writing, which was a prominent concern in all of the workshop discussions, by making assignments more relevant to students' future professional work. Even if these instructors used the term rhetoric only occasionally and never used the term social to characterize their understanding of writing, it's clear that they were in the process of passing through this particular threshold WAC concept.

Most compelling about these workshop discussions of rhetorical situations and audiences were the varied and complex concepts of audience within their WAC assignments. In the case of the draft writing assignments for a graduate course in toxicology, the instructor explained that she has created a professional rhetorical situation and audience to motivate students who are not toxicology majors to care about the assignment and the course content. In the workshop conversation about this draft assignment, a colleague zeroed in on audience, asking "Can you talk [with us] about who the audience is?"-a question that led to the recommendation, mentioned above, about building in two stages of peer review for two different audiences. For an environmental studies capstone course built around a community-service project, the professor designed a series of writing-to-learn reflection assignments. With those assignments, whose audience typically would be the student-writer and the course professor, the instructor wanted to persuade students to be honestly critical about their often less-than-ideal experiences with community projects. The instructor felt that students understandably were reluctant to express their disappointments with projects and with the course. One suggestion from the workshop group was to define the audience for this reflection piece as students who will take the course the following year, so that students would be offering advice to a familiar audience in the form of an advice letter, and their role would be defined as helping future peers rather than criticizing the course. For a communications course in digital design, the instructor wanted students to design a poster about the course itself; the poster would be used to recruit future students into the course and into a new minor. In the WAC seminar workshop discussion of this draft assignment, disciplinary instructors had a nuanced discussion about the rhetorical situation and multiple audiences for these posters. For an intermediate-level course on animal biology, an instructor designed a 100-word low-stakes assignment asking students to explain a biological concept to a friend. As a different workshop group discussed an assignment for an introductory astronomy course, mentioned above-a letter to the school board advocating for including key astronomy topics in the school curriculum-the workshop participants offered impressive insights into the complexities of having students write for dual audiences of the imagined school board and of the course professor who was checking students' understanding of course concepts. But, as we explain below, their discussion fell short of demonstrating a sophisticated understanding of what Anson and Dannels (2004) call "conditional rhetorical space."

"Writing can be a tool for learning or communicating" (Anson, 2015, p. 207). Anson's third WAC threshold concept addresses the well-known, "somewhat oversimplified but instructive distinction between writing to learn and learning to write" (p. 207) and the ways that both may be productively integrated into instruction. For disciplinary faculty new to WAC tenets, WTL, in particular, offers a new and exciting tool for deepening students' learning. Low-stakes writing assignments ask students to explore questions, synthesize ideas, respond to readings and ideas, refine their thinking, or otherwise grapple with course content. As such, Anson notes that WTL helps reinforce how writing need not "intrud[e] on coverage" of course content, "but becom[es] a way to ensure it" (p. 209).

While instructors in our workshop did not use the specific language or labels of "writing to learn" or "writing to communicate," their assignments demonstrated that they had internalized both strategies for teaching with writing. One instructor in toxicology, for example, was drafting a WTC assignment for graduate students to learn to write reports in a genre required for their future professional lives. Of course, many other assignments discussed by seminar participants combined elements of WTL and WTC, too. For instance, as mentioned above, a communication arts TA was planning to have students in a digital media course compose posters but also to do reflective writing on the process of creating those posters, a process that included learning to use Photoshop and other tools. In particular, though, one group demonstrated a strong commitment to WTL-a biology TA, for example, developed an assignment in which undergraduate students must write a series of short assignments explaining course concepts to lay audiences-parents, friends, etc. An environmental studies TA designed a series of reflection essays for students involved in a service course. A medical school professor likewise asked students to reflect in writing assignments about health inequity.

"Improvement of writing is a shared responsibility" (Anson, 2015, p. 209). When it comes to the curricular and pedagogical projects of WAC, no threshold concept seems more foundational than this: "[t]he entire WAC movement is founded on a belief that teachers of all subjects share responsibility for supporting the development of advanced student literacies" (p. 209). As all WAC specialists know, it's easy for faculty to resist accepting this responsibility—for a variety of reasons. But it is abundantly clear that the participants in our study have passed through this threshold concept and embraced this shared responsibility. Although in the workshop discussions no one said, "I know that it's my responsibility as a botanist to teach my students to think and write within my discipline," they in effect said so—over and over—through their actions.

The instructors signaled their responsibility by planning specific ways to revise and improve their assignments. The astronomy professor crystallized this responsibility in a striking comment: "Having graded these [papers in response to her assignment] recently, I now see every single thing I did wrong [in the design of my assignment]." The instructors displayed a strong commitment to clarifying their assignments, to detailed planning to incorporate interaction and scaffolding and discussions of model papers with future students, and to building in peer review. When the medical school professor, for example, explained that the undergraduate students in her course on health disparities did not understand the difference between *inequality* and *inequities*, she clearly saw it as her responsibility to teach this, so she designed a writing assignment and planned discussions to help students understand and to think critically about these concepts. Then she planned a reflection paper after the formal assignment to help students consolidate their learning. Similarly, in the discussion quoted above, when an instructor from an ethnobotany course wanted his students to learn how to

synthesize published literature—that is to find commonalities and differences across published literature instead of writing what he called a "paper parade"—his workshop colleagues all eagerly brainstormed ways to design an assignment that would involve grouping research studies and concept mapping, looking for commonalities, and students submitting a draft thesis statement that "synthesizes," "that makes a point." No shirking of responsibility for advanced literacy instruction here. When our research participants did choose to limit responsibility, they were responding to the realities of instructors' workloads. While some of the courses under discussion were small (10–15 students), another, a biology course, was growing from 60–100 students with no increase in instructional staff. So understandably—and appropriately—these instructors acknowledged the limits of what any individual instructor can do and collaborated to look for efficiencies as they limited how many drafts and how many conferences they would require in such situations.

"Writing in all contexts involves situated learning, challenging the 'transfer' of ability" (Anson, 2015, p. 211). A corollary of almost all of the other WAC threshold concepts identified by Anson, this threshold concept—that because writing involves situated learning, student-writers often struggle to transfer what they have learned about writing in one context to a new one—has deep roots in theories and research about discourse communities and about the challenges that writers face when they transition into new writing situations or discourse communities, ones in which they are, in Joseph Williams' (1991) terms, not yet "socialized." In recent research, this concept has become known as *the problem of transfer*—the difficulty that both student and expert writers have when they write in new disciplines, in new genres, at new levels, for unfamiliar audiences. If WAC faculty recognize "that no amount of prior knowledge from a generalized composition course will help students know how to cope with new genres...," faculty consequently "understand the need to support students' writing experiences in every course, especially courses that involve unfamiliar genres and methods of discourse production" (Anson, p. 211).

Within their workshop groups, the instructors in our study demonstrated a limited understanding of this WAC threshold concept. They consistently recognized that many student writers struggle to do the intellectual tasks at the heart of various assignments and, as discussed above, they planned instruction to help students learn how to do those tasks. With the assignment for a comparative-literature course—a deliberately very open-ended assignment, one in which the instructor invited students to write a non-linear or creative kind of paper—the workshop group members peppered the instructor with clarifying questions ("When you say, 'Discuss two texts,' will students know what you mean? Might you want to be more precise about what you mean?" "What's your experience with students and non-traditional formats?" "Have you thought about scaffolding?"), questions that stem no doubt from their perception that student writers are likely to struggle to figure out this genre and the expectations for such an open-ended assignment. Despite this helpful push for clarification and support in the assignment, the questions and recommendations do not seem to be motivated by a deeper understanding of the challenges students will have with transfer from previous writing experience and instruction. The seminar participants never use the language of transfer, nor do they refer to students' previous writing instruction. As is typical of most instructors, these focus on their courses and assignments as autonomous. This finding is probably not surprising, given the content of the seminar. Although the seminar focused quite a bit of attention on viewing writers developmentally (with, for example, repeated discussions about which kinds of assignments were appropriate for different levels; see the next section of our analysis), the seminar did not focus specifically on the problem of transfer across courses and disciplines.

However, one exception—one fascinating moment when this threshold concept burst into the open—occurred when a medical-school professor was discussing her students' disappointing performance on a recent mid-term essay exam in a first-year seminar on health disparities. In this discussion, she explicitly traced her students' problems with her writing assignment to their misapplying or overgeneralizing advice they had received from an instructor in a prior writing course. In this excerpt, Instructor E is from the Medical School, and Instructor D is from biology.

E: So, I said to my students, if you have any insight into why this [the exam writing] is particularly difficult, please tell me. A gal came right up to me, and she said, "I had a writing instructor who told me that when you write, you should pick one topic and discuss it really well." Well, you're supposed to, in an exam, be showing me that you know *everything*

D: [nodding] Uh, hmm.

E: that I taught you. That was common sense to her, I think—it seemed a little bizarre to me—but I bet you a whole bunch of the students were on the same page. And then, as I thought about it, you know, nobody necessarily says at the outset that there are going to be very different kinds of writing.

D: Uh, hmm

E: There is the narrative. There is the rhetorical. There is [*sic*] variations for the public—who's your audience, who's your audience?

D: Right.

E: And, and I see this when we're recruiting [for the medical school], and when students write for professional school and for graduate school, oftentimes they consider themselves their audience. And they're especially pretty bad, you know, and it goes to what do I want you to say, what do I want you to know about me, you know, and then it comes to personality. . . . So, lots of students want to write a story. They use a middle-school model: has a beginning, middle, and end, and a theme. And nobody told 'em that that's not how you write professionally.

It's remarkable to see this professor illustrate her point with two very different examples at different stages of students' undergraduate studies, to hear her insightful observation that "nobody necessarily says [to students] at the outset that there are going to be very different kinds of writing," and to hear her subsequently coin the phrase "writing across a [student's undergraduate] career" to describe the experience students have as they write in varied disciplines and genres. There seems to be no doubt that at least one WAC seminar participant had internalized the WAC threshold concept of the problem of negative writing transfer.

"Writing is highly developmental" (Anson, 2015, p. 212). Anson's last WAC threshold concept emphasizes writing as developed over time, always building on "prior experience" (p. 212). As Anson summarizes, "learning to write effectively requires slow, steady development over many years of (diverse) practice" and "it continues to develop across the span of people's lives" (p. 212). WAC experts enact this well-known principle by making writing development visible to the faculty with whom we work: to shift "attention away from the writing itself and toward the development of the writer's knowledge, ability, and expertise at a particular learning or career stage" (p. 212). This threshold concept also reminds WAC experts and disciplinary faculty of students' diverse literacy backgrounds. Multilingual writers, students with disabilities, students with more or less access to literacy preparation all enrich and influence—in important ways—our pedagogical decisions.

Seminar participants demonstrated that they had internalized this threshold concept at a number of levels. As we have illustrated above, throughout their workshop discussions instructors were especially attentive to building in scaffolding and process-oriented tasks to support students in the incremental, challenging tasks of writing. Instructors frequently commented on their own-and other instructors'-work to "scaffold" assignment tasks. "I like how you sequence this, not just with due-dates, but with the logical progression/sequence for research" a botany TA responded to a TA designing a graduate-level toxicology assignment. Shortly after, he added that the assignment was especially well-suited for motivating students at a particular level. In the same workshop discussion, a communication arts TA told the botany TA that she "loves" the "timeline, and all of the opportunities for feedback" built into his assignment, which she saw as "steps reinforcing it [writing] as a process." Later the botany TA commented that his course has, to this point, not taught "writing as a process enough." Certainly, an instructor's desire to support students' process demonstrates an understanding of writing as developmental. Likewise, the same workshop group noted how students have a "huge variation in their preparation," as the botany TA put it, making it difficult to know how to pitch one's instruction: "to the lowest common denominator? The middle?" A particularly interesting discussion of "levels" was initiated by the medical school professor who, in the excerpt quoted above, observed that in addition to variations in writing across the curriculum, students will need different kinds of preparation and will be asked to work in a variety of genres across their professional lives.

WAC Consulting Methods

In addition to demonstrating that they knew and could deploy threshold concepts of WAC, seminar participants also employed productive consulting methods within their workshop conversations, methods that sound exactly like WAC professionals. Though these kinds of interpersonal approaches may seem characteristic of and necessary for any collegial discussion, we observed that participants consistently asked probing questions to understand their colleagues' complex instructional contexts, focused on learning goals, listened actively and critically, reinforced their peers' ideas, offered suggestions and cautions and encouragement, and demonstrated genuine interest in each other's teaching challenges. Virtually every workshop discussion began with inquiry into the pedagogical context for and specifics of colleagues' assignments, including information about class size, level of students, and more. Seminar participants went on to ask pointed questions to help colleagues refine assignment design, learning goals, and evaluation criteria. In a discussion of a comparative literature graduate student's (who had not yet taught) assignment design, a biology postdoc and veteran teacher and a medical school professor offered generative guiding questions: "Have you thought about scaffolding? How long would you give them to work on this?" the biology postdoc asked. "What's your experience with students and nontraditional formats?" the medical school professor asked, and later, "Are you going to have any peer evaluation?"

Alongside constructive questions, seminar participants also frequently offered concrete, specific praise—reinforcing what they appreciated about one another's pedagogy and simultaneously reinforcing many of the threshold concepts of WAC. Before leading in to the questions about scaffolding mentioned above, the biology postdoc first noted how much she appreciated the comparative literature graduate student's creative assignment design: "I like how you allow a lot of creativity, open... allow non-traditional...really allows students to feel ownership." "I love your built-in revision"; "I like how you sequence this, not just with due-dates, but with the logical progression, sequence for research," a biology instructor said to a toxicology instructor. "Progression is awesome; rhetorical situation is awesome. I dig," a communication arts instructor's organized and creative approach to writing assignments so much that he asked for a copy of her syllabus for his own future reference, even though he was in a significantly different discipline.

In their interactions with disciplinary faculty, WAC consultants do other important work: they often empathize with colleagues and acknowledge heavy teaching workloads and other teaching challenges. That empathetic work is central to the relationship-building required of WAC consults. The WAC consultant, however, must move from acknowledgement of challenges to problem-solving. We noted one particular interaction between workshop participants that compellingly did that complex work. Just as WAC experts need to do, workshop participants acknowledged challenges and then helped fellow instructors productively move on to address those challenges. The following excerpt features this generative balance between commiseration and problem-solving necessary in teaching and in WAC consultation work.

In addition to developing helpful strategies to encourage students' learning, this group of three graduate-student instructors (A in communication arts, B in ethnobotany, C in toxicology) strove to keep teaching workloads manageable:

A: Ooh yeah, yeah! And then maybe turning in at that stage in the project, turning in the thesis or the argument would be useful. So, just a one sentence, that's easy for you to grade then.

C: Yeah-that's easy to grade, one sentence!

A: Right

B: All of that, less grading!

A: Right?! If higher education has taught me nothing else . . . [laughing]

B: Right, just getting by with the bare minimum. That's the lesson that's taught to these students. These are all seniors, so they know how to skate by . . .

C: Well, yeah, they know how to skate by, but they also know, hopefully, how to read literature, kind of, no, not really . . . ?

B: Eh, unfortunately, there's such a huge range. That's what we've noticed is that some of them don't know what this looks like, and some of them really do, so I don't know if we should teach to the lowest common denominator, the middle, or?

C: Do you let them choose their groups?

B: Ah, yes. So that might make sense to mix it up based on experience.

C: I don't know how you would measure that ahead of time, but?

A: Maybe fill out a questionnaire? What other ethnobotany, botany classes have you taken? Are you a science major or a humanities major?

B: Well yeah, that's legit because half of them are . . .

C: And then that could be helpful to pair them with different experiences. And I know you were in some of the Biocore observations [Expedition 1 & 4], they do that—choose the groups, and I think that works well for them. I mean it's smaller classes, but . . .

B: And since ethnobotany is innately kind of a crossover discipline, there are going to be anthro students and bio students. And so, it would be cool to put them together and they can kind of create a new fusion, anew each time.

A: Totally. They can teach each other in the process!

Right after Instructor C mentions concept-mapping as one teaching strategy, Instructor A points back to Instructor C's initial suggestion—to "force" students to make some kind of synthesis, by turning in a one-sentence thesis or argument. Not only will that one sentence assignment move students toward synthesis, it will be relatively easy to grade.

It is clear throughout this excerpt that commiseration-about workload, about scarcity of resources, about perceived difficulty with students' preparation, etc.-was cathartic and generative for these teaching assistants. But what kept this commiseration from devolving into "student-bashing" or aimless complaining was the instructors' quick turn to problem-solving. For instance, when Instructor B suggested that seniors "know how to skate by," Instructor C immediately countered that they have also learned "how to read." Instructor B identified another problem: the range of student preparation. In turn, Instructor C asked how groups were assigned, drawing on her experience from an Expedition in the seminar to suggest that Instructor B could help form groups. Instructor A added that questionnaires may help group students by disciplines and experience with scientific writing. In turn, Instructor E re-saw that disciplinary diversity as a "cool" "fusion." And Instructor A noted how students with these diverse disciplinary experiences may come to "teach each other in the process." This reframing moved student problems into possibilities. WAC principles, here, were not part of the wider problems experienced by instructors-scarcity of resources, unreasonable workload-but simply best practices for teaching and learning. They were part of the solution and an asset in managing scarce resources and heavy workloads.

Complicating Our Claims: Why We Need a WAC Expert in the Room

Although the evidence we discuss above compellingly demonstrates how disciplinary faculty-especially the ones more experienced with WAC and with teaching in general-take on WAC knowledge and practice some of the pedagogical ethic that Tarabochia (2017) identifies in the methods of cross-curricular literacy professionals, we want to complicate any easy conclusions about the role of WAC consultants or the knowledge and actions of disciplinary faculty. In fact, observing disciplinary faculty take on WAC knowledge and consulting roles has further reinforced for us how unique and valuable the skill-sets of WAC specialists really are. In this way, we agree with Jablonski's (2006) conclusion that "in addition to their 'content' knowledge of rhetorical theory and composition pedagogy," WAC experts "possess a certain procedural knowledge of application" (p. 131)-that is, they know how to apply that knowledge to cross-disciplinary pedagogical needs. And like Jablonski, we assert that WAC specialists sometimes undersell their expertise when they assume that "nonwriting specialists can apply these pedagogical guides, or our more specialized published scholarship, without much difficulty" (p. 6). We found in our data that disciplinary faculty did have some noticeable limits in applying WAC knowledge and consulting practices. Below, we discuss three areas in which a WAC consultant's absence has clear consequences.

Erasing disciplinary differences. Even while seminar participants take on consulting roles and demonstrate their uptake of powerful WAC knowledge, they also often fail to appreciate fully some of the disciplinary differences in discourse. For instance, as Thaiss and Zawacki (2006) found, faculty often appeared to be using a shared vocabulary when they were discussing student writing but were, in fact, erasing disciplinary differences through ostensibly shared vocabulary. In one of this seminar's workshop discussions, illustrated in the excerpt analyzed above, when the three instructors spoke of "synthesis," what exactly did they mean? While the communication arts instructor acknowledged that her background was in the social sciences, the other two instructors in the physical and life sciences did not discuss their varied definitions of and experience with "synthesis." Not explicitly or deeply engaging with disciplinary differences no doubt also limits these instructors' abilities to consider how their students' previous learning about synthesis might transfer into doing these new assignments and might transfer beyond their particular courses and assignments. Concern about transfer is exactly the kind of knowledge that WAC consultant experts would likely bring to this conversation.

Similarly, within the workshop discussions among a new graduate student in comparative literature (who had not yet taught) and two experienced instructors (a postdoc in biology and a medical school professor), we observed how a clear disconnect occurred when they talked about a literary analysis assignment so central in the humanities. The instructors from the sciences seemed to understand "analysis" differently, and none of the instructors acknowledged any of these differences. These two veteran science instructors asked the humanities graduate student a series of questions about her assignment, warning her against risks of vagueness in directions. But their examples always referred to labs and science, never demonstrating any understanding of genres of literary analysis and rhetorical moves made in that field or fully appreciating this instructor's intentional choice to have students be creative in their interpretations of assignments and approaches to papers.

Not fully grappling with complexities of key WAC principles. Just as they sometimes conflated writing terms or overlooked disciplinary differences, seminar participants also sometimes failed to fully grapple with the complexities of WAC principles or threshold concepts. In his discussion of threshold concepts, Anson (2015) warned that reductive uptake can reduce subtle understandings of writing and learning to catchphrases. We observed participants talking around an important issue or WAC principle, but not quite pinning down or demonstrating full understanding of its meaning. For instance, instructors were often enamored of creating a rhetorical situation for their assignments—of invoking a "real" audience. However, pressing on that goal, we find a number of gaps and questions. When the astronomy professor's assignment asked students to write a letter to a school board, for example, many details of that rhetorical situation remained underdeveloped, potentially confusing students. How well will students, for instance, understand the genre of a professional letter? What are the characteristics of school board audiences?

This example highlights how disciplinary faculty take up a WAC principle (Anson's [2015] threshold concept "Writing is a Social and Rhetorical Activity," for example) but then—without the support of a WAC specialist—fail to fully grapple with the complexities and implications of that approach to teaching writing. As Anson and Dannels (2004) observe, disciplinary faculty often end up creating "hybrid genres" and "conditional rhetorical space"—the complex and confusing results of assignments that mix "external or professional audiences and rhetorical situations" with "the more conventional-assessment-driven" assumptions of classroom contexts (Anson, 2015, p. 207). The result, for students, is a need to "navigate complex sets of expectations" as they understand their audience as both the teacher and an "imagined or sometimes real external audience" (207). Within their discussions, the disciplinary faculty in our study rarely considered some of these complexities.

Limiting feedback to an incremental level. Looking at these workshop discussions at a macro level, we observed that most of these discussions and recommendations were what we would call incremental: they focused on tweaks to existing assignment plans, and participants typically offered small suggestions. All of that feedback was genuinely helpful-and possibly all that was necessary. But missing in these discussions was what a WAC specialist might have offered in some cases-the intentional consideration of entirely different kinds of writing activities and assignments for achieving learning goals. In a recent WAC consultation, one of the authors of this article, for example, after lengthy discussion, encouraged a biomedical engineering professor to consider shifting from a major formal WID or WTC assignment due at the end of a course (a course in which there had previously been no writing assignments at all) to lower-stakes, informal, brief WTL writing assignments, done several times during the semester, for familiar audiences (such as fellow students who misunderstood an equation) to check and deepen understanding of key course concepts, which was a primary teaching-and-learning concern of the professor. This kind of consultant work no doubt requires the breadth of knowledge that WAC professionals have and the deep repertoire of the kinds of assignments and approaches in the process of consulting work that experienced WAC professionals have developed. Certainly, it also involves power relationships in some of the ways that Tarabochia discusses (2013, 2016). In a peer review, who has the authority to raise a big question that might suggest wholesale revisions or very different approaches? Unlike instructor peers, experienced WAC professionals may bring to their conversations with disciplinary faculty an authority as well as the experience to suggest more broad-based changes to assignments than we saw the disciplinary faculty offering in these assignment workshop discussions.

Implications and Closing Thoughts

Taken as a whole, our research provides evidence for how disciplinary faculty may take on WAC knowledge and interaction—acting as surrogate WAC consultants. In

addition, we hope that this research study serves as a persuasive form of assessment for this model of WAC faculty development-a sustained, semester-long, interdisciplinary, mixed graduate-student and faculty cohort model of a faculty learning community focused on WAC, with excursions to observe and interact with WAC classes and instructors and to observe writing center consultations. As all WAC professionals know, creating and sustaining this kind of learning community requires substantial time both for the WAC program professionals who design and lead it and for the faculty and graduate students who participate, so it's important to demonstrate that this model of faculty development leads participants to understand and apply central WAC knowledge and principles. In our analysis of workshopping discussions of draft assignments, we found extensive evidence of in-depth conversations that crossed disciplines reasonably well, of collaborative problem-solving, of active listening, and of the learning that occurs in faculty learning communities (Beach & Cox, 2009; Desrochers, 2010). In their survey responses and in their conversations about the assignments they designed, instructors focused on links between writing and learning, learning goals for assignments, specific audiences and rhetorical situations for writing, disciplinary differences, multiple genres both formal and informal, student learning and developmental perspectives, interactive processes and scaffolding, ways to anticipate common problems, and approaches to increase student motivation. It's also important to recognize, as we have outlined, some of the limits of the knowledge that disciplinary faculty demonstrated.

We also hope that our theoretical approach—defining core WAC knowledge and principles by using the latest research about WAC assignments (Anderson, Anson, Gonyea, & Paine, 2015, 2016; Geller, Eodice, & Lerner, 2017; Melzer, 2014) and Anson's (2015) articulation of threshold concepts of WAC—avoids some of the risks of imposing a "WAC orthodoxy" that Walvoord et al. (1997) warned about and offers new directions for research about faculty learning in WAC. And we hope that our mixed methods—especially the video analysis of disciplinary faculty workshopping their draft assignments to augment survey results—offers valuable approaches for future research about faculty learning about WAC. In this case, the evidence of WAC learning that we see in the workshop discussions about draft assignments not only confirms the reliability of self-reports of learning in the surveys but also allows us to deepen our analysis beyond what surveys alone provide.

Like all research, this study raises intriguing new questions, ones that we are eager to explore ourselves and to have other WAC researchers pursue. Some of those questions involve more fine-grained analysis of the disciplinary faculty workshop conversations about their draft assignments: How often, for example, do the conversations move toward more complex understandings of WAC concepts? When that happens, what leads to sustained conversation and deeper understanding? What would happen to these workshop conversations about draft assignments if a WAC specialist participated along with the instructors? And most of our questions for future research require more longitudinal or follow-up case studies, some focusing on application and others on retention of WAC concepts: What, if anything, did instructors do with the suggestions that arose in their workshop conversations? What happens when instructors encounter inevitable roadblocks in their use of writing activities in their courses? To what extent do instructors retain this WAC knowledge beyond the seminar? Does some knowledge persist more than other types? In what ways do instructors use their WAC knowledge to influence colleagues within their disciplines as surrogate WAC consultants?

But before we try to address some of those questions, as WAC program directors *and* as WAC researchers we found it heartening to discover in our study persuasive evidence that disciplinary faculty engaged in our hands-on, intensive WAC seminar do indeed understand and apply many WAC threshold concepts. In framing these workshop participants as surrogate WAC consultants, we hope to underscore one of the central underpinnings of WAC work: WAC demands a blend of knowledge between, as Anson (2015) explains, the "fundamental principles of disciplinebased communication" *combined with* "principles of writing instruction and support" (p. 204). Appreciating this ongoing accomplishment requires that we understand how complicated WAC work and partnerships really are, that "[t]hese two kinds of knowledge clearly overlap, *but neither is sufficient alone* to achieve hoped-for communication outcomes for student learning" ([emphasis added] p. 204)]. We offer our expedition-model WAC faculty development seminar and our research about it as a contribution to that ongoing work.

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Notes

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Appendix A

Syllabus for Expeditions in Learning: Exploring How Students Learn with Writing Across the Curriculum, Writing Across the Curriculum Program, The University of Wisconsin-Madison, Spring 2015.

Instructor: Elisabeth Miller, The University of Wisconsin-Madison; Assistant Director of the UW-Madison Program in Writing Across the Curriculum Time: Tuesdays, 1:30 – 3:00 pm
Location: The Writing Center Commons, 6171 Helen C. White Hall

Overview

Research has shown that when students write more in a course, they learn course content more effectively. At UW-Madison, many faculty and instructors across the disciplines have taken up this approach by making writing central to their courses. This "Expeditions in Learning" Delta course allows participants to consider the opportunities and challenges of this Writing Across the Curriculum pedagogy. Through expeditions (or mini field trips), as well as readings and discussions, participants will deepen their theoretical and practical foundations for helping students learn with writing in a range disciplines.

Course Structure

This course follows an expeditionary learning model, grounded in adult learning theory, where participants can develop new questions about teaching and learning and create methods for exploring answers to those questions. The course fosters a community of peers that will work together during meetings throughout the semester. During the weeks we don't meet, you will head out on expeditions to observe teaching and learning. You may engage in expeditions alone or partner with others in the class. In the meetings that follow expeditions, we'll discuss what you observed, learned, or questioned at your expeditions. Our goal is to learn from each other's experiences and develop new answers and ideas for our future teaching.

Expeditions will allow participants to see first-hand the range of ways students learn to write and learn with writing at UW-Madison. Readings will focus on how writing is linked to critical thinking and how writing assignments can help students learn subject matter and teach them discipline-specific ways of writing. Course discussions will connect expeditions and readings to teaching practices, so you can learn from others about their diverse experiences and increase your knowledge of using writing to promote student learning in your discipline.

Course Texts and Materials

- Articles and book chapters (I'll provide copies)
- Online videos (I'll provide links)

Expeditions

As an Expeditions in Learning participant, you'll have "programmatic permission" to explore specific aspects of teaching on this campus. The following are expeditions that you'll be asked to attend or complete during the weeks that we don't have meetings. I really hope you find them interesting, inspiring, and thought-provoking! **Please be sure to plan your expeditions well in advance and be sure to talk to me about making arrangements.** Our class discussions will help you distill and synthesize what you observe and learn from these expeditions, so that you can connect them to your teaching, learn from colleagues about their diverse observations, and explore faculty and undergraduate experiences.

1. Exploration of teaching with writing/teaching writing. Your choice of:

- attending a TA meeting for a Communication-B course
- interviewing a Communication-B course coordinator or faculty member about their writing instruction philosophy and methods

Please talk with me about your choice of course or instructor.

- 2. A visit to the Writing Center. Your choice of observing:
 - a Writing Center session in the main location
 - a Writing Center session in a satellite location
 - a Writing Center workshop for undergraduates

Please talk with me about your preference, and be sure to plan for time to talk with the instructor you observe.

- **3.** Observation of one-one-one conferences between faculty and undergraduate writers. Videos of conferences will be streamed online, and I'll provide you with the links.
- 4. Undergraduate class session focused on writing instruction with a content course. Options include observing:
 - peer review
 - a writing lesson
 - a writing activity
 - a group writing session

Please talk with me about your choice of course and class session.

Schedule of Seminar Events (which is subject to change)

January 27:	Introductions, overview of main concepts and of expeditions
	Before next meeting: Read Chapters 1 and 2 of Engaging Ideas
February 3:	Discussion of reading, discussion and planning of expeditions
·	Before next meeting: Read Chapters 3 and 6 of Engaging Ideas
February 10:	Discussion of reading, Delta presentation

	Before next week: Confirm plans for first expedition
February 17:	Expedition #1 (no meeting)
	Before next meeting: Write down observations, reactions, and ques-
	tions about expedition
February 24:	Discussion of expedition #1
	Before next week: Read "Responding to Student Writing" and watch <i>Beyond the Red Ink</i> , a short video found at http://pages.mail.bfwpub. com/hackerhandbooks/authors/videos/
March 3:	Discussion of reading and video, introduction to expedition #2 & #3
	Before next week: Confirm plans for second expedition
March 10:	Expedition # 2 (no meeting)
	Before March 31: Write down observations, reactions, and questions about expedition
March 17: <i>dents</i>	Expedition #3 (no meeting): Videos of one-on-one conferences with stu-
	Before March 31: Write down observations, reactions, and ques-
	tions about conferencing videos
March 24:	Discussion of expeditions #2 and #3
March 31:	Spring Break
	Before next week: Read Chapter 15 of Engaging Ideas
April 7:	Discussion of reading
-	Before next week: Confirm plans for fourth expedition
April 14:	Catch-up day: discussion/activity TBA
April 21:	Expedition #4 (no meeting)
	Before next meeting: Write down observations, reactions, and questions about expedition
April 28:	Workshopping Assignment Drafts
-	Before next meeting: Write down observations, reactions, and ques-
	tions about expedition and course overall
May 5:	Discussion of expedition #4 & Course Wrap-Up
-	Turn in your revised assignment from last week's workshop

Appendix B: Survey of WAC Seminar Research Participants

[Opening demographic questions omitted]

Q1. What are three or four important things you've learned about teaching with writing through this course?

Q2. What are two or three concepts, practices, or theories from this course that you plan to implement in your future teaching?

Q3. Of our four expeditions (Expedition 1—interviewing a course coordinator or instructor; Expedition 2—observing a writing center session; Expedition 3—watching video of one-to-one conferences with course instructors; Expedition 4—observing a writing session in a course) which one(s) did you find most beneficial? Why?

Q4. In our course, we had a mix of graduate students, instructional staff, postdocs, and faculty from a variety of disciplines. In what ways do you think this range of participants influenced our learning?

Q5. In our next-to-last meeting, you had a chance to share a draft of an assignment. What advice did you receive that was most helpful?

Q6. What is your academic role [position on campus]?

Q7. Which [academic] division are you from [arts and humanities; STEM; social sciences]?

Q8. Of the various components of the course (in-class discussions of readings, viewing videos related to multilingual writers and other topics, going on expeditions, looking at sample assignments or other materials, workshopping assignment drafts, etc.), which components of the course were most useful to you? What made them useful?

Q9. Of the readings that we did, which did you find most beneficial? Why?

Q10. Which components of the course were least useful to you? Why? What would you suggest for future iterations of this course?

Q11. As you know, our course was designed to be a sustained learning experience with 10 meetings over the semester. What's your take on the importance of this sustained learning experience? [1=not important at all; 5=very important]

Q12. Is there anything else you'd like us to know? Feel free to offer more suggestions or reactions or comments.