

CHAPTER 1

ADAPTIVE TRANSFER, WRITING ACROSS THE CURRICULUM, AND SECOND LANGUAGE WRITING: IMPLICATIONS FOR RESEARCH AND TEACHING

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This chapter discusses how the framework of adaptive transfer might encourage more culturally and linguistically inclusive Writing Across the Curriculum (WAC) theory and practice regarding multilingual writers. Drawing upon the shared insights on learning transfer in educational psychology, education, and human resource development, we define adaptive transfer as the conscious or intuitive process of applying or reshaping learned writing knowledge in new and potentially unfamiliar writing situations. In tracing the implications of this framework for WAC research and teaching, this chapter aims to provide WAC scholars a means to better understand the complex ways in which multilingual writers learn to write across contexts.

We need to ask ourselves: how can WAC/WID programs more effectively encourage *Multilingual Learning Across the Curriculum*? How can we find opportunities [...] to allow students to *use* those multilingual skills in an academic context?

—Jonathan Hall, “WAC/WID in the Next America”

[T]ransfer is often difficult to find because we tend to think about it from a perspective that blinds us to its presence. Prevailing theories and methods of measuring transfer work well for studying full blown expertise, but they represent too blunt an instrument for smaller changes in learning that lead to the development of expertise.

—John D. Bradford and Daniel L. Schwartz,
“Rethinking Transfer”

In our 2011 *Journal of Second Language Writing* article, “Toward a Theory of Adaptive Transfer: Expanding Disciplinary Discussions of ‘Transfer’ in Second-Language Writing and Composition Studies,” we argued that discussions of transfer in second language (L2) writing studies and composition studies have focused primarily on the *reuse* of past learning and thus have not adequately accounted for the adaptation of learned writing knowledge in unfamiliar situations. Our goal in that article was to expand disciplinary discussions of transfer in L2 writing and composition studies by theorizing adaptive transfer, a construct forged from collective insights on transfer of learning in the fields of educational psychology, education, and human resource development. In an effort to extend that work, this chapter discusses how the framework of adaptive transfer might encourage more culturally and linguistically inclusive research and teaching practices related to multilingual writers across the curriculum. In tracing the implications of this framework for Writing Across the Curriculum (WAC) theory and practice, this chapter aims to provide WAC scholars a means to better understand the complex ways in which multilingual writers learn to write across contexts. It does so in response to an exigency that Jonathan Hall (2009) articulates: “The new reality to which we must adjust in US higher education is that *multilingual learners are part of the mainstream*” (p. 37). As such, it is incumbent upon WAC specialists to account for how multilingual writers negotiate the various rhetorical situations in which they find themselves.

Following from the 2009 *CCCC Statement on Second Language Writing and Writers*, which calls WAC specialists to account for multilingual writers in research initiatives and teaching practices, we focus our discussion on the following questions:

Research: In what ways might adaptive transfer inform research on multilingual writers across the curriculum?

Teaching with Writing in the Disciplines (WID): How might adaptive transfer inform L2 writing instruction across the curriculum?

In what follows, we first discuss research on transfer in WAC and L2 writing scholarship and highlight the narrowly conceptualized notions of transfer that have informed these disciplinary discussions. We then provide an overview of adaptive transfer, explaining how it is distinct from traditional transfer. Finally, we discuss the implications of adaptive transfer for WAC research and teaching with WID, particularly in relation to multilingual writers.

ADAPTIVE TRANSFER DEFINED

For more than two decades, research on transfer of learning has been an area of critical concern for scholars in WAC (Carroll, 2002; Dively & Nelms, 2007; McCarthy, 1987; Russell, 1995, 2001; Walvoord & McCarthy, 1990), composition (Bergmann & Zepernick, 2007; Brent, 2012; Dias, Freedman, Medway, & Paré, 1999; Downs & Wardle, 2007; Haswell et al., 1999; Petraglia, 1995; Russell, 1995; Smit, 2004; Voss, 1989; Wardle, 2007, 2009), and L2 writing (Currie, 1999; James, 2006a, 2006b, 2009; Johns, 1997; Leki, 1995; Leki & Carson, 1997; Snow, 1993; Spack, 1997). Attention to transfer among WAC scholars has occurred primarily in the context of debates surrounding the efficacy of first-year writing (FYW) courses. In examining whether or not general writing skills instruction (GWSI) courses sufficiently prepare students to write in subsequent disciplinary and professional contexts, compositionists have aimed to determine the kinds of knowledge and skills that transfer when students transition from one writing context to another. Among L2 writing specialists, discussions of transfer have also been important, especially to research on contrastive rhetoric (CR) and English for academic purposes (EAP). For scholars working in CR, transfer of learning is a key area of interest, because CR researchers have aimed to identify rhetorical patterns that are unique to each language and culture in order that they might offer multilingual learners strategies for facilitating the transfer of rhetorical knowledge from a first language (L1) to a second language (L2) (Connor, 1996; Grabe & Kaplan, 1989; Hinds, 1983a, 1983b, 1990; Kang, 2005; Kaplan, 1966, 1988; Kobayashi, 1984; Kubota, 1998; Oi, 1984; Simpson, 2000). In the case of EAP research, questions about learning transfer have been a primary concern because they relate in significant ways to arguments concerning the extent to which EAP courses prepare multilingual writers for coursework in their disciplines (Belcher, 1995; Belcher & Braine, 1995; Currie, 1999; James, 2006a, 2008, 2009; Johns, 1995, 1997; Leki, 1995, 2007; Leki & Carson, 1997; Riazi, 1997; Snow, 1993; Spack, 1988, 1997; Swales, 1990).

In surveying how transfer has been discussed in WAC, composition, and L2 writing scholarship, we contend that scholars have focused primarily on the *reuse* of past learning and thus have not adequately accounted for the adaptation of learned writing knowledge in unfamiliar situations (see DePalma & Ringer, 2011 for a full critique of traditional notions of transfer). As we explain in our 2011 article, definitions of transfer have implied that transfer does not occur unless skills learned in one context are consistently applied in other settings. Such emphasis on application limits transfer to the *reuse* of writing skills and prevents researchers from acknowledging what *does* happen when students encounter novel rhetorical situations. Narrow conceptualizations of transfer also ignore the agency of writers; assume the initial and target writing contexts are stable; reduce readers to decoders; deflect attention away from the moves students make to reshape and reform learned writing skills to fit new tasks; and neglect other important forms of transfer, such as lateral, vertical, near, far, literal, or figural transfer (see Haskell, 1998 and Royer, Mestre, & Dufresne, 2005 for discussions of various types of transfer).

As an alternative to traditional notions of transfer, we thus offer the construct of adaptive transfer. Drawing on the shared insights about learning transfer in educational psychology, education, and human resource development (Beech, 1999; Bradford & Schwartz, 1999; Broudy, 1977; Dyson, 1999; Greeno, Smith, & Moore, 1993; Haskell, 1998; Lave, 1988; Lave & Wenger, 1991; Royer, 1979; Royer, Mestre, & Dufresne, 2005; Wenger, 1998), we define adaptive transfer as a writer's conscious or intuitive process of applying or reshaping learned writing knowledge in order to negotiate new and potentially unfamiliar writing situations (DePalma and Ringer, 2011, p. 141). Specifically, adaptive transfer is *dynamic*, because it is premised on the notion that writing practices learned in one context may be reused or reshaped in another, thus allowing space for change and fluidity (Lobato, 2003; Matsuda, 1997; Parks, 2001). Processes of adaptive transfer are also *idiosyncratic* in that they are particular to individual learners and influenced by factors such as language repertoire, race, class, gender, educational history, social setting, genre knowledge, and so forth (Lobato, 2003). Adaptive transfer is also *cross-contextual*, occurring when learners recognize a resemblance between a familiar writing situation in which a skill was learned and an unfamiliar writing situation in which rhetorical production is required (Lobato, 2003; Pierce, Duncan, Gholson, Ray, & Kamhi, 1993, p. 67). Likewise, adaptive transfer is *rhetorical*, meaning that it takes place when a writer understands that the context, audience, and purpose of a text influence what is suitable; furthermore, adaptive transfer makes space for the possibility that differences in students' texts are "matters of design" (Lu, 2004, p. 26) or the result of a "strategic and creative choice by the author to attain his or her rhetorical objectives" (Canagarajah,

2006b, p. 591). Related to this, adaptive transfer is *multilingual* in that it views all language and varieties of language as fluid and in process, and it recognizes the agency of writers to draw from among a variety of discourses and languages in order to influence contexts of writing (Canagarajah, 2006a; Horner & Lu, 2007; Horner & Trimbur, 2002; Lu, 2006; Matsuda, 2002). Finally, adaptive transfer is *transformative*. It recognizes that writers shape and are shaped by rhetorical practice, and, as such, it allows for the possibility that newcomers working with a genre might act as brokers who introduce new ways of seeing, doing, or knowing into writing practice (Beech, 1999; Wenger, 1998).

Given these characteristics, we argue that adaptive transfer offers WAC specialists a theoretical construct that will help reveal the complex ways in which multilingual writers learn to write across disciplines. It does so by emphasizing the agency of individual writers—“the processes by which learners form personal relations of similarities across situations, whether or not those connections are correct or normative” (Lobato, 2003, p. 20). Adaptive transfer thus provides a terministic screen that names what *does* happen when students traverse rhetorical contexts.

One empirical study that illustrates adaptive transfer is Susan Parks’ (2001) “Moving from School to the Workplace.” In her study of eleven francophone nurses transitioning from their respective French-speaking universities in Quebec, Canada to an English-speaking hospital in Montreal, Canada, Parks (2001) describes the ways these nurses adapted their prior writing knowledge to fit a new context. The locus of adaptive transfer in Parks’ (2001) study is a genre known as care plans. As university students, the nurses viewed care plans as simply a school-based genre that would be of little use in the workplace. As these nurses shifted from an academic to a workplace setting, however, they started to see the significance of the genre to their professional work and “began to perceive differences between the way they had done care plans while at university and those which they had begun to do on the units” (p. 415). One of the key differences the nurses recognized between the genre knowledge they acquired in school and the writing of care plans in a hospital setting was the level of detail required and the structure of the care plans.

In their university coursework, the nurses had been taught to construct a detailed three-part care plan, outlining a patient’s diagnosis, cause of illness, and symptoms. When writing the care plans, they were also instructed to steer away from the language of medical diagnosis. Through their interactions with colleagues and the genre of the care plan in a hospital setting, however, they recognized that the care plan did not often take the detailed three-part structure that they had been taught to use in school, and they realized that the language of medical diagnosis was encouraged in the writing of care plans

in their professional context. Recognizing these crucial differences led to the simplification of their care plans—a reshaping which might at first glance appear to indicate linguistic incompetence or a lack of genre knowledge. As Parks (2001) explains, however, “the francophone nurses were simplifying the way they wrote care plans, not because they lacked language *per se*, but in response to the influence of peers” (pp. 417-418). In other words, the nurses were adapting a school-based genre to their socio-rhetorical situation; their use of “more simplified rhetorical structures emerged as a result of intersubjective functioning” (p. 417). Moreover, Parks (2001) explains that the ways the individual nurses engaged with this genre were influenced by their perceptions of the genre and the motives or purposes they associated with it—dispositions which were informed by their beliefs and personal histories (p. 408). In sum, the reshaping of the nurses’ prior writing knowledge was not only a response to the demands of their new context, but was also adapted on the basis of their socio-rhetorical situation and each nurse’s perceptions of and interactions with the genre. They adapted what they knew to fit a new context.

Another study that highlights adaptive transfer comes from A. Suresh Canagarajah (2006b). In his discussion of a Tamil scholar’s construction of his introduction for three different research articles—one in his native language for a Sri Lankan publication, one in English for a Sri Lankan publication, and one in English for a European publication—Canagarajah (2006b) details how K. Sivatamby imports rhetorical patterns from his native culture into his academic writing for a Western audience. Sivatamby is, in our terms, adapting a rhetorical form related to his Tamil background for Western academics. In the process, he creates a “multivocal discourse that merges the strengths of [Sri Lankan] scholarly discourse with the dominant conventions of mainstream academic discourse” (Canagarajah, 2006b, p. 598). In the paper written for a Western academic audience, for instance, Sivatamby adopts the same narrative structure he uses in the papers written for the Sri Lankan audience. He does so, though, by couching his narrative analysis in rhetorical moves that would be familiar to Western readers, namely a statement of academic significance, explicit identification of the problem he is addressing, and a forecasting statement regarding his argument. In short, Sivatamby invents what Canagarajah (2006b) calls a “hybrid text,” one wherein he adapts writing knowledge from one cultural, linguistic context to fit another. In so doing, Canagarajah (2006b) argues, Sivatamby illustrates the mutability of rhetorical forms and contexts, which corresponds to adaptive transfer’s transformative nature, what we often refer to in this chapter as “reshaping.”

We recognize that Sivatamby is a scholar and not a student in WAC courses. (For an example of a multilingual graduate student “reshaping” writing as he

writes across a multidisciplinary MA program, see Phillips in this collection.) And yet Canagarajah (2006b) uses this example to argue for the need to recognize that multilingual students' native languages and cultures should be treated as resources instead of as problems. Adaptive transfer similarly recognizes multilingual students' diverse backgrounds as resources, though it does not assume every instance of reshaping will be intentional or appropriate. What it does do is provide a set of terms for understanding the complexity of learning to write across contexts, complexity that Canagarajah (2006b) and Parks (2001) illustrate. Specifically, their examples call attention to the dynamic nature of writing knowledge, rhetorical contexts, and genres of writing; highlight the idiosyncratic ways individuals perceive and interact with genres; emphasize the shift from one context to another; and acknowledge the rhetorical manner in which individuals envision how to reshape what they know to fit a new context. Though not about multilingual writers, Lobato's (2003) study of high school algebra students and Brent's (2012) case studies of undergraduates in writing co-ops also provide useful examples of the kinds of reshaping that the framework of adaptive transfer allows writing specialists to identify.

IMPLICATIONS OF ADAPTIVE TRANSFER FOR WAC RESEARCH AND TEACHING

In this section, we explore adaptive transfer's implications for WAC programs, paying particular attention to how it can help such programs adopt culturally inclusive practices regarding multilingual writers. We suggest how adaptive transfer can help reframe questions about multilingual writers across the curriculum by informing WAC research and teaching with WID.

RESEARCH

We see adaptive transfer as a lens through which WAC research can be problematized and extended, particularly in regard to how multilingual writers navigate diverse writing demands across the curriculum. Adaptive transfer invites WAC scholars to reframe the questions they ask when researching multilingual writers in WAC programs and to adopt multilayered methodological approaches similar to the ones employed by Parks (2001) and Lobato (2003). Specifically, the framework of adaptive transfer significantly shapes the kinds of questions WAC scholars ask about how multilingual and native English speaking (NES) students learn to write across the disciplines. To demonstrate this, we discuss at length a study that has bearing on WAC, ESL, and transfer: Ilona Leki's (1995)

“Coping Strategies of ESL students in Writing Tasks across the Curriculum.” We then discuss two methods that can help researchers identify and understand the diverse ways in which NES and multilingual students navigate unfamiliar writing situations—focus groups and classroom-based reflective writing.

Lamenting the fact that little research existed about ESL experiences in writing courses across the curriculum, Leki’s (1995) purpose in her study was “to develop insights into the academic literacy experiences across the curriculum” of multilingual writers. Specifically, she sought to learn “about how ESL students acquire forms and attitudes specific to various disciplinary discourses [and] how their experiences in disciplinary courses shape their understandings of appropriate and inappropriate discourse within those disciplines” (p. 237). Leki (1995) interviewed five ESL students, three graduate students and two undergraduates, whose majors included business, political science, speech, and education. Two of the students were from China and one each was from Taiwan, France, and Finland. Leki (1995) interviewed each student on a weekly basis, observed several classes, analyzed the students’ writings, and interviewed their instructors. Based on the data gathered, Leki (1995) identified recurring themes and developed ten categories as a coding scheme. Of the ten coping strategies Leki (1995) identified, two speak directly to questions of transfer: “Relying on past writing experiences” and “Using current or past ESL writing training” (p. 240). (Chapters by Center and Niestepski and Phillips in this collection also draw from Leki’s schema to describe the variety of coping strategies their L2 student informants employed to respond to the reading and writing demands of their courses.)

Leki’s (1995) overall summary of her findings points toward a key aspect of adaptive transfer: “Although different students in this study used strategies to varying degrees, they all also displayed the flexibility necessary to shift among strategies as needed” (p. 241). While clearly aimed at flexibility in terms of shifting from one strategy to another, this statement nonetheless points toward several of the key characteristics of adaptive transfer, namely that it is idiosyncratic, rhetorical, and cross-contextual. As Leki (1995) shows, such flexibility results from each student’s individual background and particular rhetorical situation.

One student Leki (1995) discusses is particularly relevant to adaptive transfer. Julie, an undergraduate business major from France, is described by Leki (1995) as “probably the most successful” student of the five (p. 242). Much of the reason why she was so successful centered on the fact that she “came equipped with a clear, conscious approach to her work” that involved “strategies ... for using past writing experiences” (Leki, 1995, p. 242). Julie had been carefully trained in the French rhetorical style and said that if she felt

disorganized, she could always fall back on the three-part framing strategy for writing essays, namely thesis/antithesis/synthesis—look at a topic and develop a position, a counter position, and a synthesizing position. Though Leki (1995) admits that “the rigidity of the structure hemmed [Julie] in and constrained the expansive style she preferred” (p. 242), she does not discuss how Julie might (not) have adapted this strategy in later assignments. She does note, however, that in a later assignment, Julie resisted her teacher’s guidelines and abandoned the organizational structure that had served her so well. As Leki (1995) puts it, Julie “rewr[ote] the terms of the assignment to suit what she thought she could do best” (p. 242).

Leki’s discussion of Julie offers helpful ways to understand the differences between the kinds of questions traditional transfer would prompt versus the questions that adaptive transfer would raise. Encountering Julie, traditional transfer theorists might have asked questions like the following:

- What discursive features of the tripartite French rhetorical style, if any, did Julie transfer to her history term paper?
- If she transferred none, then what about the new rhetorical situation caused Julie to abandon the thesis/antithesis/synthesis structure?
- Is there a relationship between Julie’s decision to resist her professor’s assignment and her (in)ability to transfer knowledge from prior writing experiences? If so, what is that relationship?

While such questions could lead to productive insights regarding transfer, they could also limit researchers in terms of identifying a fuller range of the complexity associated with students learning to write across disciplines, genres, and contexts.

Questions derived from the framework of adaptive transfer, on the other hand, would allow researchers to account for a broader range of phenomena:

- How might Julie’s background as a native speaker of French allow her to negotiate the novel rhetorical demands of writing the term paper for her history course?
- In what ways might Julie have transformed or adapted the tripartite French rhetorical structure to help her write her history paper? In other words, how might the theory of adaptive transfer reveal ways in which Julie didn’t fully abandon that structure but rather reshaped and repurposed key elements of it?
- How might Julie’s resistance toward her professor’s assignment reflect what Canagarajah (2006b) has called “a strategic and creative choice by the author to attain his or her rhetorical objectives” (p. 591)?
- In resisting her professor’s assignment and potentially adapting the tripartite French rhetorical structure, how might Julie have functioned as a

broker (Wenger, 1998) and thus introduced new ways of seeing, doing, and knowing to her academic community of practice?

Our purpose here is not to critique Leki (1995) but rather to show how adaptive transfer could help WAC scholars identify the complex, idiosyncratic ways in which multilingual writers such as Julie might be reshaping prior writing knowledge to fit new contexts. Adaptive transfer offers a lens, in other words, that can help WAC researchers acknowledge the complexity associated with multilingual writers writing across the curriculum. As Russell (2001) notes in his review essay of naturalistic studies in WAC/WID, “qualitative studies point faculty and program directors beyond the research for universal or autonomous approaches toward much more messy—and human—factors” (p. 261). Adaptive transfer, we contend, offers researcher a way to “see” this messiness more fully than traditional notions of transfer allow.

While Leki’s (1995) intention was not to explore transfer or adaptive transfer, her study does provide insight into how WAC scholars might go about researching how multilingual writers learn to write across the curriculum. It also points to the benefit of designing multilayered methodologies that employ textual analysis, interviews, observations, rhetorical analysis, and genre analysis to explore adaptive transfer (see also Canagarajah, 2006b; Lobato, 2003; Parks, 2001). Recent WAC research that reflects this emphasis on multifaceted methodologies could also provide WAC scholars with a fuller understanding of how multilingual and native English speakers learn to write across disciplines, genres, and contexts. One example is Stitt-Bergh and Hilgers’s (2009) recent discussion of WAC assessment at the University of Hawai’i at Manoa (UHM)—an example that is particularly relevant to our discussion given that Hawai’i recognizes Hawaiian as an official language.

In their article, Stitt-Bergh and Hilgers (2009) name a variety of methods that, if reconceived through the lens of adaptive transfer, could help expand WAC scholarship in productive ways. Some of the methods they name, such as interviews and text analysis, parallel those that Leki (1995) employed. But they also name several additional methodologies that could be useful, including ethnography, focus groups, and surveys. Given their interactional nature, focus groups might be ideally suited to helping WAC researchers identify instances of adaptive transfer, whether with alumni or current students. Focus groups might be particularly useful to help WAC researchers understand how recent graduates reshape prior writing knowledge learned in academic contexts to professional ones. Specifically, focus groups comprised of recent graduates could provide insight into how students transitioned from course to course in university writing contexts and from academic writing contexts to professional writing contexts. As Stitt-Bergh and Hilgers (2009) put it, focus groups could

offer insight into “[a]lumni perceptions of workplace writing tasks and their level of preparedness to undertake those writing tasks” (Stitt-Bergh & Hilgers, 2009). Because participants in a focus group might be able to name instances of adaptive transfer more easily when they hear others do so, this approach could be particularly effective for multilingual writers. That said, focus group participants would need to be selected carefully. Participants, whether native English speakers or multilingual students, would need to have an awareness of and language for talking about how they negotiate the demands of shifting from one context to another. Our assumption is that advanced students or recent graduates would have a better-developed awareness and language than less experienced students.

To once again demonstrate how the theory of adaptive transfer could inform such research, we provide sample questions that researchers might ask in such focus groups. From the vantage of traditional transfer, such questions might include the following:

- Think about the writing you learned to do in college. How has it (not) prepared you to do the writing you’re now doing in your profession?
- Think about your background as a native speaker of _____. How did that background help or hinder your writing in different classes in college? How has it helped or hindered your workplace writing?
- Reflect back on the different classes you took that included significant writing. How did the writing that you learned to do in earlier classes (not) prepare you to do the writing you did in later classes?

Again, while such questions would certainly provide valuable data, questions reframed using the theory of adaptive transfer could lead to even richer insights:

- Think back on the different classes you took that included significant writing. Describe your process of working through new or unfamiliar writing tasks.
- Think about the writing you do in the workplace. Describe your process of working through new or unfamiliar writing tasks.
- Think about the writing you learned to do in college. In what ways have you had to reshape what you learned in school to fit what you need to do at work?
- Reflect back on the different classes you took that included significant writing. How did your background as a native speaker of _____ help you complete that writing?
- Think of moments when you were told you had made an error or done something wrong. In any of these moments, did you feel like what you did was really a different way of writing that you felt was valuable, useful, and/or original?

Using focus groups as means of studying instances of adaptive transfer has the potential to highlight the diverse linguistic resources of alumni, particularly in terms of the rhetorical patterns multilingual writers might draw on to negotiate unfamiliar writing contexts. Put otherwise, by using the lens of adaptive transfer to analyze the ways multilingual and NES alumni discuss their processes of reshaping in a focus group setting, WAC researchers could learn much about the ways writers adapt writing knowledge learned in one context to suit their rhetorical purposes in another. To get at these adaptations in analyzing focus group transcripts, WAC research might ask the following questions:

- In describing their processes of carrying out writing tasks, what kinds of linguistic resources, rhetorical knowledge, and writing experience do focus group participants discuss?
- How did the focus group participants reuse or reshape prior writing knowledge to suit new contexts?
- In what ways have focus group participants' backgrounds as multilingual writers enabled them to negotiate the novel rhetorical demands of writing in their university coursework and in their places of work?
- Are there cases in which the use of alternative discourses were “matters of design” (Lu, 2004, p. 26) or the result of a “strategic and creative choice by the author to attain his or her rhetorical objectives” (Canagarajah, 2006b, p. 591)?
- What do such cases suggest about the malleability of genres, discourses, or contexts of writing?

Finally, adaptive transfer could also inform classroom-based research. Reflective writing assignments are common in WAC and could be revised to help faculty account for students' processes of adaptive transfer; such writing could also provide datasets that WAC researchers could analyze with the aim of understanding the ways students adapt to new writing tasks. Thaiss and Zawacki (2006), for example, offer a range of practices that faculty across the disciplines might employ, one of which includes, “Give students opportunities for reflecting on their own growth as writers and rhetors, in the academy and as related to the workplaces they will enter” (p. 152). Central to our concerns, such assignments could help students, instructors, and WAC researchers identify how and when adaptive transfer might be occurring. Thaiss and Zawacki (2006) recognize that students are not “*tabula rasa[s]*” but rather “have a history as writers” that could “either help them in future situations or limit their understanding or performance” (p. 152-3). Many of the reflective assignments they suggest (e.g., literacy narratives, journals, blogs, or eportfolios) could help faculty and WAC researchers understand how students might be drawing on their “history as writers”—and on their multilingual backgrounds—to navigate novel rhetorical tasks.

One particular assignment invites students to “analyze current rhetorical tasks in the context of relevant challenges” associated with prior writing experiences (Thaiss & Zawacki, 2006, p. 153). From the vantage of adaptive transfer, such assignments could also invite multilingual students to analyze current rhetorical tasks in light of a number of other factors, including their linguistic backgrounds and the resemblances they perceive between one writing context and another (Lobato, 2003). Specifically, such assignments could prompt students to identify and describe the rhetorical patterns or linguistic features of their native languages or dialects and then consider how they might use or reshape those patterns to help them complete a current writing task. Teachers might use questions like the following to help their students frame a reflective writing assignment:

- How does this writing task compare with those you have encountered in the past?
- What previous writing experiences might help you fulfill this task?
- How might you need to adapt what you did previously to fit the current rhetorical situation?
- How might the way you talk, think, and write in your native language(s) help you fulfill this task?
- How might your approach to this task differ from the approach of native English speakers?

For WAC researchers, such writing could point to evidence of when and how students reshape or reuse prior writing knowledge in new contexts. To help them analyze these texts, researchers might use questions like the following:

- What resemblances across rhetorical contexts do students perceive? What do these resemblances suggest about the potential malleability and fluidity of genres, discourses, or rhetorical forms?
- What types of prior writing experiences do students identify as potentially helping them fulfill the current task? What do their comments regarding their idiosyncratic processes of adaptation tell us about the nature of adaptive transfer in general? What do their comments suggest about learning to write?
- How do multilingual students perceive their linguistic backgrounds as shaping how they approach current tasks? What do such perceptions tell researchers about the fluidity of languages and contexts of writing?

What evidence, if any, suggests that students are intentionally altering discourses as the result of a “strategic and creative choice by the author to attain his or her rhetorical objectives” (Canagarajah, 2006b, p. 591)?

Overall, the purposes of such measures would be to expand WAC researchers’ conceptions of what happens when students write across contexts by identifying

the diverse ways in which NES and multilingual students navigate unfamiliar writing situations. It would do so by highlighting the complexity of learning to write, particularly in terms of how individuals reuse or reshape prior rhetorical and linguistic knowledge in new contexts. Understanding how these reshaping occur may help WAC researchers and administrators develop programs that take advantage of multilingual and NES students' diverse resources. As a result, the insights gained from such research would likely have significant implications for faculty who teach with writing in the disciplines.

TEACHING WITH WRITING IN THE DISCIPLINES

Along with helping WAC researchers understand how students navigate novel writing situations, adaptive transfer also has significant implications for the pedagogical practices that WAC professionals promote as they guide faculty to teach with WID. More specifically, WAC specialists might offer the lens of adaptive transfer as means by which to reinvigorate how faculty teaching with WID view language and language change; student writers and texts; contexts of writing; and the aims of writing instruction. In using the lens of adaptive transfer to reshape how faculty understand the nature of learning to write and the aims of teaching with WID, WAC specialists will have an opportunity to address faculty expectations regarding the transfer of writing knowledge. They will also be able to influence the kinds of assignments and evaluation methods that faculty employ in their courses.

The aims of learning to write across the curriculum are often premised on traditional notions of transfer, as is evident in Condon's (2001) articulation of the responsibilities of WAC faculty:

Teachers—WAC faculty in particular—need to know what they can reasonably expect students to be able to do with and in writing, and they need to match those expectations with the level of expectations that are implicit in the teachers' own course objectives, objectives which, in turn, are determined by their location within the curriculum. Teachers need to know how to build more effective assignments—knowledge that involves both information about the writing students will do after taking a particular course (in careers or in subsequent courses) and information about the writing students have done to that point in the university's curriculum. (p. 31)

Though he does not mention transfer specifically, Condon (2001) is alluding to the possibility that students will be able to apply what they learned in prior courses when they encounter writing tasks in later courses or careers. As such, the implicit view of learning to write is that it occurs with a degree of predictability in terms of what students will learn, how they will learn it, and their ability to transfer such learning. While we certainly agree that it is important for faculty across the disciplines to understand where their course fits into the wider curriculum, we also contend that premising such discussions on traditional notions of transfer will likely result in unrealistic expectations: faculty will expect students to carry over generic, disciplinary, or rhetorical knowledge and will grow frustrated when this does not occur—a frustration that so often motivates criticisms leveled at first-year writing courses from faculty across the disciplines who complain that students “don’t know how to write.”

In drawing upon the framework of adaptive transfer to guide faculty teaching with WID, however, WAC professionals can promote a different picture of learning to write. Specifically, WAC specialists could use adaptive transfer to complicate faculty expectations regarding what students have learned prior to entering their courses and what they will do with that knowledge following those courses. Regarding multilingual students in particular, WAC professionals could offer adaptive transfer as a means by which to help faculty teaching with WID envision students not as passive recipients of writing knowledge, but as individuals with unique educational and linguistic backgrounds who may appropriate and transform prior or new writing knowledge for their own purposes (Canagarajah 2006b). This is not to say that every multilingual student will consciously reshape prior writing knowledge for his/her own ends, but it does provide space for this possibility. Likewise, WAC specialists might encourage faculty teaching with WID to consider the kinds of intuitive reshaping that may occur as students shift between writing contexts. In short, adaptive transfer might be productively used by WAC specialists to reinvigorate how faculty teaching with WID view language change, student texts, contexts of writing, and the purpose of writing instruction.

LANGUAGE

Adaptive transfer highlights the ways in which languages and language varieties are “always in process, located in and subject to ongoing and varying material practice” (Horner & Trimbur, 2002, p. 596). In recent years, specialists in second language (L2) writing have demonstrated the dynamic nature of language and the multiplicity of language uses (Canagarajah, 2002; Canagarajah, 2006a; Canagarajah, 2006b; Lu, 2004; Lu, 2006; Matsuda, 1997; Matsuda,

2002). These discussions have not only called attention to the need to alter views about language, but have also indicated the extent to which assumptions about writing and writing instruction must change if we are to adequately prepare NES and multilingual writers for the varied tasks they face as students and professionals. To this point, Horner and Trimbur (2002) argue, “If we grant that definitions of academic discourse and competence in it are arbitrary, then the notion of leading students through a fixed developmental sequence of stages to mastery of that language has to be rethought” (p. 620). Recognizing “the heterogeneity and fluctuating nature of writing” necessitates rethinking “how [instructors] design both individual writing courses and curricular programs” (Horner & Trimbur, 2002, p. 620). The framework of adaptive transfer helps to foreground the view that all language is invariably in flux. As such, adaptive transfer has the potential to help faculty across the curriculum rethink the ways that writing is taught in both L1 and L2 writing contexts. The lens of adaptive transfer, that is, might encourage faculty teaching with WID to adopt the kinds of culturally and linguistically inclusive approaches to writing instruction that L2 specialists have called for. These include the utilization of a “code meshing” strategy that will allow multilingual writers to blend standard written English (SWE) with other language varieties (Canagarajah, 2006a, 2006b); the adoption of pedagogical strategies for doing “Living-English Work” (Lu, 2006; p. 605); and the inclusion of pluralized forms of academic writing that have been brought to the fore by various scholars (Schroeder, Fox, & Bizzell, 2002; Thaiss & Zawacki, 2006).

STUDENT TEXTS

By encouraging progressive views of language use through the framework of adaptive transfer, WAC specialists can also help faculty teaching with WID consider how native English speakers and multilingual students might reshape writing skills they’ve learned in prior contexts to fit new ones. Working from an adaptive transfer perspective, that is, faculty teaching with WID might be less apt to claim that transfer did not occur when students’ texts disrupt their expectations. Instead, faculty might ask how students have attempted to adapt writing skills learned in other settings to their current rhetorical situation. Further, if students defy a disciplinary convention, faculty might be more likely to ask students why they made the rhetorical choices they did instead of dismissing those choices as signs of error. The view of language encouraged by the framework of adaptive transfer, in other words, might help broaden faculty perceptions of student texts. Rather than approaching student writing with preconceived notions about what student texts should look like, adaptive

transfer encourages faculty to recognize when students attempt to reshape prior knowledge to suit both the demands of the rhetorical situation and students' own objectives.

Such a reconception of student writers and texts could certainly inform teachers' processes of evaluation. For example, faculty working from the perspective of adaptive transfer might ask student writers to complete the kind of reflective writing we discussed earlier. Asking students to "analyze current rhetorical tasks in the context of relevant challenges of the writer's past" (Thaiss & Zawacki, 2006, p. 153) could lead to productive insights for faculty regarding students' writing knowledge, processes, histories, and challenges. By prompting students as Thaiss and Zawacki (2006) suggest, faculty teaching with WID are apt to learn valuable information about the assumptions guiding each writer's rhetorical and linguistic choices. For example, if Leki's (1995) student Julie had been provided an opportunity to reflect on the rhetorical choices she was making while composing her history paper, her teacher may have gained important insights into Julie's reasons for "rewriting the terms of the assignment to suit what she thought she could do best" (Leki, 1995, p. 243). Such information would have been valuable in evaluating Julie's written work because it would have highlighted her rhetorical processes of adaptive transfer. Specifically, it would have underscored that Julie's resistance resulted from a "strategic and creative choice [...] to attain [...] her rhetorical objectives" (Canagarajah, 2006b, p. 591). Such reflective writing could play an even more significant role for students who similarly rewrite assignments but do not fare as well as Julie. In such cases, faculty teaching with WID who know *why* students chose to write an assignment differently would be able to take such motives into account when evaluating written work.

Using this kind of reflective writing as part of teachers' processes of evaluating student texts might also allow faculty teaching with WID to see how factors such as race, class, gender, socioeconomic status, educational history, genre knowledge, and language repertoire shape how individuals encounter new writing situations (DePalma & Ringer, 2011; Zamel & Spack, 2006). Finally, such reflective writing will likely encourage faculty to more readily account for the highly diverse ways in which students will learn to write in new genres, disciplines, and contexts.

CONTEXTS OF WRITING

Along with informing how faculty teaching with WID interact with students' texts, adaptive transfer might also encourage faculty to embrace a dynamic theory of writing, which has implications for both native English speakers

and multilingual writers. In the dynamic model of multilingual writing that Matsuda (1997) proposes, both the writer's and the reader's backgrounds are included in the context of writing. Matsuda (1997) defines this space as "the dynamic environment that surrounds the meeting of the writer and the reader through the text in a particular writing situation" (p. 248). Because adaptive transfer stems from a dynamic view of writing that views contexts for writing as shared, negotiated, and constantly in flux, adaptive transfer has the potential to alter faculty members' views of and attitudes toward NES and multilingual writers across the curriculum. Rather than viewing students solely as novice writers with little to contribute to the discourse communities they are seeking to enter, adaptive transfer encourages faculty to see students as agents who possess a range of valuable language resources and knowledge that might shape their writing in productive ways. Students are thus reconceived of as potential contributors to an ever-changing rhetorical context rather than as repositories of genre knowledge and conventions. They are, in other words, *transformers* rather than *transferers* of writing knowledge and writing contexts (Brent, 2012). When thinking in terms of adaptive transfer, that is, faculty would be more likely to ask how students' texts might influence contexts of writing.

AIMS OF WRITING INSTRUCTION

In addition to influencing the ways faculty across the curriculum approach student texts and view student writers, adaptive transfer also has significant implications for how faculty teaching with WID understand the aims of writing instruction. Rather than seeing the goal of writing instruction as teaching students to master discourses of power, adaptive transfer foregrounds a pedagogy that allows students to question writing conventions at the same time that they are being taught to practice them. Because of this, adaptive transfer might encourage faculty to adopt an alternative discourses approach, such as that noted by Thaiss and Zawacki (2006). Whereas traditional pedagogies assume that all students desire to learn dominant discourses, an alternative discourses approach that informs adaptive transfer might help faculty acknowledge that students have different reasons for learning to write, one of which may include the desire to change contexts of writing. Thaiss and Zawacki (2006), for instance, note that the faculty they interviewed recognized "the dynamism of disciplines," such that "a teacher preparing students for academic writing would be hard pressed to label any discursive practice always unacceptable" (p. 137). Thus, rather than *only* using the expectations of the instructor's academic discourse community as a basis for determining instructional aims, adaptive transfer might urge faculty

to also view students' strategic design to create new discourses as a legitimate goal of writing instruction in the disciplines.

While we would be remiss to argue that multilingual students' various reshaping are always conscious and strategic, we would be equally remiss to argue that they never are (Canagarajah, 2006b). In some cases, the decision to depart from disciplinary conventions is purposeful, and the framework of adaptive transfer helps us to recognize this kind of intentional reshaping. When considering adaptive transfer as a guide in structuring curricular goals, faculty members' ideas about how to encourage students to reshape and reform learned writing skills to fit new tasks are liable to shift. Instead of setting the reuse of disciplinary conventions as the primary goal of instruction, the framework of adaptive transfer might prompt faculty members to adopt a multilingual approach that takes full advantage of students' diverse rhetorical and linguistic resources.

CONCLUSION

Adaptive transfer has significant implications for multilingual and NES writers across the curriculum and for the WAC programs that support them. It thus serves as a framework that can help WAC scholars and faculty adjust their practices in ways that effectively serve the growing population of multilingual learners in US higher education. As we continue to realize the "New America" in which we live—an America, as Hall (2009) writes, wherein multilingualism is now more common than monolingualism—it is imperative that WAC scholars account for the complex ways in which all students learn to write across the curriculum. In doing so, it is our hope that WAC scholars and faculty will be able to recognize multilingual writers' rhetorical and linguistic backgrounds as resources and not liabilities (Canagarajah, 2006b). We hope that the framework of adaptive transfer will help achieve such ends, so that WAC researchers and faculty across the disciplines can ethically and effectively help students learn to write—and value students' multilingual, idiosyncratic ways of writing and knowing as part of that enterprise.

REFERENCES

Beach, K. (1999). Consequential transitions: A sociocultural expedition beyond transfer in education. In A. Iran-Nejad & P. D. Pearson (Eds.), *Review*

- of research in education*, 24 (pp. 101-139). Washington, DC: American Educational Research Association.
- Belcher, D. (1995). Writing critically across the curriculum. In D. Belcher & G. Braine (Eds.), *Academic writing in a second language: Essays on research and pedagogy* (pp. 135-154). Norwood, NJ: Ablex.
- Belcher, D. & Braine, G. (1995). *Academic writing in a second language: Essays on research and pedagogy*. Norwood, NJ: Ablex.
- Bergmann, L. S. & Zepernick, J. (2007). Disciplinarity and transfer: Students' perceptions of learning to write. *WPA: Writing Program Administration*, 31(1/2), 124-49.
- Bloch, J., Condon, W., Hickey, D., McLeary, L., Matsuda, P. K., Rilling, S., and Palmquist, M. (2001). Connecting WAC and ESL? *Academic Writing*, 2. Retrieved from <http://wac.colostate.edu/aw/forums/>
- Bradford, J. D. & Schwartz, D. L. (1999). Rethinking transfer: A simple proposal with multiple implications. In A. Iran-Nejad & P. D. Pearson (Eds.), *Review of research in education*, 24 (pp. 61-100). Washington, DC: American Educational Research Association.
- Brent, D. (2012). Crossing boundaries: Co-op students relearning to write. *College Composition and Communication*, 63(4), 558-592.
- Broudy, H.S. (1977). Types of knowledge and purposes of education. In R. C. Anderson, R. J. Spiro, & W. E. Montague (Eds.), *Schooling and the acquisition of knowledge* (pp. 1-17). Hillsdale, NJ: Erlbaum.
- Canagarajah, A. S. (2002). *Critical academic writing and multilingual students*. Ann Arbor, MI: University of Michigan Press.
- Canagarajah, A. S. (2006a). The place of world Englishes in composition: Pluralization continued. *College Composition and Communication*, 57, 586-619.
- Canagarajah, A. S. (2006b). Toward a writing pedagogy of shuttling between languages: learning from multilingual writers. *College English*, 68, 589-604.
- Carroll, L. A. (2002). *Rehearsing new roles: How college students develop as writers*. Carbondale: Southern Illinois University Press.
- Condon, W. (2001). Accommodating complexity: WAC program evaluation in the age of accountability. In S. H. McLeod, E. Miraglia, M. Soven, & C. Thaiss (Eds.), *WAC for the new millennium: Strategies for continuing writing-across-the-curriculum programs* (pp. 28-51). Urbana, IL: NCTE.
- Conference on College Composition and Communication. (2009). *Statement on second language writing and writers*. Retrieved from <http://www.ncte.org/cccc/resources/positions/secondlangwriting>
- Connor, U. (1996). *Contrastive rhetoric: Cross-cultural aspects of second-language writing*. New York: Cambridge University Press.

- Currie, P. (1999). Transferable skills: Promoting student research. *English for Specific Purposes*, 18(1), 329-345.
- DePalma, M.-J. & Ringer, J. M. (2011). Toward a theory of adaptive transfer: Expanding disciplinary discussions of “transfer” in second-language writing and composition studies. *Journal of Second Language Writing*, 20(2), 134-47.
- Dias, P., Freedman, A., Medway, P., and Paré, A. (1999). *Worlds apart: Acting and writing in academic and workplace contexts*. Mahwah, NJ: Lawrence Erlbaum.
- Dively, R. L. & Nelms, G. (2007). Perceived roadblocks to transferring knowledge from first-year composition to writing-intensive major courses: A pilot study. *Writing Program Administration*, 31(1/2), 214-240.
- Downs, D. & Wardle, E. (2007). Teaching about writing, righting misconceptions: (Re)envisioning “first-year composition” as “introduction to writing studies.” *College Composition and Communication*, 58(4), 552-84.
- Dyson, A. H. (1999). Transforming transfer: Unruly children, contrary texts, and the persistence of pedagogical order. In A. Iran-Nejad & P. D. Pearson (Eds.), *Review of research in education*, 24 (pp. 141-171). Washington, DC: American Educational Research Association.
- Grabe, W. & Kaplan, R. B. (1989). Writing in a second language: Contrastive rhetoric. In D. M. Johnson & D. H. Rohen (Eds.), *Richness in writing: Empowering ESL students* (pp. 263-83). White Plains, NY: Longman.
- Greeno, J. G., Smith, D. R., & Moore, J. L. (1993). Transfer of situated learning. In D. K. Detterman and R. J. Sternberg (Eds.), *Transfer on trial: Intelligence, cognition, and instruction* (pp. 99-167). Norwood, NJ: Ablex Publishing Corporation.
- Hall, J. (2009). WAC/WID in the next America: Redefining professional identity in the age of the multilingual majority. *The WAC Journal*, 20. Retrieved from <http://wac.colostate.edu/journal/vol20/hall.pdf>
- Haskell, R. E. (1998). *Reengineering corporate training: Intellectual capital and transfer of learning*. Westport, CT: Quorum Books.
- Haswell, R. H., Briggs, T. L., Fay, J. A., Gillen, N. K., Harrill, R., Shupala, A. M., Trevino, S. S. (1999). Context and rhetorical reading strategies: Haas and Flower (1988) revisited. *Written Communication*, 16, 3-28.
- Hinds, J. (1983a). Contrastive rhetoric: Japanese and English. *Text*, 3(2), 183-95.
- Hinds, J. (1983b). Linguistics in written discourse in particular languages: Contrastive studies: English and Japanese. In R. B. Kaplan (Ed.), *Annual review of applied linguistics III* (pp. 78-84). Rowley, MA: Newbury House.
- Hinds, J. (1990). Inductive, deductive, quasi-inductive: Expository writing in Japanese, Korean, Chinese, and Thai. In U. Connor & A. M. Johns (Eds.),

- Coherence in writing: Research and pedagogical perspectives* (pp. 87-110). Alexandria, VA: TESOL.
- Horner, B. & Lu, M. (2007). *Resisting monolingualism in "English": Reading and writing the politics of language*. Paper presented at the University of New Hampshire, Durham, NH.
- Horner, B. & Trimbur, J. (2002). English only and US college composition. *College Composition and Communication*, 53, 594-630.
- James, M. A. (2006a). Teaching for transfer in ELT. *ELT Journal*, 60(2), 151-159.
- James, M. A. (2006b). Transfer of learning from a university content-based EAP course. *TESOL Quarterly*, 40, 783-806.
- James, M. A. (2009). "Far" transfer of learning outcomes from an ESL writing course: Can the gap be bridged? *Journal of Second Language Writing*, 18, 69-84.
- Johns, A. M. (1995). Teaching classroom and authentic genres: Initiating students into academic cultures and discourses. In D. Belcher & G. Braine (Eds.), *Academic writing in a second language: Essays on research and pedagogy* (pp. 277-91). Norwood, NJ: Ablex.
- Johns, A. M. (1997). *Text, role, and context: Developing academic literacies*. New York: Cambridge University Press.
- Kang, J. Y. (2005). Written narratives as an index of L2 competence in Korean EFL learners. *Journal of Second Language Writing*, 14, 259-79.
- Kaplan, R. B. (1966). Cultural thought patterns in intercultural education. *Language Learning*, 16, 1-20.
- Kaplan, R.B. (1988). Contrastive rhetoric and second language learning: Notes towards a theory of contrastive rhetoric. In A. C. Purves (Ed.), *Writing across languages and cultures* (pp. 275-304). Newbury Park, CA: Sage Publications.
- Kobayashi, H. (1984). Rhetorical patterns in English and Japanese. *Dissertation Abstracts International*, 45(S), 2425A.
- Kubota, R. (1998). An investigation of L1-L2 transfer in writing among Japanese university students: Implications for contrastive rhetoric. *Journal of Second Language Writing*, 7, 69-100.
- Lave, J. (1988). *Cognition in practice: Mind, mathematics, and culture in everyday life*. Cambridge, UK: Cambridge University Press.
- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Leki, I. (1995). Coping strategies of ESL students in writing tasks across the curriculum. *TESOL Quarterly*, 29(2), 235-260.
- Leki, I. (2007). *Undergraduates in a second language: Challenges and complexities of academic literacy development*. New York: Lawrence Erlbaum Associates.

- Leki, I., & Carson, J. G. (1997). "Completely different worlds": EAP and the writing experiences of ESL students in university courses. *TESOL Quarterly*, 31(1), 39-69.
- Lobato, J. (2003). How design experiments can inform a rethinking of transfer and vice versa. *Educational Researcher*, 32(1), 17-20.
- Lu, M. (2004). An essay on the work of composition: Composing English against the order of fast capitalism. *College Composition and Communication*, 56, 16-50.
- Lu, M. (2006). Living English work. *College English*, 68, 605-18.
- MacDonald, S. P. & Cooper, C. R. (1992). Contributions of academic and dialogic journals to writing about literature. In Herrington, A. & Moran, C. (Eds.), *Writing, teaching, and learning in the disciplines*. (pp. 137-155). New York: Modern Language Association.
- Matsuda, P. K. (1997). Contrastive rhetoric in context: A dynamic model of L2 writing. In T. Silva & P. K. Matsuda (Eds.), *Landmark essays on second language writing* (pp. 241-255). Mahwah, NJ: Erlbaum.
- Matsuda, P. K. (2002). Alternative discourses: a synthesis. In C. Schroeder, H. Fox, and P. Bizzell (Eds.), *ALT/DIS: Alternative discourses and the academy* (pp. 191-96). Portsmouth, NH: Boynton/Cook.
- McCarthy, L. P. (1987). A stranger in strange lands: a college student writing across the curriculum. *Research in the Teaching of English*, 21(3), 233-65.
- McLeod, S. H. & Miraglia, E. (2001). Writing across the curriculum in a time of change. In McLeod, S. H., Miraglia, E., Soven, M., and Thaiss, C. (Eds.), *WAC for the new millennium: Strategies for continuing writing-across-the-curriculum programs* (pp. 1-27). Urbana: NCTE.
- Oi, K. (1984). Cross-cultural differences in rhetorical patterning: A study of Japanese and English. *Dissertation Abstracts International*, 4, 5(8), 251 IA.
- Parks, S. (2001). Moving from school to the workplace: Disciplinary innovation, border crossings, and the reshaping of a written genre. *Applied Linguistics*, 22, 405-438.
- Petraglia, J. (1995). *Reconceiving writing, rethinking writing instruction*. Mahwah, NJ: Erlbaum.
- Pierce, K. A., Duncan, M. K., Gholson, B., Ray, G. E., & Kamhi, A. G. (1993). Cognitive load, schema acquisition, and procedural adaptation in nonisomorphic analogical transfer. *Journal of Educational Psychology*, 85, 66-74.
- Prior, P. A. (1998). *Writing/disciplinarity: A sociohistoric account of literate activity in the academy*. Mahwah, NJ: Erlbaum.
- Riazi, A. (1997). Acquiring disciplinary literacy: A social-cognitive analysis of text production and learning among Iranian graduate students of education. *Journal of Second Language Writing*, 6, 105-37.

- Royer, J. M. (1979). Theories of the transfer of learning. *Educational Psychologist, 14*, 53-69.
- Royer, J. M., Mestre, J. P., & Dufresne, R. J. (2005). Framing the transfer problem. In J. P. Mestre (Ed.), *Transfer of learning from a modern multidisciplinary perspective* (pp. vii-xxvi). Greenwich, CT: Information Age Publishing.
- Russell, D. (1995). Activity theory and its implications for writing instruction. In J. Petraglia (Ed.), *Reconceiving writing, rethinking writing instruction* (pp. 51-77). Mahwah, NJ: Erlbaum.
- Russell, D. (2001). Where do the naturalistic studies of WAC/WID point? A research review. In S. H. McLeod, E. Miraglia, M. Soven, & C. Thaiss (Eds.), *WAC for the new millennium: Strategies for continuing writing-across-the-curriculum programs* (pp. 259-98). Urbana: NCTE.
- Schroeder, C. L., Fox, H., & Bizzell, P. (2002). *ALT DIS: Alternative discourses and the academy*. Portsmouth, NH: Boynton/Cook.
- Simpson, J. M. (2000). Topical structure analysis of academic paragraphs in English and Spanish. *Journal of Second Language Writing, 9* (3), 239-309.
- Smit, D. W. (2004). *The end of composition studies*. Carbondale: Southern Illinois University Press.
- Snow, M. A. (1993). Discipline-based foreign language teaching: Implications from ESL/EFL. In M. Krueger & F. Ryan (Eds.), *Language and content: Discipline- and content-based approaches to language study*. Lexington, MA.: D.C. Heath & Co.
- Spack, R. (1988). Initiating ESL students into the academic discourse community: How far should we go? *TESOL Quarterly, 22*, 29-51.
- Spack, R. (1997). The acquisition of academic literacy in a second language: A longitudinal case study. *Written Communication, 14*(1), 3-62.
- Stitt-Bergh, M. & Hilgers, T. (2009, December 3). Program assessment: Processes, propagation, and culture change. [Special issue of Writing Across the Curriculum and Assessment] *Across the Disciplines, 6*. Retrieved from http://wac.colostate.edu/atd/assessment/stittbergh_hilgers.cfm
- Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge: Cambridge University Press.
- Thaiss, C., & Zawacki, T. M. (2006). *Engaged writers and dynamic disciplines: Research on the academic writing life*. Portsmouth, NH: Boynton/Cook Heinemann.
- Thomas, F. L. (2009, December 3). Developing a culture of writing at Virginia State University: A new writing emphasis. [Special issue of Writing Across the Curriculum and Assessment] *Across the Disciplines, 6*. Retrieved from <http://wac.colostate.edu/atd/assessment/thomas.cfm>

- Voss, J. F. (1989). On the composition of experts and novices. In E. Maimon, B. Nodine, & F. W. O'Connor (Eds.), *Thinking, reasoning, and writing* (pp. 69-84). New York: Longman.
- Walvoord, B. E. & McCarthy, L. P. (1990). *Thinking and writing in college: a naturalistic study of students in four disciplines*. Urbana: NCTE.
- Wardle, E. (2007). Understanding “transfer” from FYC: Preliminary results of a longitudinal study. *Writing Program Administration*, 31(1/2), 65-85.
- Wardle, E. (2009). “Mutt genres” and the goal of FYW: Can we help students write the genres of the university? *College Composition and Communication*, 60(4), 765-89.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. New York: Cambridge University Press.
- Zamel, V. & Spack, R. (Eds). (2004). *Crossing the curriculum: Multilingual learners in college classrooms*. Mahwah, NJ: Lawrence Erlbaum.