

1 Introduction

Writing studies scholars are relatively new to the study of transfer of learning, joining in conversations that date back over a century to the groundbreaking work of psychologist E. L. Thorndike. The current focus on transfer of learning in writing studies is often traced to Smit's (2004) challenge to "construct a writing curriculum so that such instruction in transfer is commonplace, indeed a major feature of the curriculum" (p. 134). In 2007, Beaufort's *College Writing and Beyond* and a trio of articles appearing in *WPA: Writing Program Administration* (Bergmann & Zepernick, 2007; Nelms & Dively, 2007; Wardle, 2007) answered that challenge, making pedagogical suggestions and posing research agendas of their own. Since that time, questions about transfer of learning have taken center stage within the field of writing studies—often, though not always, motivated by an institutional exigence to understand and perhaps defend the value of writing courses, especially first-year writing.

Signs of this interest are visible in multiple ways. Conference sessions devoted to transfer have risen at the Conference on College Composition and Communication as well as the conferences of the International Writing Center Association and the International Writing Across the Curriculum Association; for instance, by our count there were nearly four dozen panels at the 2017 CCCC taking transfer of learning as a central focus. The Elon Seminar on Critical Transitions (2011–2013) facilitated multi-institutional research projects on transfer for more than 40 international participants (with applications from more than 150 scholars); Elon has also launched a second Seminar on Writing Beyond the University: Fostering Writers' Lifelong Learning and Agency (2019–2021). Special issues on transfer of learning have

appeared in *Composition Forum* (2012) and *WLN* (formerly known as *Writing Lab Newsletter*) (2018). In 2019, scholars undertaking transfer-related studies were among the recipients of both a CCCC Research Initiative Award (Driscoll, Field-Rothschild, Powell, & Wells) and a CCCC Emergent Researcher Award (Bugdal).

Those seeking to understand how such a “new” area could blossom so quickly might point out that even before transfer of learning was named as a focus in the field, scholars studying writing in the disciplines conducted longitudinal studies of writers, seeking to understand how they repurposed their learning from earlier writing courses when facing subsequent challenges (e.g., Carroll, 2002; Chiseri-Strater, 1991; McCarthy, 1987; Sternglass, 1997). Arguably, the current focus on metacognition and self-monitoring in transfer scholarship has a progenitor in Flower and Hayes’s (1981) identification of the monitor as part of their cognitive process theory of writing as well as in Yancey’s (1998) work on reflection. Even references to Aristotle’s articulation of the *koina topoi*—meant to help rhetors generate arguments in any situation—might be seen as a very early example of how scholars in writing studies¹ have long taken an interest in composition strategies that are transferable across rhetorical contexts. Nevertheless, writing studies scholars seeking to study transfer of learning engage a phenomenon with a long, multidisciplinary history of scholarship—much of which is underrepresented in writing studies. This volume seeks to synthesize and make this wide-ranging scholarship accessible and useful to current and future transfer researchers and teachers in writing studies.

As part of the Reference Guides to Rhetoric and Composition series, the book aims to develop a more capacious understanding of transfer in writing studies, tracing both the distinct ways transfer has been engaged in a wide range of disciplinary fields and drawing connections among similar threads of inquiry. More specifically, we approach transfer research with a transdisciplinary aim. In this volume, we use *transdisciplinary* to mean the result of a systematic reading across disciplinary fields that creates a synthesis of intellectual frameworks that are holistic in their responses to complex problems (Choi & Pak, 2006). Choi and Pak suggest a useful definition: “Transdisciplinarity integrates the natural, social and health sciences in a humanities

1. We elect to use the term *writing studies* in an effort to encompass as fully as possible the many dimensions of the field of Rhetoric and Composition.

context, and in so doing transcends each of their traditional boundaries” (p. 359). Such an approach is especially valuable for questions of transfer, as a phenomenon that includes dynamic interplay of task, individual, and context (Wardle, 2007, pp. 66–67) and that matters to any field that seeks to move students from facilitated learning and training to agentic performance and action.

Our transdisciplinary approach is motivated by several goals. First, we aim to point writing studies researchers and teachers toward existing conversations about transfer in other fields. Our reference guide seeks to, in a way, help scholars not reinvent well-tread wheels. As Tardy (2017) aptly puts it, “the use of new terminology for established ideas can ultimately restrict our understanding of an issue by occluding relevant scholarship from view (p. 182; also see MacDonald [2007] and Matsuda [2013]). While Tardy especially wants scholars to avoid creating neologisms for existing terms under long examination, we also find her advice useful for considering how phenomena we name as *transfer* may have been problematized or challenged as such by other fields (see also Wardle [2007] and Nowacek [2011]). We hope to guide scholars to this relevant scholarship, both within writing studies and far afield in disciplines that may not immediately seem relevant to writing, rhetoric, or literacy problems and questions. Thus, our chapters compile and synthesize some of the most salient long-term debates around the term *transfer* that scholars in writing studies could fruitfully cite, challenge, or move forward from.

Second, we take a cue from research we read during the writing of this reference guide (see in particular the chapters on transfer in cognitive and industrial/organizational psychology) and propose that analogical reasoning across disciplines can expand what transfer means in writing studies. Beyond the classical rhetorical roots that will be familiar to many writing studies readers, analogy is taken up across fields to trace how individuals use the concepts and schemata they’ve developed from previous specific situations to make sense of a new context. Scholars like Nonaka (1991) argue that analogical thinking can help convert tacit knowledge into explicit knowledge “by linking contradictory things and ideas through metaphor” and then “by resolving those contradictions through analogy” (p. 101). Hargadon (1998) argues that analogy serves a linking function in which analogies “highlight non-obvious similarities between two things that appear to be dissimilar” and then prompt an individual facing a new problem to see

“non-obvious similarities in other problems he or she has faced in the past” (p. 219). An analogical approach shares a kinship with the transdisciplinary approach we have taken in this Reference Guide. As Choi and Pak (2006) explain, the “ambiguous and incongruous juxtaposition of heterogeneous information elements that are related through the operation of a transdisciplinary interface is likely to stimulate the emergence of new knowledge” (p. 357). The transdisciplinary themes that we present in our conclusion, which emerged as a result of our extensive cross-disciplinary reading, reflect these intellectual processes.

Putting writing studies scholars in the role of the “individual” in the research above, the utility of analogical reasoning about transfer comes into focus: writing studies scholars can convert tacit knowledge about the transfer of writing into explicit knowledge that can be taught, traced, or described; they might link seemingly dissimilar or contradictory transfer phenomena across disciplines for more theoretically grounded conclusions; they could generate new solutions or ideas about the transfer of writing knowledge by analyzing data for non-obvious similarities. As we write in Chapter 4 (“Transfer in Sports, Medical, Aviation, and Military Training”), treating the cross-disciplinary repetition of the term transfer analogically helps writing studies scholars “build out a more holistic and sophisticated theory of transfer to broaden where and how transfer of both writing-related knowledge and writing-related action can matter.” By building in analogic thinking about transfer across disciplines, we hope to avoid the missed connections that are common in random database searches for the term. As Hargadon (1998) notes, databases “gather and store information through a process of abstraction and categorization” that sometimes obscure “non-obvious connections between the current problem and past problems” (p. 221). Our aim is to facilitate these connections for readers of this reference guide.

Therefore, our cross-disciplinary presentation of transfer research through individual chapters in this book is motivated by our desire to help scholars link very long and broad transfer conversations, solve transfer problems in their teaching or research that are perhaps stumping them, and support both amplitude (more capacious understandings of writing transfer) and specificity (more detailed and relevant treatments of the term) in research on the transfer of writing knowledge. Optimally, this could lead us all to realize the “untapped potential of a truly transdisciplinary approach” to transfer, fostering the humility to

consider what the field may not yet be able to see because of our existing theoretical frames or analytic habits (Tardy, 2017, p. 187).

STUDYING TRANSFER THROUGH A TRANSDISCIPLINARY LENS: TENTATIVE DEFINITIONS

Readers have doubtless noticed that in this introduction we have not yet provided a definition of transfer. The transdisciplinary nature of our endeavor leads us to this necessary (if unsatisfying) conclusion: there is no one easy definition, for scholars debate these definitions within and across fields, based on significant differences in their theoretical frameworks and empirical data. Indeed, Baird and Dilger (2018) “inventoried over 20 metaphors for ‘adaptive transfer’ . . . each with a slightly different understanding of how transfer occurs, is learned, and can be taught” (p. 24). Nevertheless, we can note that any definition of transfer must wrestle with the relationship between transfer of learning and learning itself. A long tradition of scholarship sees these as distinct phenomena. Thorndike and Woodworth (1901), for instance, traced initial learning in one domain and tracked its possible influence on subsequent tasks. Even later cognitive psychologists who rejected the behaviorism of Thorndike’s theory of identical elements retained what is often called the two-problem paradigm: tracking the influence of initial learning upon later problem solving. Cognitivist studies of analogical reasoning rely on such a paradigm. The concept of negative transfer—defined as how “prior learning interferes with subsequent learning” (Schunk, 2004, p. 217)—also assumes a distinction between learning and transfer. This distinction is implicit in the entire field of “transfer of training”—whose very name suggests that initial training is a necessary precondition for subsequent transfer.

Other researchers, frequently those adopting a situated learning perspective, are far less likely to distinguish between learning and transfer. It’s not uncommon for these scholars to abandon the term transfer (with its resonance of discrete, portable packages of knowledge simply carried over and applied to new contexts) entirely. The language of consequential transitions, generalization, expansive learning, boundary spanning, preparation for future learning, recontextualization, and repurposing are all examples of ways in which scholars reimagine the continuity between earlier and subsequent experiences of learning.

Writing in the wake of situated learning critiques of the earlier learning/transfer distinction, Perkins and Salomon (2012) articulate both the wisdom of the critique and the persistence of the distinction:

What counts as transfer of learning in contrast with just plain learning? The question arises because all learning involves transfer in some sense. Evidence of learning always entails the learner doing something at least later and under another set of conditions, if not elsewhere, informed by what has been learned; otherwise there would be no basis to claim that learning had occurred. On this reading, transfer has an *inclusive* meaning, always part of learning and a matter of degree—how much later, how far elsewhere, and how different the conditions under which it is displayed. However, transfer as researchers usually use the term takes on a *contrastive* meaning—successful initial learning positively influencing performance on a later occasion and with a different appearance (transfer) versus not influencing (failure to transfer). Yet another case is negative influence, generally called negative transfer. (p. 249)

Ultimately, we have continued to use transfer as the term anchoring this volume, even as it has been both conflated with and distinguished from learning. Although we embrace the critiques of its limitations, we find that—on a very practical level—it remains the term that is threaded through the various disciplinary and methodological approaches synthesized in this volume. Even as we retain the term, we hope through this volume to illuminate its many facets. We treat discrete terms in relation to their disciplinary origins and also place them in conversation with core questions from across writing studies. Through our own analogical reasoning across the literature in this book, we have learned that while binaries may seem initially satisfying—like those referenced in the Perkins and Salomon passage above—transfer processes are never so neat.

For instance, when we place transfer in the stream of a learner's experience over time rather than in discrete moments (i.e., a=initial learning and then b=transfer), we note how transfer opportunities that might be outside the "target context" are occluded from view. When we use the perspective of the learner (e.g., Lobato's 2012 actor-oriented transfer theory) rather than that of the researcher or educator, a priori

distinctions between positive and negative transfer are harder to uphold: what did not appear to transfer from a researcher's vantage has perhaps been incorporated by the learner into other practices of invention or resistance.

Thus, throughout this volume we keep the term transfer while also tracing how previous scholars have engaged the phenomenon in ways that hold multiple meanings, even reminding us that not all transfer acts can be captured. As we discuss in our conclusion, such qualities pushed us, in the writing of this book, to especially highlight the interdependent and ephemeral facets that make transfer so tricky to study and teach, but also so interesting. Throughout this writing process, we came to understand that transfer-oriented teaching and research requires not a rigid and uni-positional stance on transfer (one does or does not teach for it) but instead a dialogic and flexible orientation to transfer that includes inevitable relations with other teachers, learners, and writers across multiple transfer contexts.

PREVIEWING TRANSDISCIPLINARY THEMES

Before we turn to a chapter-by-chapter overview of the book, we include below a table of five transdisciplinary themes on writing and transfer that extend across chapters: *individuality* (which raises issues of identity, agency, dispositions, and embodied cognition); *intentionality* (with its focus on abstract schema, metacognition, and automaticity); *fidelity* (in the forms of situated learning, high and low fidelity, scaffolding, modeling, and proximity); *directionality* (including transfer forward, backward, and in both directions); and *simultaneity* (which accounts for concurrent contexts, dynamism, and multicompetence).

These themes emerged during our systematic reading of and conversations about disciplinary scholarship in the multiple fields represented in this volume. The themes echoed across chapters as recurring issues or questions that animate transfer research. Readers will find that although each disciplinary chapter is organized around the history and local debates particular to that field, these five transdisciplinary themes highlight connections across chapters that might otherwise be obscured by terminological and methodological differences. To help readers anticipate these connections, Table 1 offers brief overviews of the transdisciplinary transfer themes and subthemes. The transdisciplinary themes also organize the book's conclusion, offering a

framework that demonstrates another layer of scholarly contribution. A more detailed version of Table 1, which includes the chapter locations and representative citations for each theme and subtheme, can be found in Appendix A.

Theme and <i>Subthemes</i>	Brief overview
Individuality	
<i>Identity</i>	Transfer of learning cannot be fully understood without considering an individual's full range of linguistic, professional, and personal identifications.
<i>Agency</i>	An emphasis on learner agency focuses on reflection and self-regulated learning, as well as a reconsideration of "failure" and "negative transfer."
<i>Dispositions</i>	Drawing from extensive work in psychology, researchers parse the similarities and differences between traits, states, dispositions, and personality characteristics, all of which play different roles in transfer of learning and exist in dynamic relationship with context.
<i>Embodied Cognition</i>	Theories of embodied cognition, which argue that the body is always active in transfer of learning, play an important role in fields such as medical and aviation education as well as industrial and organizational psychology, and they have become increasingly recognized within writing studies.
Intentionality	
<i>Abstract Schema</i>	Research across fields shows that an abstract schema facilitates transfer, through the use of generalization, hints, and explicit instruction. However, the causal relationship between an abstract schema and transfer of learning is not without some debate.

<i>Metacognition and Self-Monitoring</i>	Studies of metacognition and self-monitoring across fields trace how levels of intentionality affect transfer, focusing on how components of metacognition are related to self-regulation in transfer, including monitoring, regulating, controlling, and evaluating.
<i>Automaticity</i>	Although sometimes dismissed as the cause of low-road negative transfer, automaticity also can be a component of expertise in certain fields; in some knowledge management scholarship, tacit knowledge is crucial for innovation.
Fidelity	
<i>Situated Learning</i>	Situated learning theory, such as communities of practice and legitimate peripheral participation, suggests that fidelity in practice and participation is necessary for learning and for transfer.
<i>High and Low Fidelity</i>	Theories of situated learning generate concern over the similarities or differences among transfer contexts. To name types of likeness among contexts, some fields distinguish high and low fidelity, in which high fidelity indicates a close likeness to the real while low fidelity suggests that the likeness is partial or distant.
<i>Scaffolding</i>	Scaffolding for transfer might involve contriving high-fidelity contexts or moving learners from low to high fidelity contexts; in either case, peers and mentors play an important role.
<i>Modeling</i>	Across a wide range of fields, researchers emphasize the important role that models play for learners constructing abstract schemata that can facilitate transfer of learning across contexts.

<i>Proximity and Perception</i>	Learners' <i>perceptions</i> of proximity—closeness or distance of context fidelity—also matter for transfer of learning.
Directionality	
Forward: <i>Preparation for Future Learning</i>	Bransford and Schwartz's (1999) notion of <i>preparation for future learning</i> explores how to make explicit use of learners' futures to guide them toward successful transfer.
Forward: <i>Framing</i>	Drawing on work in linguistics and anthropology, frames are a pedagogical strategy that prime learners for transfer of learning.
Forward: <i>Lateral and Vertical Transfer</i>	Lateral transfer links analogous experiences; vertical transfer requires distinguishing simpler and more complex skills and presenting them in a meaningful order over time.
Backward: <i>Prior Knowledge and Reflection</i>	Reflection involves looking back to rethink prior knowledge. Writing reflection, in particular, assumes that explicit backward thinking has the potential to reformulate prior experience and make it relevant for supporting the transfer of knowledge.
Backward: <i>Negative Transfer and Interference</i>	Negative transfer refers to the ways prior knowledge interferes with learning. Multiple studies (from sociocultural literacy studies and writing studies, and Lobato's [2012] AOT framework), have questioned the ways in which negative transfer privileges the perspective of the researcher.
<i>Multidirectional</i>	Some transfer scholarship indicates both forward <i>and</i> backward directionality, including discussions of cross-linguistic influence and writing tutor expertise.
Simultaneity	
<i>Concurrent Contexts</i>	Scholarship suggesting simultaneity in the transfer act, such as Lemke's (2000) heterochrony or Prior and Shipka's (2003) chronotopic lamination, consider how concurrent contexts—situations co-occurring, or happening at the same time—can shape single transfer acts.

<i>Dynamic Dimensionality</i>	This lens attends to the dynamic or multi-dimensional factors that shape a single transfer act, including material factors like noise, psychological factors like bedside manner, physical factors like dexterity or accuracy, and sociocultural factors like educational experiences with writing.
<i>Multicompetence</i>	Multicompetence demonstrates simultaneity in its emphasis on the whole of language relationships rather than the sum of two monolingual parts. The term can reframe the potential of what appear to be language errors, negative transfer, or interference as positive evidence of writers drawing on “existing resources in new combinations,” all at once (Hammer et al., 2005, p. 114).

OVERVIEW OF THE BOOK

Part 1: Outside the Field

The book begins with two chapters that immerse readers in research on transfer of learning in psychology, research with a history that spans 125 years. Tracing the history of behaviorism, the cognitive revolution, and the situated learning critique, the chapter on “Cognitive Psychology and Situated Learning” focuses on issues of concept and schema formation, analogical thinking, attention and cognitive load, and metacognition. After a brief discussion of Thorndike’s theory of identical elements, we turn to the laboratory-based research of cognitive psychologists and their focus on mental representations of knowledge. After establishing cognitive psychologists’ abiding interest in abstract concepts and analogical thinking and their disappointment in finding relatively few instances of “spontaneous transfer,” we identify in their scholarship five conditions that tend to assist people in transferring knowledge. The final condition, a discussion of heuristics and mindfulness, becomes an occasion to critically reassess the role that the work of Perkins and Salomon (1988, 1989) has played in writing studies, by contextualizing their work within ongoing scholarly debates over the nature of attention and cognitive load. We turn then to the situated learning critique of the cognitivist tradition, tracking

the ways it changes research methods, terminology, and theories of how individuals build abstract representations. Here we also review work on the value of embodied cognition as a wellspring of transfer.

The second chapter, “Transfer of Training and Knowledge Management: Research from Industrial Psychology, Human Resources, and Management,” continues to draw on the long tradition of psychological research—but this time to explore two large areas of scholarly research that are rarely mentioned in writing studies: transfer of training and knowledge management. These terms are rarely if ever used in writing studies—largely, we speculate, because this disciplinary work is grounded in quantitative, survey-based measures; although the situated learning critique has had some influence on the field, industrial/organizational psychology and human resources scholars remain overwhelmingly guided by survey research and statistical analyses to build models of influence. The chapter begins with a focus on “transfer of training,” the province of human resources and industrial/organizational psychology scholars seeking to understand whether an organization’s investments in employee professional development (or “training”) have measurable consequences in the workplace. Although writing studies scholars rarely use the term *transfer of training*, they are in fact increasingly familiar with scholarship central to this field: scholarship focused on dispositions, personality traits, motivation, goal orientations, and more. Human resources scholars identify these as “trainee characteristics.” The bulk of the chapter reviews the findings from research on such trainee characteristics, as well as research on the role “training design” and “work environment” might also play in transfer of training. The final pages of the chapter turn from transfer of training to the field of knowledge management; here management scholars focus on how an *organization’s* knowledge—one of its greatest assets in the knowledge economy—can be “transferred” from people in one part of the organization to another part and can be used to innovatively meet future challenges (rather than keeping organizations bogged down in their past actions and approaches). Conceiving of transfer as an interpersonal act—taking place between individuals or even groups of individuals, rather than an intrapersonal act, confined within a single individual—these knowledge management scholars significantly challenge the usual assumptions of writing studies scholars.

Part 2: Bridges

Part 2 of the book includes chapters on education, literacy studies, and second language writing that bridge transfer concerns across writing studies and other fields. This section begins with the chapter on transfer in education, which shows how schools mediate transfer from the perspective of sports education, medical education, aviation education, and military education. While this chapter (“Transfer in Sports, Medical, Aviation, and Military Training”) draws together four distinct fields, we have placed them all under the capacious heading of education to emphasize the ways that transfer is a core category for learning, research, and scholarship in fields that writing studies may not seek input from, but perhaps should due to their direct investment in undergraduate education. Sports education offers a unique view, mostly unavailable in other fields, of the relationship between mind and body in transfer through its heavy theoretical focus on embodied cognition. Medical education and aviation education likewise complicate transfer through their focus on how to teach for automaticity through simulations. Moving beyond the discursive and deliberative dimensions of transfer, these fields may provide new theoretical and research avenues for the study of writing-related transfer that attune to the embodied and multi-sensory facets of how learners engage past learning to act in new situations.

The next chapter in this section, “Transfer Implications from Sociocultural and Sociohistorical Literacy Studies,” addresses how the ideologies of schooling, as embedded in sociocultural and sociohistorical contexts, are a significant but often overlooked set of contextual factors in transfer. In particular, this chapter highlights the range of continuities and discontinuities between learners’ community-based repertoires and those expected in mainstream school settings to show that so-called positive and negative transfer are frequently the result of historical power imbalances. Research shows the ways that these imbalances articulate with race and ethnicity, class, language, and geographical location. The value of literacy studies’ research on transfer includes theoretical constructs that expand the sociocultural and sociolinguistic dimensions of literacy transfer; theoretical constructs for a range of situated reading and writing contexts; additional methods for exploring the movement of literacy, literacy practices, and literacy learners across situated reading and writing contexts; and

pedagogical approaches for facilitating transfer between in- and out-of-school settings.

Our final chapter of Part 2 addresses “Research on Transfer in Studies of Second Language Writing,” identifying several themes that commonly motivate or drive research on transfer in the field: (1) students’ writing and rhetorical activities, (2) instructional and curricular design, (3) the role of genre, and (4) the impact of identity. The chapter examines how second language writing scholars have traced the movement of writing knowledge among learning contexts and among languages, accounting for how multiple cultural, educational, and linguistic traditions come to bear on the possibility of transfer. Scholars in L2 writing pursue these complexities to understand how language diversity complicates the transfer of writing knowledge and how to best support the linguistically diverse writers who navigate these complexities when they compose. The chapter highlights both what is there in the research—how scholars have navigated the issues—as well as what is implicit—the transfer concerns that appear in L2 writing scholarship whether scholars set out to study them or not. L2 writing transfer research thus suggests not just that language learners make choices among languages when they write, but why they do, how those decisions occur across contexts, and what the consequences of their transfer attempts are for their learning. In the end, the chapter shows that as concepts of language have become more diffuse and research questions have become more precise, several complicating factors remain that researchers of transfer in L2 writing have yet to settle, namely the extent and impact of writers’ awareness, intentionality, and agency during the act of transfer.

Part 3: Inside the Field

Part 3 focuses on transfer research inside the field of writing studies. The first chapter in this section, “Transfer in First-Year Writing,” traces the ways that scholars have looked at what transfers into and out of first-year writing to offer explicit transdisciplinary connections between FYW and out-of-field scholarship. This chapter reviews literature on (a) the role of prior knowledge; (b) dispositions, attitudes, and emotions in FYW; (c) digital composing and multimodality; and (d) curricular innovations. We attribute the robustness of this line of inquiry to early debates about the efficacy of teaching generalized and local knowledge in FYW and the subsequent theoretical and em-

pirical work on the viability of transfer from FYW. Petraglia (1995), for instance, asked if teaching students generic writing skills could really stand up to the field's growing consensus that writing is situationally, ideologically, and contextually embedded. Smit (2004) later lamented the dearth of communal knowledge about transfer and its role in FYW. As this chapter demonstrates, writing studies has experienced a significant expansion in research and pedagogical knowledge since those early debates and has moved beyond calls to abolish FYW to complex and research-rich responses about what helps or hinders transfer and the role of FYW in that process. As transfer research in FYW is now sufficiently rich though not yet calcified, we suggest it is an ideal time for deliberate transdisciplinary linkage between "core concepts and principles" within and beyond writing studies (Qualley, 2016, p. 69).

The chapter on writing across the curriculum (WAC) and writing in the disciplines (WID) shows how these fields are inescapably shaped by the transfer of writing knowledge. WAC/WID initiatives came into being partly in response to concerns that students did not transfer their writing knowledge beyond first-year writing and thus needed further instruction—whether in general practices of writing to learn (WAC) or disciplinary skills or genres (WID). The chapter reviews scholarship that treats writing as a general learning skill; a socialized disciplinary activity; a process or procedural activity; the activity that compromises the discipline of writing studies itself; or simply as a vessel through which assessment of content occurs. The chapter shows the multi-directionality of transfer, as knowledge moves "up" vertically in a discipline and "out" across courses and extra-curricular writing contexts that students encounter over time, a frame that helps account for the ways that the WAC/WID relationship mirrors what transfer research in other fields argues: that "*general cognitive skills*" exist, but they "function in *contextual ways*" (Perkins & Salomon, 1989, p. 19, emphasis added). The chapter follows this cue by presenting sections organized by WAC/WID researchers' common questions about the transfer of writing knowledge: what students are learning about writing with or through transfer, what instructors are or should be doing to support that transfer, how genre plays a role in that transfer, and which courses or curriculum best support student transfer in and across disciplines or curricular contexts. The chapter shows that WAC and WID approaches to writing education serve as a kind of infrastructure for

transfer, creating the architecture that cues students' prior knowledge, scaffolds connections among writing genres, lays down paths for metacognition about writing knowledge, and prompts students to reflect on past, current, and future writing activities across disciplinary contexts, including first-year writing.

The chapter on transfer in writing centers suggests that writing centers are intriguing spaces for attention to transfer because they act as an infrastructural hub of transfer activity. Writing centers' low-stakes atmosphere outside of conventional classrooms, disciplines, and academic hierarchies invites tutors and writers to share and make connections among several forms of writing-related knowledge. For example, writing center tutors transfer knowledge about writing even as they transfer knowledge about tutoring writing; tutors toggle between general writing skills instruction and disciplinary-specific approaches as they work. The chapter reviews the research and thinking that shows this unique potential, with sections organized by common questions and issues in writing center studies: (1) the writing knowledge that tutors transfer, including debates about specialist vs. generalist tutor knowledge; (2) the writing knowledge tutors *should* come to know and transfer through tutor education; (3) studies of writers, themselves, transferring knowledge in writing centers; and (4) the kinds of knowledge, writing and otherwise, tutors and teachers transfer beyond the center into classrooms, workplaces, or community contexts.

The final writing studies chapter has at its heart research on school-to-work transitions. The chapter begins with a review of three theoretical frameworks that dominate scholarship in this area: Lave and Wenger's (1991) concepts of community of practice and legitimate peripheral participation, Miller's (1984) theorization of the rhetorical nature of genres, and Engeström's (2014) model of activity theory. Although we argue that these frameworks are not mutually exclusive and often coexist as complementary frameworks within studies, they also invite very different units of analysis. Thus, we taxonomize in this chapter the copious research analyzing particular school-workplace relationships—but also identify smaller but important traditions of research that follow individuals over much longer periods of time and that focus not on individuals or discrete workplaces but larger activity systems. The bulk of the chapter, though, is devoted to synthesizing empirical research on four pedagogical contexts for facilitating the transition from school to work: writing about writing classrooms,

classroom-based interactions with clients, workplace-based internships, and adult learning classrooms where prior work experiences sometimes inform school learning.

Part 4: Conclusion

In the book's final chapter, we synthesize and critically assess the transdisciplinary themes on transfer woven through the previous chapters. Specifically, as we indicated earlier, we identify five concepts as the sites of emerging understandings and intense debates about transfer across fields: *individuality*, *intentionality*, *fidelity*, *directionality*, and *simultaneity*. After synthesizing the scholarship relevant to each of these concepts, we show how a sixth concept—orientation—unites these threads by accounting for the ephemerality and interdependence of transfer concepts. Using a concept of transfer as orientation, we identify several pedagogical implications as well as methods and agendas for future research.

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