

## Student Inclusion through Theoretical Reframing

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[See table of contents](#)

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### Article abstract

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Article

# Student Inclusion through Theoretical Reframing

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## Abstract

In the wake of COVID-19, educators are reconsidering not only conventional methods but also those comparatively recent to pedagogy. However, a change in pedagogical strategy can risk being little more than reactive if its philosophical grounding is unvetted. This piece reconsiders the *distributed knowledge* framework and its potential for writing program administration and writing instruction. The professional communication discipline has used this framework with a frequent result: privileging expertise at the exclusion of other knowledges. This piece chronicles a writing program administrator's pre-pandemic use of distributed knowledge, and how pandemic surprises led to a revision of the lens. The post-pandemic frame differently addresses the knowledges at play in a learning community. It works to include more students by including more of each student.

## Introduction

Many of us have been pedagogically “flying the plane while we build it” since the beginning of the COVID-19 pandemic<sup>1</sup>, resulting in several innovative teaching strategies. A change in pedagogy, however, may be little more than reactive if its philosophical grounding is unexamined. Upheavals at every level suggest that educators revisit the perspectives that have shaped familiar practices. As Poe (2022) puts it, “[T]he pandemic and recent social movements . . . have brought a reckoning about epistemological and pedagogical frameworks used in higher education” (p. 163). If we subscribe to the idea that praxis is theory in action (Freire, 1968), then our practices can be no sounder than the theories they embody.

For educational administrators, an academic program's operation is one such embodiment. Questioning frameworks therefore can reveal, among other things, normalized yet problematic

dynamics between a program's administrators, teachers and students. During the pandemic and its aftermath, I confronted this reality as an administrator of my university's professional writing program. I came to realize that my preferred theory should be reconsidered. This piece calls for reexamining frameworks associated with writing education, here focusing on a distributed knowledge lens.

Satisfied with my pre-pandemic use of distributed knowledge to frame administrative practices, I did not wonder about the voices informing my work—and whose were not. Yet any theory implies the question of whose theory, even if not consciously answered. Whether a theory is defined by, e.g., its purposes (see DiMaggio, 1983) or how it is tested (see Gelso, 2006), it represents the boundaries placed on a purview. The question of “who” can act especially in two ways: whose phenomena are detected by the lens, and whose perspectives form the lens itself. Rethinking a theory thus entails more than what it brings into view. It also looks at how a theory's makeup scopes the viewpoint. While reconsidering distributed knowledge, I needed to face the question of “who.”

What if the energy invested in theoretical revision leads us to more so value our students, and to value more students? The answer in this piece is contemplative and procedural, an offering to other educators who are trying to manage post-pandemic tumult. It chronicles a journey that began with a pedagogical mystery and unexpectedly broadened to a theoretical revision. I fully acknowledge that educators are overwhelmed with change fatigue. Entertaining a prospective paradigm shift, not to mention practicing it, takes energy. Pandemic pedagogy has required enormous flexibility from us and likely will continue to do so. However, the ensuing discussion is in the spirit of flexibility borne out of curiosity rather than compulsion. If we investigate different approaches for our practices or reshape our current approaches, what may result?

First, I will describe my institution's professional writing program and my administrative practices. Writing program administration (WPA) has been characterized as walking a “line between critical humanism and bureaucratic managerialism” (Beckett, 2017, p. 4). This multi-purpose aspect to the work comes from the need for administrators to perform supervisory tasks while representing the knowledge of writing studies disciplines (p. 5, citing Schell). I will outline how I shepherded the program towards a service-learning orientation, explored instructional delivery modes, and composed documentation about my decisions. A summary of scholarly thought about service-learning and delivery modes will follow, as a snapshot of the disciplinary community knowledge that shaped my WPA work. I also will trace the distributed knowledge framework's scholarly background, and how my discipline (rhetoric and professional communication) defined the lens over time to

prioritize expertise. This interpretation of the lens is evident in how I discursively used research when composing WPA documents. Theory makes some voices more audible than others, and my use of the lens meant I inadvertently marginalized students.

As nothing has escaped the reach of COVID-19, I will describe the pandemic's impact upon my administrative decisions and the writing program's delivery mode—and the surprising results. When the program moved to online delivery during 2020 and 2021, students fared much better than anticipated. When the program resumed in-person delivery in 2022, students' performance again delivered a surprise. I quantify students' work performances to illustrate trends across pre-pandemic/in-person, pandemic/online, and post-pandemic/in-person courses. My response to the trends and its shortcomings are then described. A pre-pandemic distributed knowledge lens proved insufficient in a post-pandemic atmosphere.

I subsequently contemplate how the framework may be revised. The scholarly background to distributed knowledge provides one suggestion: walking back the framework's historical trajectory and concentrating on knowledge identification. Such revision is an opportunity to recognize emerging, hybridized, and innovative knowledges in the post-pandemic writing classroom. As students have tried to learn during two years of unrelenting challenges, they may have developed new ways of knowing that are powerful and central to their identity yet are operating undetected. Articulating today's knowledges honors the students who carry them. The piece concludes with one example of how a rethought distributed knowledge lens played out in a recent writing course, by describing how the lens is relevant to threshold concepts in writing.

## **Framing a Program with Distributed Knowledge**

I began a WPA position at a U.S. Midwestern public university in 2005. At that time, its professional writing program focused almost exclusively on desktop publishing software. Tool use is an important skill and has its place in education, but there were additional skills as well as content knowledge that students needed to acquire, if they were to be ready for their professional lives upon graduation. I concentrated my early administrative work on nudging the program towards a service-learning (SL) orientation, as SL facilitates professionalization. SL curricula offer students an opportunity to participate in civic events (Choo et al., 2019), engage in critical thinking (Fleming, 2019), and cultivate interpersonal sensitivity (Pierangeli & Lenhart, 2018), to name just a few learning outcomes. Over time, the program's undergraduate courses increasingly partnered with

organizational clients during service-learning projects, whereby students produced workplace documents to meet clients' rhetorical needs.

Guiding the curriculum meant fitting content delivery to the nature of content delivered. I was responsible for grounding curriculum and delivery decisions within disciplinary thought, and for communicating them to institutional audiences (e.g., upper-level administrators and departmental colleagues). My communication practice was a habituated one. As an English-speaking professional academic in the U.S., I had been trained to signal my disciplinary knowledge by composing researched texts. This practice exhibited an "Anglo-American" bent (Hint & Leijen, 2022, n.p.) and is traditional in many Western academic spheres. Each text I wrote needed to exhibit two conventions (Swales, 1990): a composite of dominating issues connected to the text's topic and a synthesis of the research pieces published on the topic. These conventions "create a research space" (CARS) within a discipline's larger scholarship (Swales & Feak, 2012, p. 331). Within my WPA texts, then, I needed to situate scholarly publications about service-learning and instructional delivery to be in conversation with each other, and to do so in a manner that left room for my own ideas (Swales, 1990). If I executed the composing process successfully, the documents' audiences were likelier to support my decisions.

Whether I wrote curriculum proposals, assessment plans, or grant applications, the pre-pandemic communication practice involved these components:

- researching scholarship about service-learning and delivery modes;
- analyzing research by applying a distributed knowledge lens; and
- discursively framing the research via academic writing conventions.

Below, I disassemble my practice by detailing each component. Although they acted in concert to produce documents, an elaboration of each reveals how it contributed to the larger effect. I then will weave the components together to demonstrate how the WPA discourse inadvertently valued certain voices by devaluing others. In the familiarity of my theorized practice, I did not see the impact. It became visible only when the pandemic prompted substantial reflection on my work.

### Disciplinary research: service-learning and content delivery

There is considerable literature on what has been called "distance learning," which shaped my WPA decisions in a certain direction. Long before the pandemic spike in technology usage, many studies explored avenues for online instruction. For instance, Strait and Sauer (2004) saw online delivery as a practical response to the increase in service-learning curricula throughout education (p. 62). The authors shared their seasoned knowledge about the workload required to begin online service-

learning. “Start small,” they warned (p. 64). Other educators such as Turnley (2007) similarly advocated the introduction of online tools into service-learning curricula, but with reminders that technology “complicates student work both practically and conceptually” (p. 104).

Indeed, professional communication scholarship often addressed the effort to balance technology’s pragmatic affordances with the humanistic mission of service-learning. Studies during the early 2000s often positioned themselves as reacting to the field’s larger humanistic concerns, and in doing so expressed ambivalence towards digital pedagogy. Dayton and Bernhardt’s (2004) survey of Association of Teachers of Technical Writing members, for example, indicated that the field’s “To-Do list” prioritized “deeper theoretical and research grounding” over “keep[ing] up with changes” such as technologies (p. 39). From my standpoint as an early WPA, I perceived one consistent message: when it comes to online instruction, tread carefully. Doing otherwise could erode the philosophy of a service-learning curriculum.

Even a decade into my WPA work, the expanded body of literature about online instruction still largely appeared to grapple with technological glitches and how they might interfere with service-learning objectives. The literature began to address online delivery not in terms of its possible adoption but rather as a pedagogy here to stay, the worry being its impact on education. One piece even phrased service-learning curricula as something to adapt “into the online technical communication classroom” (Bourelle, 2014, p. 247; emphasis added). Even so, Bourelle’s decision to create and teach a pilot online SL course was not influenced by any perceived superiority in distance learning. Instead, the author was moved by technology’s ability to resolve some of the geographical constraints of place-based service-learning (p. 250).

While exploring such disciplinary thought on service-learning and delivery modes, I applied a distributed knowledge lens. The lens has some of its most recognized roots in studies about communities of practice (see especially Lave & Wenger, 1991). These roots serve as a backdrop to how my discipline cultivated a certain definition of the lens.

## Distributed knowledge over time

The professional communication discipline’s interpretation of distributed knowledge rises from scholarship about communities of practice (CoP). Communities of practice are “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott & Snyder, 2002, p. 4). A CoP is comprised of the interactions of a community’s participants and a specific practice by which

participants learn and share their knowledges. The “common” in “communities of practice” is key; participants recognize, if not explicitly concur, that they are intent on learning something by way of a set of behaviors, and on growing that understanding (Hildreth & Kimble, 2004, p. xi).

Three decades of CoP studies reveal evolutions in the concept, and as discussed later in this piece, these changes indicate the potential for distributed knowledge to be revised as a lens for writing education. Wenger’s ongoing study of CoP, for instance, increasingly focused on community members’ “collective process of negotiation,” emphasizing it as a “joint enterprise” (1999, p. 77). Hesitation about the future of CoP also effected some of its conceptual changes. Cox (2005) contended that the fluidity of the words “community” and “practice” had enabled business managers to hijack the concept for their own purposes (p. 23).

While CoP scholarship focuses on community as the site whereby members’ respective knowledges come into contact, a distributed knowledge framework focuses on the knowledges brought to the community. As an entity, distributed knowledge is created when understood by “someone . . . who somehow has access to the epistemic states of the group members” (Ågotnes & Wáng, 2016, pp. 31-2). The professional communication field’s definition of distributed knowledge as a lens, meanwhile, believes communication to be the catalyst for that creation. The discipline’s repeated use of the lens increasingly leaned towards a particular knowledge type.

My field has used the framework to study CoP for some time (see Farace, Monge & Russell, 1977). As one historical instance, Gunawardena, Lowe and Anderson (1997) analyzed “stages of knowledge co-creation” during an online professional conference. The authors argued mediated community interactions as more than the literal messages that were electronically disseminated (at the time, a novel stance) (p. 429). More recently, the field’s use of distributed knowledge often focuses on community members’ expertise. One example is a study of how instructors professionally specialize in digital media production (Getto, Leon & Getto-Rivait, 2014). Winsor’s (2001) study of engineering students at an agricultural equipment plant uses the framework to understand several phenomena about expert knowledge; one being communication as an instrument by which manufacturer knowledges promoted both students’ (“newcomers”) and experts’ learning (p. 26).

Subsequent disciplinary studies took up Winsor’s call for increased research on communication as a tool in collaborative meaning making. With such studies, certain forms of knowledge were made more distinguished. Schriver’s (2012) study of the nature of expertise as communally built knowledge even “distinguish[es] experts from novices, and *experts from experienced nonexperts*” (p. 306; emphasis added). Regardless of how knowledges are shown to exist, circulate, and contribute

to CoP members' learning, the professional communication discipline's application of a distributed knowledge lens often perpetuates the "expert" label's social and political capital.

## Distributed knowledge at work: discursive space-making within the scholarship

As it theorized my use of research to make and communicate WPA decisions, the distributed knowledge lens sieved which knowledges I sought—and downplayed. I enacted the lens in two ways. For one, I discursively made sense of the scholarship via the CARS process. Synthesizing knowledges from my disciplinary community moved me to regard online-only instruction as something to be adopted cautiously and incrementally (if at all), especially when service-learning curricula were involved. My consequent administrative documents argued that online instruction was not viable for the writing program.

I operated by the distributed knowledge lens in an additional way. My use of the framework meant that I gravitated toward expertise in the scholarship. Put plainly, the frame cast a lesser status onto students' knowledge. I read references to student perspectives as important data *if* time was available for collecting it. For instance, Strait and Sauer (2004), having already piloted online service-learning courses, stated that they subsequently were in the process of developing a rubric to solicit students' thoughts on their experience. Bourelle (2014) added opportunities for student voices into a service-learning project that she already had built and assigned.

Although heavy-handed, my use of the lens did have some merit. WPA decisions had resulted in hundreds of service-learning partnerships during fifteen years of in-person classes. Student perspectives, often in the form of course evaluation surveys dispensed at the end of a semester, largely indicated curricular success and satisfaction with the writing program. As it has with so much else, though, COVID-19 would disturb the framework through which I practiced.

## Surprises from the New Normal

In 2020, any research I performed or arguments I constructed were irrelevant, because the appearance of the pandemic made administrative decisions for me. This section describes how the writing program's courses transitioned to online delivery during the pandemic and recently returned to in-person mode, and the surprising show of students' work performance across course sections. The surprises were a key moment in my program administration and instruction. They would incite

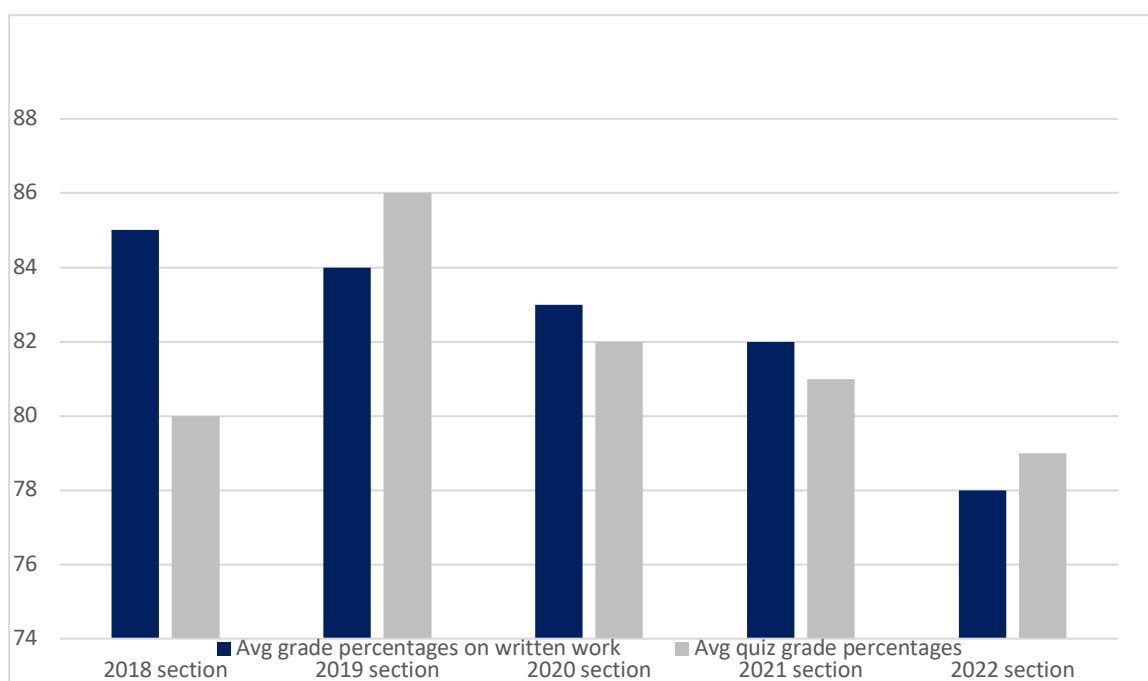


me to search for an explanation but ultimately would lead me to rethinking my entire use of distributed knowledge in writing education.

My university temporarily transitioned to online-only instruction in early 2020. By the middle of that year, I had experienced a surprise: online delivery was proving almost as successful as pre-pandemic, in-person instruction. That, plus the pandemic's continued intensity, made me decide to extend the writing program's online synchronous delivery mode until the end of 2021. Beginning in 2022, my institution expected almost every course to be delivered in person, and I experienced a second surprise: students struggled with in-person instruction more than they had with online delivery.

A breakdown of work performances from a representative course illustrates the surprises. I taught the course in question five times between 2018 and 2022. The course sections' grade averages (see Table 1) resemble trends across all the writing program's classes during this time span. Although the use of a standardized grading system has been questioned as a reliable indicator of student learning (see Hornsby, 2020), there also is general recognition (see Elzainy, El Sadik & Al Abdulmonem, 2020) that quantitative scoring can be used legitimately to capture educational phenomena involving large numbers of students or trends across time.

Like other courses in the writing program, this class asked students to compose professional genres as part of a service-learning project, and to take multiple-choice quizzes throughout the semester. Its contexts and delivery modes over five years were pre-pandemic/in-person (2018-19), pandemic/online synchronous (2020-21), and post-pandemic/in-person (2022). The course sections experienced no significant differences in student demographics, number of students enrolled per section, or content.



*Figure 1. Average grade percentages for the same course across three contexts and delivery formats: pre-pandemic/in-person (2018-19), pandemic/online synchronous (2020-21), and post-pandemic/in-person (2022).*

Surprisingly, across the course's five sections, average grade percentages from the first pandemic/online section<sup>2</sup> (2020) only somewhat declined compared to averages from the pre-pandemic, in-person sections. There was little further decline (1%) between the 2020 and 2021 online sections. This small drop was heartening, considering how the globe was in the throes of COVID-19, and unpredictability dominated my students' U.S. context. It was reassuring to witness steady statistics across a painful year's time, rather than an erosion as the pandemic intensified.

Again to my surprise, during the 2022 in-person course, graded activity showed a decline in performance when compared to the pandemic/online (2020-21) sections' grades. (Written work statistics exclude the course sections' final projects, as the 2022 course is still in progress.) In fact, the post-pandemic/in-person quiz grades' average (79%) and written assignment grades' average (82%) were the lowest in five years. Had the 2022 in-person section's work performance been even somewhat below the 2020-21 online sections' performance, it would have been understandable; by that point, students were shouldering the pandemic's cumulative effects regardless of class delivery mode. The marked drop from pandemic/online to post-pandemic/in-person, however, was alarming. I was well experienced with in-person instruction, and several students knew me and had taken other

in-person courses. Given our familiarity with both the delivery mode and each other, could 2022's degree of weaker performance be attributed mostly to COVID-19?

I might have immediately discovered an explanation had my epistemology—a process whereby a distributed knowledge lens prioritized expertise—remained fully relevant in a post-pandemic landscape. However, this process did not satisfy my confusion about students' work performance. What I did discover was a shortcoming not with the research I consulted, but rather the framing of it. Especially notable was the frame's exclusion of certain voices. If I wanted to make responsible administrative decisions, especially in the aftershocks of COVID-19, I needed to “learn to unlearn” (Poe, 2022) my comfortable process.

## **Distributed Knowledge in the New Normal**

Before the pandemic, expert knowledge guided my administrative decisions about writing program content and delivery. My theorized practice formed a certain disposition towards online instruction. I had concluded that this mode was an inconsistent, high maintenance, and less substantive learning experience when compared to in-person instruction. During my 2020-21 online classes, students' steady work performance therefore was a surprise. The troubled work performance from the 2022 class also was a surprise, given its in-person format. Of course, pre-pandemic expertise could not have anticipated a global plague. Falling back on my usual framework and practice, I sought recent research to understand the trends from my class. At the time of this writing, there are almost two million English language research publications that focus on pandemic and post-pandemic education (Blake, 2022).

As I studied, a different, recurring issue in the scholarship drew my attention from the topics of pandemic pedagogy and online instruction. Before COVID-19, I had used my WPA practices to enter a disciplinary community, and a distributed knowledge lens to learn mostly from expert knowledge. Post-pandemic, my theorized practice raised questions about that knowledge. This section lays out the aftermath of my research efforts. As I will describe, scholars are loosening academic “expertise” from its conventional reference to professional experience and educational credentialing. One effect is to unmoor distributed knowledge, since my field has interpreted the lens along the idea of traditional expertise. I will contemplate what this means for the framework. I also will revisit how distributed knowledge moved from its roots in communities of practice (CoP) scholarship to my discipline's interpretation. This retracing effort suggests how distributed knowledge might take new shape and incite an educator to reflect on their work.

## The problem of the “expert”

The research offered several topics related to the mystery of my course. For example, scholars are investigating the online instruction of what had been location-specific lessons before the pandemic (Maher & Zollman, 2020). Other studies look at the correlations between instructors’ technological skill and student learning (Evmenova, Borup, & Dabbagh, 2022), and especially at the impact of online delivery on student engagement (Zwanch & Cribbs, 2021). My pursuit of an explanation gave way to a larger concern, however. While I practiced the CARS model of synthesizing research, I perceived one consistent message. COVID-19 so profoundly caught humanity off guard (Van der Spoel, 2020) that educators used every resource available, including a variety of knowledge types. Post-pandemic, I again was resorting to expertise, only to find *expert* voices turning to *student* voices.

Some authors are questioning inherited definitions of expertise to defuse power dynamics that complicate student learning. For instance, Nordstrom (2021) sees the acquisition of expertise as a feasible goal for students seeking help from a writing center; that is, specialized knowledge is not something reserved exclusively for tutors. Rose and Grauman (2020) offer examples of how writing center transactions may look if an “expert” identity is an option for all parties involved. As the authors describe, writing tutors can discursively solicit certain responses from their student tutees. In responding to a tutor’s crafted prompts, students fully participate in problem solving, rather than simply deferring to the tutor’s authority. As a result, tutor and student co-create specialized knowledge that the latter retains after a tutoring session (n.p.).

Such examples do not argue that student knowledge is synonymous with professional academic expertise. They do make a case for destabilizing familiar labels for knowledge if they no longer facilitate a learning community. Scholars are revisiting their stance toward students’ knowledges not only because of the pandemic, but also because of discussions about diversity, equity and inclusion. These discussions are not at all new. In the U.S., they gained significant traction shortly before and during the pandemic. Several acute events pointed to a chronic national sickness, especially racism, sexism, and homophobia (Ballard et al., 2020). The 2013 #BlackLivesMatter movement, which intervenes against racism at all levels, and the 2017 #MeToo movement, which protests sexual violence, were met with counter events such as the 2017 “Unite the Right” rally of White supremacists in Charlottesville, Virginia. Murder, other violence, discrimination, and imbalance were addressed during national-level discourse as systemic conditions rather than unique incidents. Educators worried that their pedagogy and curricula somehow aided the crises. They looked to students for

guidance. Many unfortunately were experts, possessing knowledge borne of repeated, painful experience.

Any changes to the concept of expertise thus affects a framework reliant on the concept. This includes distributed knowledge as defined within my discipline. The lens' continued value would depend on its relevance to current knowledges. Revisiting the scholarly backdrop to distributed knowledge (studies about community of practice) suggests how the lens might look in a post-pandemic world. If revised, distributed knowledge offers a path for recognizing a variety of knowledges, including those brought into a classroom.

### A suggestion from CoP literature

The communities where our students live, learn, and work obviously have weathered severe change. Communities suddenly had to pivot their members' interactions from in-person to virtual (Liu & Wang, 2021). Communities without sufficient technology access had to make do, if they continued at all. Other upheavals, such as severe political tensions, contribute only more change. The very boundaries of communities were expanded, shrunk, meshed and redrawn to accommodate the events of the past two years (Lester, 2021).

As investigated throughout communities of practice (CoP) scholarship, community contextualizes how members' knowledges interact. My discipline defines the distributed knowledge lens by looking at how community members' knowledges are birthed discursively. Given the relationship between community context and knowledge, it may be that some pandemic and post-pandemic knowledges are so emergent they have not been named. In that sense, *they may not yet exist*. In addition to the resilience that many students needed before the pandemic (Ofgang, 2021), all students now must call upon whatever knowledges help them to cope with blurred home/school/work community boundaries (McMurtrie, 2022). A familiar taxonomy that names and privileges conventional "expertise," despite wide use throughout scholarship (Sorensen, 2022), may not sufficiently capture the knowledges resulting from two years of extreme living. If pre-pandemic tags risk obsolescence, a distributed knowledge lens could be of help here—were it walked back from its historical trajectory towards expertise. Instead of interpreting the framework to privilege one knowledge type, we might understand distributed knowledge as asking, just what knowledges do happen to be present?

## Lens revision as an educator's mirror

Revising a lens means re-seeing what came before. Opportunities for accountability become visible, and owning responsibility can be a breakthrough experience for educators pursuing clarity in a post-pandemic environment.

My field's interpretation of the distributed knowledge framework is intellectually valuable. It shows how a knowledge type can acquire and lose positive public regard (Swarts, 2018) and how knowledge is a co-created entity (Miller & Wyborn, 2020), for example. Using an expert-centric definition of the lens helped me to coordinate a writing program and practice the scholar-teacher model expected by my institution. But it also made for top-down practices that were reactive instead of responsive, such as my blanket opposition to online learning. Meanwhile, a distributed knowledge lens that keeps the focus on identifying many knowledges, rather than narrowing towards one type, widens purview. It pushes against those "horizons of observation" that are made tighter with repeated professional practice and "constrain the possibilities that teachers consider and the solutions that teachers develop" (Ermeling & Yarbo, 2016, p. 2; citing Hutchins). In the middle of WPA business and service-learning partnerships and curriculum assessments, in the panicked shifting from all in-person to all online delivery during the pandemic, in the culture wars that show no sign of easing in the U.S., I did not wonder about what and who I saw (and didn't) whenever looking through my chosen frame.

My lack of curiosity could be chalked up as the complacency of a privileged educator. This is a fair charge. I did operate with student-centered goals as a WPA but did not consciously tag student knowledges, because many were internalized in me. My decisions usually addressed the blue-collar, rural, first-generation college student demographic that characterizes the numerical majority at my university. I also happen to share this background. Before studying them as a professional academic, I was personally fluent in rural epistemologies, their associated literacies, and students' struggles when negotiating their knowledge with university expectations (Donehower, Hogg & Schell, 2007; Lamberti, 2019; Roberts, 2019).

My administrative decisions respected these ways of knowing but were unreflective and usually assumed tangible shape. For instance, service-learning partners were recruited locally to minimize students' transportation costs. In recognition of inconsistent technology access, course materials were offered in both digital and print forms. By materially responding to student knowledges that I also held intuitively, the ideological question, "Whose knowledge?" was pre-empted, never examined.

Operating without question had additional consequences. Because knowledges are bound up with how and whether we recognize their existence (Canfield et al., 2020), never asking, “Who?” enabled predispositions such as

- the idea that students’ rural and economic situations mostly comprised their identity;
- the belief that formal course evaluation surveys sufficiently captured student perspectives;
- the tendency to regard students’ background from a deficit orientation; and
- the reliance on a conventional Western approach to study communication (Calvente et al., 2020) and make decisions about student learning.

Most concerning, there are several student populations at my institution; my other pre-pandemic efforts at “inclusion,” as seen now, were inconsequential correctives. Pedagogy with any social justice goal requires educators to ask “some fundamental and uncomfortable questions” about their own culpability (Rosenberg, 2021). Believing my theorized work was inclusive because of the student populations it did happen to serve, I did not mull what this actually meant. When the question was put in front of me, change became possible.

## **What Now: Beyond the Comfort Zone**

Reconsidering a theoretical frame is not a simple toggle from one perspective to another. Nor is knowledge identification a straightforward undertaking. Nevertheless, putting words to a learning community’s knowledges contributes to a fuller picture of our students. Some teachers are noting that students did indeed learn during the pandemic, “about loss and grief, about racism and resistance, about cooking and family traditions at home,” but these lessons are not often recognized or used within conventional education (Mervosh, 2021). Students may be invoking fresh knowledges that help their comprehension yet are operating unnamed.

This section considers how a reconsidered distributed knowledge framework might percolate through the writing classroom. In particular, a pedagogy that leans heavily on knowledge tags may benefit from a lens that asks just how those labels were determined. I look at threshold concepts as they are used in writing instruction, then describe an example of threshold concepts in action. During my 2022 in-person class, I was able to use the revised lens to identify knowledges that students brought to their service-learning project, and to guide the students toward acquisition of a threshold concept in writing.

The use of threshold concepts is a powerful example of student-centered writing instruction. Threshold concepts are beliefs about how writing exists, influences, and operates—“what writing *is*”

(Johnson, 2019, n.p.; emphasis in original). The beliefs are representative of how a discipline understands writing as not just a product and an action, but why these are meaningful. One example is the concept of writing as an infinite learning opportunity; no matter how much one knows about writing, there is more that can be learned (Adler-Kassner & Wardle, 2015). When student writers grasp a threshold concept, it is an epiphanous moment. They see their writing not just as a concrete entity (a text) but also how it incarnates disciplinary beliefs. This realization often has the effect of springboarding a writer towards greater ownership of their work.

Students' acquisition of threshold concepts has been used for several years to expand the range of knowledges invoked during classroom learning (see Entwistle, 2003). Some examples include knowledges held by professional nonacademic communities (Barradell, 2013) and "painful" affective knowledges that make conventional education difficult for students (Goebel & Maistry, 2019). Downs and Robertson (2015) state that a writing curriculum focused on threshold concepts involves "helping students examine prior knowledge" insofar as it helps them to grasp concepts (p. 105). This process would be undermined, though, if less relevant pre-pandemic terms were used to identify students' current, emergent knowledges.

I had an opportunity to practice a revised distributed knowledge lens during my 2022 course's service-learning project. Early in the project, students found it hard to move from their experience in writing traditional academic genres (e.g., the five-paragraph essay) to grasp other disciplinary concepts about writing. They especially struggled to imagine their product deliverable. They tried a genre-first approach, which allowed them to meet certain generic conventions but little else. For instance, they decided to create a PowerPoint presentation deck. The students chose a color scheme and selected slide transitions but otherwise could not create content.

The students seemed held back by the current-traditional model of invention that they'd learned in other writing courses. They regarded writing as an invention tool only to "select-narrow-amplify" a topic (Crowley, 1996, p. 72). This assumption blocked the students from disciplinary understandings of writing in a few ways. It kept them from recognizing that this definition of *inventio* is just one of many within writing studies (Ottman, 2021). By extension, they could not see iterative writing as more than an act of honing. The students believed that content creation should lead ever forward to a text's completion. Because they didn't already know their topic, there seemed to be nothing to write about. They regarded each drafting act as an isolated moment within a linear series of writing acts, rather than a chance to discursively pinball among their text's organization, style of expression, and use of evidence (Lanius, 2017). That is, they could not move towards a disciplinary



understanding of the symbiotic relationship among Western canons for expression (the rhetoric expected by their service-learning client, a university steering committee).

During this struggle, I often heard the students exchange personal information. One student worked as a mentor with my institution's government-funded student services program and shared some of her (anonymous) mentees' stories. Their anecdotes encouraged her to see the service-learning project as an opportunity for advocacy. She especially worried about mentees who shared her background. As a student from a racially diverse, urban area, she sympathized with her mentees' experiences at a university in a less diverse, smaller town. The other student worked at an agricultural company and told stories about his onboarding process at the store. The experience reminded him of matriculating at the university, as both involved confusion and frustration. Like his teammate, he wanted the service-learning project to benefit students.

Before and during the pandemic, I would not have thought consciously about the knowledges that students bring to a classroom. My use of an expert-centric distributed knowledge lens prescribed the writing program's service-learning curriculum and instructional delivery. Any knowledges not subsumed into this frame were rendered invisible. Through a post-pandemic lens that no longer funneled everything through expertise, however, I was diverted by the students' use of personal experience when discussing the project, considering how they were frozen when trying to actually create the deliverable. Students have always expressed personal information, but its deliberate application was interesting. Without any prompting, they had regarded the stories as an intellectual resource rather than a social exchange. So did I.

I asked the team to discuss their use of the stories in the project log that I assign with service-learning projects. The log is a companion document that asks students to justify their decision making and reveal the learning that may not be evident in a project's deliverable. A piece of visual communication does not reveal the amount of troubleshooting required by graphic design software, for instance. Log entries are submitted repeatedly throughout a project. They offer students a space to express their challenges and victories. I obviously do not require entries that violate confidentiality law, but students often volunteer private information. In one entry, the struggling student team documented their stories' significance.

The team's log revealed that stories assumed a different place in learning than they had even a couple years ago. As the student mentor's comments are too specific for anonymity, I will quote the other student's comments. Writing of the loneliness from his onboarding experience, the student narrated:

I didn't express this externally *as it felt inappropriate to do so, plus I wasn't sure how I would express this emotion*. I felt emotionally isolated ... none of my older coworkers could relate to me or even cared what my feelings or opinions were. This change in my life led me to really focus on improving myself and becoming much more self-reliant [and encouraged me to begin] my own college career. Plus[,] my relationship with my other coworkers has become much more friendly and open. (personal communication, April 8, 2022; emphasis added)

When he was hired before the pandemic, the student understood his interior life and his professional position to be mutually exclusive. He could not express his feelings in a professional community because he did not see workplace discourse as providing words for personal expression. The student now blurs community boundaries. Their porousness allows community knowledges to easily blend, and when the student enters a classroom, he does so as a whole person. That is to say, he perceives no need to set aside some knowledges as inappropriate. The student mentor's comments revealed a similar change in her knowledge use. Whereas she once regarded the sharing of stories as a vulnerability, she now uses story exchange as a professional strategy to build trust with her mentees. Learning about their personal situations helps her to allocate program services.

The team's log entry was enlightening. It discursively established the students' hybridizing of anecdotal knowledge with the more formal knowledge they needed for rhetorical analysis. In other words, the students used stories to understand their relationship to the service-learning deliverable. The log also was a call to action. Having paid attention to the knowledges that the team used, I pondered how those knowledges might be segued into a threshold concept.

I needed to disrupt students' view of writing as a linear experience and relieve the pressure of expectation. The students felt as if they needed to know the "what" before they wrote. Instead, the "what" happens *during* writing—a disciplinary concept that eluded the students. As they already were comfortable in telling stories for the purpose of rhetorical analysis, I suggested that the students freewrite the "tale" of their service-learning client. What was the steering committee's backstory? Who are the characters? What do they say? What do they do? The team did not immediately see the relevance of the exercise to their more formal service-learning deliverable, but such is the incremental process of moving students towards a threshold concept. Writing can help students to articulate their learning along a spectrum between vague perception and rich comprehension of a concept (Meyer & Land, 2003).

The team found their storytelling to be intermittent. The narration process revealed gaps in students' understanding of the steering committee and they occasionally suspended the exercise to

perform more research. As team members compared notes on their respective views of the committee, they also had to rearrange “plot points” about the committee’s history. There also were style discussions, such as how to interpret the tone from committee members’ emails to the student team. The students’ narrative knowledge was a scaffold upon which they could become accustomed to a different writing experience, one that moved them among the rhetorical canons rather than linearly from brainstorming to completion.

As the students freewrote the story, they concurrently generated ideas for their deliverable. The team was attentive to the political dynamics of their committee client as evinced in members’ emails, and consequently decided to avoid certain topics in the deliverable. They realized that a formal style would be rhetorically appropriate, given that the committee was comprised of faculty. Although the students still believed that a PowerPoint presentation was the most appropriate genre, they were able to begin creating content and arranging talking points. The committee’s charge (addressing post-pandemic technology needs) assumed more importance, and the students shaped what had been hazy thoughts about “post-pandemic business” into “a report on students’ use of Blackboard” [the learning management system]. Significantly, the team was more comfortable with a non-linear drafting process; even the presentation’s color theme, one of the students’ earliest decisions, was changed to align with the university’s color brand.

As I write this piece, my 2022 class is still in progress. The “story” exercise occurred recently, and the student team continues to develop their deliverable. Soon, writing exercises will ask my students to compare their perspectives across the service-learning project’s early, mid-process, and closing moments. The exercises will invite big-picture commentary about service-learning but also will request that students compare their beliefs about professional writing at the beginning and end of the semester. Comments from the student team chronicled in this piece may indicate the stickiness of the threshold concept about writing. Land (2011) mentions that some concepts pose “troublesome knowledge” for students:

Sometimes [a threshold concept] is just very difficult.... Sometimes it’s counterintuitive.... It’s not that students don’t get it, they just don’t want to think and practice like that because it’s hard to resolve [the concept] with other parts of their being.... Students feel they’re being shaped or encouraged to see the world in a way they’re not sure they want. (n.p.)

It may prove that the students’ comfort with narrative ways of knowing was not enough reassurance against the seeming aimlessness of nonlinear writing. They may regard their service-learning writing process as a unique experience. My use of a revised distributed knowledge lens nonetheless

suggested how students could use their knowledges to burst through an obstructionist perception of writing and develop their project. It offered a path for the students while enriching my acquaintance with them as people beyond their classroom identity.

## **Conclusion**

A journey that began with a classroom mystery led to an entire change in a theory about writing education. This was not the goal when I began searching for answers about my pandemic and post-pandemic courses. I had merely wanted to know why pandemic online instruction had proved more successful than predicted, and post-pandemic in-person instruction, less so. By nature, however, journeys make us think about where we are. By accepting that my pre-pandemic distributed knowledge lens had lost currency, I could reconsider what potential it still held for writing administration and instruction. Refocusing the framework on knowledge identification meant that I could spot the knowledges that are rising from two years of community change.

Identification of knowledges also means learning more about identities of students. For instance, I would not have guessed that my female student held politically conservative views (as revealed in some of her comments), given her work with a government-funded student services program. Nor would I have anticipated that my male student from an agricultural background would be so frank about emotions. The reconsidered lens installed new practices in the classroom and included more of each student.

As a writing program administrator, I also believe a revised distributed knowledge framework addresses critical issues in the wake of COVID-19. Teachers and administrators are concerned especially with the pandemic's toll on mental health (Wang et al., 2020) and student engagement (Bond et al., 2020). A focus on knowledge identification thus would notice those knowledges formed out of students' health situations and lifestyles that distract from learning. The focus inspires administrative ideas such as professional development events about these topics. As a voyage, theory revision is a way to ask whether and how we see everyone involved in education, and in doing so evaluate our pedagogical practices.

## Endnotes

1. Given the variability of COVID-19, this piece uses “pandemic” and “post-pandemic” only to specify timeframes and geography. “Pandemic” refers to the years 2020 and 2021 in my geographical context (United States). “Post-pandemic” refers to the same context in 2022.
2. Although the course transitioned from in-person to online delivery early in 2020, most of its content was taught online.

## References

- Adler-Kassner, L. & Wardle, E. (2015). *Naming what we know: Threshold concepts of writing studies*. Boulder: University Press of Colorado.
- Ågotnes, T., & Wáng, Y. N. (2016). Resolving distributed knowledge. *arXiv preprint arXiv:1606.07515*
- Ballard, D., Allen, B., Ashcraft, K., Ganesh, S., McLeod, P. & Zoller, H. (2020). When words do not matter: Identifying actions to effect diversity, equity, and inclusion in the academy. *Management Communication Quarterly*, 34(4), 590-616.
- Barradell, S. (2013). The identification of threshold concepts: a review of theoretical complexities and methodological challenges. *Higher Education*, 65(2), 265-76.
- Beckett, J. M. (2017). *Negotiating expertise: The strategies writing program administrators use to mediate disciplinary and institutional values*. PhD dissertation. Blacksburg, VA: Virginia Polytechnic Institute and State University.
- Blake, A. (2022, April 1). Kids' mental health is getting worse. But that predated the pandemic. *The Washington Post*. <https://www.washingtonpost.com/politics/2022/04/01/pandemic-kids-mental-health-trends/>
- Bond, M., Buntins, K., Bedenlier, S., Zawacki-Richter, O., & Kerres, M. (2020). Mapping research in student engagement and educational technology in higher education: A systematic evidence map. *International journal of educational technology in higher education*, 17(1), 1-30.
- Bourelle, T. (2014). Adapting service-learning into the online technical communication classroom: A framework and model. *Technical Communication Quarterly*, 23, 247-64.
- Calvente, L. B. Y., Calafell, B. & Chavez, K. R. (2020). Here is something you can't understand: The suffocating whiteness of communication studies. *Communication and Critical/Cultural Studies*, 17(2), 1-8.

- Canfield, K. N., Menezes, S., Matsuda, S. B., Moore, A., Mosley Austin, A. N., Dewsbury, B. M., Taylor, C., et al. (2020). Science communication demands a critical approach that centers inclusion, equity, and intersectionality. *Frontiers in Communication*, 2.  
<https://doi.org/10.3389/fcomm.2020.00002>
- Choo, J., Tan, Y. K., Ong, F., Tiong, S. S. Nair, S., Ong, J. & Chan, A. (2019). What works in service-learning? Achieving civic outcomes, academic connection, career, preparation, and personal growth in students at Ngee Ann Polytechnic. *Michigan Journal of Community Service Learning* 25(2), 95-132.
- Cox, A. M. (2005). What are communities of practice? A comparative review of four seminal works. *Journal of Information Science*, 31(6), 527-40.
- Crowley, S. (1996). Around 1971: Current-traditional rhetoric and process models of composing. *Composition in the twenty-first century: Crisis and change*, 64-74.
- Dayton, D. & Bernhardt, S. A. (2004). Results of a survey of ATTW members, 2003. *Technical Communication Quarterly*, 13, 13-43.
- DiMaggio, P. J. & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 147-60.
- Donehower, K., Hogg, C., & Schell, E. E. (2007). *Rural literacies*. Carbondale: SIU Press.
- Downs, D. & Robertson, L. (2015). Threshold concepts in first-year composition. In L. Adler-Kassner & E. Wardle (Eds.), *Naming what we know: Threshold concepts of writing studies* (pp. 105-21). Boulder: University Press of Colorado.
- Elzainy, A. El Sadik, A. & Al Abdulmonem, W. (2020). Experience of e-learning and online assessment during the COVID-19 pandemic at the college of medicine, Qassim University. *Journal of Taibah University Medical Sciences*, 15(6), 456-62.
- Entwhistle, N. (2003). *Concepts and conceptual frameworks underpinning the ETL project*. ETL Project Occasional Report 3. Edinburgh.
- Ermeling, B. A. & Yarbo, J. (2016). Expanding instructional horizons: A case study of teacher team-outside expert partnerships. *Teachers College Record*, 118(2), 1-48.
- Evmenova, A. S., Borup, J. & Dabbagh, N. (2022). Re-designing professional development to assist instructors' rapid transition to remote teaching during the COVID-19 pandemic. *Teacher Educators' Journal*, 14, 22-42.
- Farace, R. V., Monge, P. R. & Russell, H. H. (1977). *Communicating and organizing*. Boston: Addison-Wesley.

- Fleming, S. (2019). *The effect of out-of-classroom experiences on critical thinking disposition among college students*. Doctoral dissertation. Philadelphia, PA: Temple University.
- Freire, P. (1968). *Pedagogy of the oppressed*. New York: Seabury Press.
- Gelso, C. J. (2006). Applying theories to research. In F. T. L. Leong & J. T. Austin (Eds.), *The psychology research handbook: A guide for graduate students and research assistants* (pp. 455-64). Thousand Oaks, CA: Sage.
- Getto, G., Leon, K. & Getto-Rivait, J. (2014). Helping to build better networks: service-learning partnerships as distributed knowledge work. *Reflections: Public Rhetoric, Civic Writing and Service Learning*, 13(2). <https://reflectionsjournal.net/category/archive/13-2/>
- Goebel, J. & Maistry, S. (2019). Recounting the role of emotions in learning economics: Using the Threshold Concepts Framework to explore affective dimensions of students' learning. *International Review of Economics Education*, 30, 100145.
- Gunawardena, C. N., Lowe, C. A. & Anderson, T. (1997). Analysis of a global online debate and the development of an interaction analysis model for examining social construction of knowledge in computer conferencing. *Journal of Technical Writing and Communication*, 17(4), 397-431.
- Hildreth, P. & Kimble, C. (Eds.). (2004). *Knowledge networks: Innovation through communities of practice*. Hershey, PA: IGI Global.
- Hint, H. & Leijen, D. (2022). How to determine Estonian writing structures at the macro-, meso-, and micro-level. *WAC Clearinghouse*. <https://wac.colostate.edu/community/international-writing-studies/2022-cccc-workshop/>
- Hornsby, D. J. (2020). Moving large classes online: Principles for teaching, learning and assessment. 6<sup>th</sup> International Conference on Higher Education Advances. Universitat Politècnica de València.
- Johnson, K. (2019). The threshold concepts of Writing Studies in the writing methods course. *Teaching/Writing: The Journal of Writing Teacher Education*, 6(1.2). <https://scholarworks.wmich.edu/wte/vol6/iss1/2>
- Lamberti, A. (2019). Navigating a tangled intersection: Agricultural communication as public meeting space among the humanities, social sciences, and the digital. In A. P. Lamberti (Ed.), *Cultivating Spheres: Agriculture, Technical Communication, and the Publics*. Open Library of Humanities.
- Land, R. (2011). *Threshold concepts and troublesome knowledge* [video]. <https://www.youtube.com/watch?v=WR1cXIdWnNU&t=2693s>

- Lanius, C. & Hubbell, G. S. (2017). The new data: Argumentation amid, on, with, and in data. In A. Hess & A. Davisson (Eds.), *Theorizing Digital Rhetoric* (pp. 126-139). Routledge.
- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- Liu, C. & Wang, W. (2021). Knowledge creation in pandemic time: Challenges and opportunities. *Issues in Information Systems*, 22(1), 306-319.
- Maher, S. & Zollman, Z. (2021). "Into the unknown": Supervising teacher candidates during the 2020 COVID-19 pandemic. *Journal of Teaching and Learning with Technology*, 10, 158-163.
- McMurtrie, B. (2022, April 5). A "stunning" level of student disconnection. *Chronicle of Higher Education*. <https://www.chronicle.com/article/a-stunning-level-of-student-disconnection>
- Mervosh, S. (2021, July 28). The pandemic hurt these students the most. *The New York Times*. <https://www.nytimes.com/2021/07/28/us/covid-schools-at-home-learning-study.html>
- Meyer, J. & Land, R. (2003). Threshold concepts and troublesome knowledge: Linkages to ways of thinking and practising within the disciplines. In C. Rust (Ed.), *Improving student learning—ten years on* (pp. 412-424). Edinburgh: University of Edinburgh.
- Miller, C. A. & Wyborn, C. (2020). Co-production in global sustainability: Histories and theories. *Environmental Science & Policy*, 113, 88-95.
- Nordstrom, G. (2021). *A writing center practitioner's inquiry into collaboration: Pedagogy, practice, and research*. Oxfordshire: Routledge.
- Pierangeli, L. T. & Lenhart, C. M. (2018). Service-learning: Promoting empathy through the point-in-time count of homeless populations. *Journal of Nursing Education*, 57(7). <https://doi.org/10.3928/01484834-20180618-10>
- Poe, M. (2022). Learning to unlearn the teaching and assessment of academic writing. *Discourse and Writing/Rédactologie*, 32(1), 161-190. <https://doi.org/10.31468/dwr.977>
- Ofgang, E. (2021, June 1). 5 learning gains made during the pandemic. *Tech & Learning*. <https://www.techlearning.com/news/5-learning-gains-made-during-the-pandemic>
- Ottman, R. D. (2021). *Theorizing eloquence as a means-driven process of recursive invention*. Doctoral dissertation. Bloomington: Indiana University.
- Roberts, P. (2019). Looking for the rural: Epistemic absences and cultural silence. In A. Reid & D. Price (Eds.), *The Australian Curriculum: Promises, Problems and Possibilities* (pp. 201-210). Deakin West: Australian Curriculum Studies Association.



- Rose, K. & Grauman, J. (2020). Motivational scaffolding's potential for inviting transfer in writing center collaborations. In B. Devet & D. L. Driscoll (Eds.), *Transfer of Learning in the Writing Center*. <https://wlnjournal.org/digitaleditedcollection2/RoseandGrauman.html>
- Rosenberg, B. (2021, March 24). It's time to rethink higher education. *The Chronicle of Higher Education*. <https://community.chronicle.com/news/2515-it-s-time-to-rethink-higher-education?cid=VTEVPMSED1>
- Schrivers, K. (2012). What we know about expertise in professional communication. In V. W. Berninger (Ed.), *Past, Present, and Future Contributions of Cognitive Writing Research to Cognitive Psychology* (pp. 275-312). New York: Psychology Press.
- Sorensen, N. (2022). Developing the improvising teacher: Implications for professionalism and the development of expertise. In H. King (Ed.), *Developing Expertise for Teaching in Higher Education* (pp. 218-30). Routledge.
- Strait, J. & Sauer, T. (2004). Constructing experiential learning for online courses: The birth of e-service. *Educause Quarterly*, 1, 62-5.
- Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge: Cambridge University Press.
- Swales, J. M. & Feak, C. B. (2012). *Academic writing for graduate students*. Ann Arbor: University of Michigan Press.
- Swarts, J. (2018). Locating and describing the work of technical communication in an online user network. *IEEE Transactions on Professional Communication*, 61(4), 356-71.
- Turnley, M. (2007). Integrating critical approaches to technology and service-learning projects. *Technical Communication Quarterly*, 16(1), 103-23.
- Van der Spoel, I., Noroozi, O., Schuurink, E. & van Ginkel, S. (2020). Teachers' online teaching expectations and experiences during the Covid-19 pandemic in the Netherlands. *European Journal of Teacher Education*, 43(4), 623-38.
- Wang, X., Hegde, S., Son, C., Keller, B., Smith, A., & Sasangohar, F. (2020). Investigating mental health of US college students during the COVID-19 pandemic: Cross-sectional survey study. *Journal of Medical Internet Research*, 22(9), e22817.
- Wenger, E. (1999). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.
- Wenger, E., McDermott, R. A., & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Brighton: Harvard Business Review Press.

Winsor, D. (2001). Learning to do knowledge work in systems of distributed cognition. *Journal of Business and Technical Communication*, 15(1), 5-28.

Zwanch, K. & Cribbs, J. A. (2021). Study of motivation and engagement in teacher education: Students' perceptions of moving to online instruction in response to a pandemic. *Journal of Technology and Teacher Education*, 29(1), 91-119.