CHAPTER 3.

ASSESSING FACULTY MEMBERS' THRESHOLD CONCEPTS FOR THE TEACHING OF WRITING: THE CHALLENGES OF SURVEY VALIDITY AND THE PROMISE OF NARRATIVE METHODS

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FACULTY WRITING CONCEPTIONS

Writing across the curriculum (WAC) programs support writing and writing instruction in a broad range of communicative contexts in higher education with faculty from a variety of disciplines forming the core constituency participating in WAC efforts. Therefore, it is no surprise that WAC research often examines faculty perceptions on writing and how faculty teach writing in the disciplines. These studies have taken many forms, including investigations of faculty's differing expectations for school-based and professional assignments (Herrington, 1985), their expectations for good writing (Walvoord & McCarthy, 1990), their ideas about the qualities of academic writing (Thaiss & Zawacki, 2006), the kinds of assignments they require students to complete (Melzer, 2014), and aspects of those assignments they believe impact students' learning (Eodice et al., 2016).

Recently, WAC scholars have also begun examining faculty's conceptions of writing pedagogy (e.g., Flash, 2016; Moon et al., 2018). WAC pedagogies are often counterintuitive for faculty in the disciplines, yet they can be transformative when understood and applied in a systematic, integrated fashion. For example, the notion that writing instruction ought to be a shared enterprise across disciplines might seem unreasonable to faculty who believe students should learn everything they need to know about writing in first-year composition (or in high school). However, when they come to see that even expert writers can improve with practice and feedback, they might be more apt to change the ways they think about, and thus teach, writing in the disciplines. One innovative

DOI: https://doi.org/10.37514/PER-B.2023.1947.2.03

way of researching the counterintuitive and transformational potential of WAC pedagogy is through *threshold concepts* (Meyer & Land, 2005; Timmermans & Meyer, 2017), which are complex ideas that enable learners to enter and work within communities of practice to develop interdisciplinary skills in higher education (Brew, 2012).

Threshold Concepts Framework

Threshold concepts hold particular promise as a framework for investigating conceptual dimensions of writing pedagogy across disciplinary contexts. The framework holds that certain difficult concepts—often referred to as "troublesome knowledge" (Adler-Kassner et al., 2012, Meyer et al., 2008)—can act as irreversible gateways to an academic discipline's ways of knowing, doing, and communicating (Baillie et al., 2013). Much of the recent work in writing studies related to the framework focuses on how threshold concepts may help students transfer knowledge about writing to new, unfamiliar communicative contexts across the curriculum (e.g., Adler-Kassner, et al., 2016; Melzer, 2014). However, students are not the only ones who wrestle with threshold concepts.

According to Chris Anson (2015), faculty also encounter threshold concepts germane to WAC, which encourages them "to think in principled ways about incorporating writing in their courses, regardless of discipline" (p. 213). Indeed, faculty frequently turn to WAC programs after they assign writing in their courses, and the results do not go as planned, particularly when assignments do more to confuse students than improve their learning (Melzer, 2014; Walvoord & McCarthy, 1990). Through formal and informal WAC channels, including consultations, workshops, learning communities, and lunch discussions, faculty encounter principled thinking about topics such as effective assignment design, writing-to-learn, scaffolding assignments in a course, and integrating writing across a department or program curriculum. Because of the diversity of backgrounds in those seeking assistance in teaching disciplinary writing, WAC professionals who deliver such programs often find themselves wondering how to best gauge faculty participants' threshold crossings (Basgier & Simpson, 2019; Basgier & Simpson, 2020).

In previous studies, Christopher Basgier and Amber Simpson (2019; 2020) showed how faculty narratives could reveal different stages of understanding about threshold concepts for the teaching of writing in the disciplines. Basgier and Simpson (2019) created a "travel" metaphor as a heuristic for analyzing faculty members' narratives, including *roadblocks* (when they could not see a way through a teaching difficulty), *detours* (when they tried an isolated change with limited success), and *journeys* (when they told detailed stories of multifaceted

solutions that manifested conceptual changes). Using this heuristic, the researchers (2020) then identified three threshold concepts for the teaching of writing in the disciplines: (a) effective writing pedagogy involves iterative, multifaceted changes; (b) students' development as writers can be supported through scaffolded interventions; and (c) genres can be taught as actions, not (just) as forms. Given these findings, Basgier wondered whether the threshold concepts suggested by WAC research could be converted into a survey instrument that would assess any changes in faculty thinking after they participated in WAC programs. Thus, the two of us, Basgier and Cordie, began a collaborative effort to develop such an inventory and research its efficacy.

Overview of Study

In this chapter, we report on our efforts to develop a quantitative inventory of approaches to teaching with writing that measured six threshold concepts: 1) writing-to-learn, 2) writing in the disciplines, 3) writing as rhetorical, 4) writing as developmental, 5) writing as a process, and 6) writing as a general skill. We begin by describing our process for creating the survey based on research in WAC and on qualitative interviews with faculty members about their pedagogical techniques and commitments. We then explain the need for survey validation and describe our use of an index of item-objective congruence (IIOC) for validation. Based on the results, we show how the survey items we developed were not strongly associated with any single concept, which suggests that in practice, the six concepts proposed are especially interconnected and difficult to isolate. We conclude by reflecting on the implications of our study for the identification and assessment of threshold concepts research more broadly. Finally, we suggest that narrative methods show future promise for WAC's work in threshold concepts.

RESEARCH METHODOLOGY

We designed the Inventory of Approaches to Teaching Writing (IATW) to measure disciplinary faculty's underlying conceptions for the teaching of writing in the disciplines in terms of our WAC program's broad definition of writing, which includes any forms of composed communication, such as text, image, and sound. We began by defining six concepts for teaching writing in the disciplines derived from the scholarly literature in WAC (e.g., Anson, 2015; Bazerman, 1988; Berkenkotter & Huckin, 1995; Carroll, 2002; Emig, 1977; Herrington, 1981; McCarthy, 1987; Russell, 2002; Russell & Yañez, 2003; Thaiss & Zawacki, 2006) as well as Basgier and Simpson's (2019, 2020) previous research on threshold concepts. The first concept—writing as a general skill—is not a

threshold concept, but one many WAC specialists might consider "pre-threshold" with its focus on "writing [as] an autonomous skill, generalizable to all activity systems" (Russell, 1995, p. 57). The other five concepts are ones we believed faculty were most likely to encounter in our local WAC program or that were implied in Basgier and Simpson's (2019, 2020) research. Like Anson (2015), we recognized that other threshold concepts for WAC likely exist, yet felt the foundation for the survey was ready for testing with the six main concepts discussed next.

Concepts Measurement

The six concepts we used for the IATW included the following terms and definitions:

Writing as a General Skill (WGS). Teaching writing from a general skill perspective emphasizes rules and common expectations for writing. Faculty who hold this perspective typically focus on grammar and other surface issues when they comment on student writing— although some faculty may not feel any obligation to comment on student writing at all. Often, they believe that students ought to have learned how to write before enrolling in a specific course. They may be more interested in the content of the writing (and whether such content is correct) than in the effectiveness of the writing (e.g., for different audiences or purposes). Others may feel that students are inherently good or bad writers, which means writing instruction is not their responsibility. Broadly, this perspective treats writing as a foundational skill that transfers easily to new situations.

Writing Development (WDEV). Teaching writing from a developmental perspective involves supporting students' growth as writers. Faculty with a commitment to WDEV generally wish to help students improve as writers by teaching them the features of effective writing or the expectations for writing in a particular course. Often, faculty see themselves preparing students to write effectively in future communicative situations and may wish to help students develop identities as writers.

Writing in the Disciplines (WID). Teaching writing from a disciplinary perspective involves preparing students to write in an academic discipline, profession, or field. Faculty with a commitment to WID often ask students to use writing as a means of practicing the ways of thinking that characterize a discipline, profession, or field. To that end, they may use writing to help students answer questions, explore hypotheses, analyze data or texts, or intervene in debates with disciplinary relevance. Others with a commitment to writing in the discipline may emphasize the correct and appropriate use of technical vocabulary ("jargon"), as well as the genres or forms common in a particular field. Finally, some

faculty members may use writing to help students connect their personal lives to the work of a discipline, profession, or field.

Writing-to-Learn (WTL). Teaching writing from a writing-to-learn perspective involves using writing to help students understand, and engage with, the content of a course. Faculty with a commitment to WTL may assign low-stakes writing tasks that help students engage with readings, practice applying course concepts in hypothetical situations, or wrestle with complexity. Some may be especially committed to the potential for writing to promote students' thinking.

Writing as a Process (WAP). Teaching writing as a process involves helping students manage the range of activities involved in the writing process, particularly for complex projects. Faculty with a commitment to WAP may help students learn to work with sources and/or data iteratively. They might also scaffold assignments into manageable tasks with increasing complexity. Often, these faculty build in opportunities for peer and instructor feedback, and they may guide students to use that feedback to revise effectively.

Writing as Rhetorical (WAR). Teaching writing from a rhetorical perspective involves explicit attention to audience, purpose, genre, and context. Often, faculty who teach WAR develop assignments with realistic rhetorical contexts in mind, and may even engage students in authentic writing situations for real-world audiences. Others who are committed to WAR pedagogy may ask students to analyze rhetorical situations and develop plans for creating effective pieces of communication for those situations.

Survey Development

After defining and revising these concepts for teaching writing in the disciplines, we created survey items that would potentially measure faculty members' relative commitment to each one. To do so, we adapted a framework from Daniel D. Pratt (1998), who designed the Teaching Perspectives Inventory (TPI). TPI items measured five broad concepts for teaching in general, and were grouped according to actions, intentions, and beliefs. According to Pratt (1998), actions are "the routines and techniques we use to engage people in content" (p. 17); intentions are "an expression of what a person is trying to accomplish and, usually, an indication of role and responsibility in pursuit of that" (p. 18); and beliefs "represent underlying values" that drive actions and intentions (p. 21). Using this framework, we created items representing actions, beliefs, and intentions that were associated with each of the six concepts defined above. Like the TPI, we created survey items by adapting specific statements about classes and assignments discussed in earlier research (Basgier & Simpson, 2019; Basgier & Simpson, 2020) into more general statements that we believed applied across

contexts and disciplines.

The aim of the IATW was to score faculty members' responses using a five-point Likert scale on each item, with the survey designed to provide a numerical representation of faculty members' relative commitment to each conception for the teaching of writing in the disciplines. We planned to include sub-scores for actions, intentions, and beliefs, which could be particularly useful if any one of those elements was misaligned with the others. For example, we anticipated some faculty members expressing a belief that students should learn to communicate with multiple audiences for multiple purposes (a feature of writing as rhetorical), but spend more time correcting surface features of students' writing (a feature of writing as a general skill). Ideally, if such discrepancies were assessed through the survey before a WAC faculty development experience, faculty members' conceptions would be better aligned afterward through discussion or a learning activity. Additionally, if faculty expressed no commitment to, say, writing-to-learn beforehand, they might intend to do so afterward, particularly after an interval (a semester or a year) post workshop.

Survey Validity

J. David Creswell and John W. Creswell (2017) noted that validating a new research instrument, even one derived from the literature and synthesis of other instruments, raises concerns about the instrument's utility. Arlene Fink (2003) defined validity as whether the instrument actually measures the proposed constructs. In the area of assessment research, there are several types of measurement validity recognized, with the most relevant including *face*, *content*, *criterion-related*, and *construct* validity approaches. Creswell and Creswell (2017) further noted that *content* validity is the most commonly addressed validation approach in the research literature and refers to actual content measurement in the instrument. Thus, we selected *content* validity for confirmation of the six threshold concepts and development of the IATW to establish the survey measurement.

Content Validity

Jake London et al. (2017) have noted that content validity is essential for developing accurate and consistent psychometric measures to progress theory. The concept of content validity, though, is complex and as noted by Stephen Sireci (1998) involves evaluating content representation in a survey instrument. A critical component of survey development is providing evidence that the actual items created do effectively measure the content or construct that they are defined to measure—in our case, the six concepts for the teaching of writing defined above.

Index of Item Congruence

After developing the IATW, we used the Index of Item-Objective Congruence (IIOC) to establish content validity. Ronna Turner and Laurie Carlson (2003) have emphasized that IIOC uses a panel of experts (a group of people who are familiar with the subject the instrument purports to measure) that judge the adequacy of the information and appropriateness of the items in measuring one or more constructs. Richard Rovinelli and Ronald Hambleton (1976) first developed the IIOC's procedures and test statistics for assessing the degree to which an item measures the objective or construct that it intends to measure. Turner and Carlson (2003) further developed the index to measure multi-dimensional items, including types of interaction in distance learning courses (Keeler, 2006; Lambie et al., 2017; Murphy et al., 2013). We decided to use the IIOC to validate the IATW and the threshold concepts, hoping to ensure recognition by other WAC scholars, along with transferability to WAC contexts beyond our own teaching and learning environments.

DATA COLLECTION AND ANALYSIS

After IRB approval, we emailed the IIOC survey on threshold concepts with a link to the Qualtrics® survey to 43 individuals from a range of institution types across the United States. We had identified these individuals as content experts in writing studies with backgrounds in WAC/WID administration and research. The survey included demographic data collection, such as institution and number of years working in WAC, a list of definitions for the six concepts included above, and instructions on how to complete the IIOC for this study. As recommended by Turner and Carlson (2003), experts were not told what constructs the individual items were intended to measure, so they could remain independent evaluators. Each expert was asked to evaluate each item by giving the rating of 1 (for clearly measuring the content), -1 (clearly not measuring), or 0 (measure of the content area is not clear). For each item, the goal was a 70 percent agreement rate for the target construct. As there is no statistical test for assessing significance of the measure using IIOC, Rovinelli and Hambleton (1976) recommended a procedure for setting the criterion levels. Following Turner and Carlson's (2003) recommendation, a level of 0.70 for the index was chosen as the minimum requirement because it indicates that a majority of experts agreed that the item clearly measured the content.

Eighteen (18) experts responded to the IIOC survey, or nearly a 42 percent response rate, an acceptable rate for online surveys (Fulton, 2018). The demographic data on the experts represented a diverse range of faculty ranks: two assistant professors, four associate professors, six professors, two clinical

professors, one visiting professor, and three "others" responded. The respondents had worked in WAC/WID on average 19 years, with a minimum of five years and a maximum of 41 years. The broad range of ranks and years of experience implied a quality sample for the survey testing, as suggested by Fink (2003).

After reading the definitions of the six concepts, 15 respondents agreed or strongly agreed that they could distinguish among the definitions of the threshold concepts. One (1) respondent neither agreed nor disagreed, and two (2) disagreed. These differences of opinion did not appear to differ according to rank or years of experience in the field. Our analysis of respondents' evaluations indicated that only one of the 36 items met the minimum level of acceptance (0.70). Most items were below the significance level, had more than one item above the significance level, or had negative values. We then conducted a second analysis using Turner and Carlson's (2003) IIOC multi-dimensional method on the ten survey items that had more than one average value above 0.70 for multiple constructs, including WDEV, WTL, WAR, and WAP. The analysis produced similar results, with only one WGS item attaining above a 0.70 value.

DISCUSSION

Although it is possible that the survey items could be again revised and rewritten to measure each concept more independently, we believe the results of both validation attempts pointed to a generalizable result: We may be able to develop reasonably distinct definitions of different threshold concepts for the teaching of writing in the disciplines, but faculty's actual actions, intentions, and beliefs are markedly interconnected and aligned on the concepts. Overall, the experts were unable to isolate separate threshold constructs using the IIOC.

Narrative Comments

Participants' qualitative comments from the survey extended our interpretation of these data. First, several respondents noted the interconnected nature of these constructs. As one of the WAC experts wrote at the end of the IIOC:

> These 6 conceptions / labels for writing instruction are not discrete / separate, at least for me and for the faculty I work with, teachers I prepare, etc. WID is rhetorical and includes attention to process and has elements of WTL; and in all writing instruction, I see / want to see attention to the development of writer.

Similarly, another WAC expert wrote:

> These categories seem to me to be aspects that are present in nearly any writing classroom. I have difficulty separating them in many cases. A good writing teacher would make use of toolkits from any of these categories. I guess one might find some instructors who tend more in one direction. But the longer one teaches the more one draws from all of these approaches.

Scope of Threshold Concepts

Expert respondents also suggested that these six constructs might not be fully representative of the full range of conceptions for the teaching of writing in the disciplines. When asked whether they could think of other concepts, for example, individual WAC experts noted "writing for critical consciousness" and "'civic' writing" as other possibilities. Several responses pointed to the link between writing and what might be viewed as personal growth or well-being. For instance, one respondent mentioned "writing as an aid in maintaining and improving psychological health" as a potential concept. Taken together, these suggestions indicate that WAC experts who took the IIOC did not believe the survey items represented the full range of beliefs, intentions, and actions that might characterize faculty members' conceptions for teaching writing in the disciplines. If these conceptions and related items were added to the IATW, they may still be difficult to distinguish from other conceptions. For example, civic writing would require significant attention to rhetoric and writing pedagogies that involve psychological well-being, or the development of identity could intersect with a developmental understanding of writing acquisition in the discipline.

CONCLUSION AND IMPLICATIONS

As WAC continues to evolve, the field will need to develop innovative methods for researching and assessing the efforts of our faculty development endeavors. Our study illustrates the challenges and opportunities that arise when innovating methodologies, especially those that translate across qualitative and quantitative inquiries. Based on the results from this research, the main implications from our analyses were 1) the lack of statistical indications or qualitative suggestions, and 2) that the survey items were not associated with a single threshold concept. Because the six conceptions we used in the IATW appear to have overlapping beliefs, intentions, and actions, they cannot be easily separated using this kind of quantitative instrument. Additionally, even if we were to build a more comprehensive inventory with additional conceptions, such as multimodal writing or writing for introspection, the same lack of distinction between items would

likely persist. Linda Adler-Kassner and Elizabeth Wardle (2019) maintain that threshold concepts "are contingent, contextual, and threshold-for-now," so they cannot be used as a "checklist" or "reduce[d] . . . to easily accessible, ready-to-digest ideas" (p. 9). The results of our validation study provide empirical backing for their claim.

The results also suggest a potential refinement of the theory undergirding the threshold concepts framework as an explanation for transformative learning experiences in communities of practice (Cordie & Adelino, 2020). One of the many suggested features of threshold concepts is their "integrative" nature. According to Ray Land et al. (2016):

> [Threshold] concepts seem to have an integrating function in the sense of bringing what formerly appeared to be disparate elements into a coherent relationship, much as the addition of a particular jigsaw piece may bring other pieces together to provide a new and meaningful perspective. (p. xii)

Unlike a puzzle, however, a given element of writing pedagogy can figure differently from different threshold perspectives. For example, our results indicate that scaffolded writing experiences could fit into multiple perspectives on the teaching of writing in the disciplines. Similarly, interdisciplinary scholarship often makes use of diverse theories that might constitute threshold concepts in particular disciplines. Both of these scenarios suggest that certain pieces (usually called "elements" or "phenomena" in the threshold concepts framework) can fit multiple puzzles (disciplinary or interdisciplinary fields).

Finally, our results have methodological implications. Although there is no methodological consensus about the best ways of identifying and studying threshold concepts, qualitative methods appear to be the most constructive going forward. Sarah Barradell (2013) identified "semi-structured interviews, analysis of exam responses, and observations of classroom behavior" as common methods in threshold concepts research (p. 25), and Kathleen Quinlan et al. (2013) added "surveys, laboratory observations, grade distributions, and course feedback" to the list (p. 586). Although quantitative methods certainly figure in these lists, Barradell (2013) concluded "that conversation amongst teaching and learning stakeholders" characteristic of "transactional curriculum inquiry" are necessary for the identification of threshold concepts (p. 275). Quinlan et al. (2013) argued in favor of "tailored methodologies" used to research each of the different characteristics of threshold concepts. We suggest a similar approach for tracking changes in faculty thinking after faculty development experiences. Narratives (Basgier & Simpson, 2019) and reflective practice (Flash, 2016) hold particular promise as tools for engaging faculty in the kinds of thinking about

their knowledge that can engender changed conceptions. Storytelling and reflection give faculty members the opportunity to retain ownership of the ways they think about and talk about the teaching of writing in the disciplines. Narratives can also be leveraged as assessment mechanisms. When focused on learning and implementation of specific pedagogies germane to WAC, narrative and reflection can help WAC administrators gauge the extent of faculty members' changed thinking (Basgier & Simpson, 2020).

Moreover, narrative methods also complement the theory of threshold concepts. Land et al. (2016) expound on the idea that thresholds, including learning thresholds, are something one passes through. Although the metaphor of the threshold is a spatial one, the passing through also has a temporal dimension that can be plotted. The process of learning is messy and rarely linear, but we humans have a way of using narrative to make sense of what would otherwise be a messy stream of unbroken sensory experiences and mental phenomena. Through narrative methods, we can see how faculty encounter difficult WAC concepts, wrestle with them, test them, and (ideally) eventually internalize them as principled ways of thinking about disciplinary writing pedagogy. Still, as Creswell and Creswell (2017) point out, narrative methods can be labor-intensive and problematic for annual assessment reports due to their perceived lack of quantifiable data. Yet, there may be ways of capturing faculty learning through a quantitative instrument, for instance by Likert-type questions asking about the extent to which someone has changed a particular teaching practice in ways that align with different threshold concepts. As WAC continues working with threshold concepts as a framework for research and assessment into faculty learning, the field will need to identify innovative methodological tools that capture the integrative complexity of the conceptual terrain that characterizes teaching writing in the disciplines.

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