SELF-REGULATION AND WRITING TRANSFER:
HOW STUDENTS NAVIGATE UNFAMILIAR WRITING SITUATIONS

by

Ryan Roderick

A dissertation submitted to the Department of English in partial fulfillment of the
requirements for the degree of:

DOCTOR OF PHILOSOPHY IN RHETORIC

Carnegie Mellon University
May 7, 2012

Committee
Joanna Wolfe (Chair)
Linda Flower
Danielle Wetzel

Acknowledgements

This project would not have been possible without the support of:

The writers who participated in this study whose voices are the foundation for insight.

The Carnegie Mellon University Department of English, which provided training and funding for undertaking this research.

My committee, including regular discussions with my adviser, Joanna Wolfe, the insightful feedback from Linda Flower, and all of the opportunities to share and hone my thinking offered by Danielle Wetzel.

Graduate students in the department of English for feedback about the project. Special thanks to Maria Pozhnahovska, who helped establish interrater reliability.

My family and friends who encouraged and supported me as I undertook this work.

My life partner, Lisa Panepinto, who has provided invaluable support and feedback.

Abstract

It is well documented that, as students encounter new genres throughout their academic and professional careers, most struggle to develop their writing knowledge and processes. The process of developing writing knowledge and practices in new situations has become studied as adaptive transfer. Mainstream pedagogical approaches are designed to teach adaptive transfer by showing students how to analyze genres so that they may infer conventions and apply that knowledge to their processes. However, knowledge about genre is not the whole story. Some students may have knowledge about genres yet still fail to take up successful writing processes, while others may initially lack genre knowledge and gain it as an effect of their writing processes.

This dissertation analyzes what writing processes are associated with adaptive transfer and how we teach them in first-year writing. I analyzed students' processes through the lens of self-regulation, defined as an ability to monitor and refine behaviors and emotions in accordance with new situations. My research was carried out through three related studies. The first study, which looked at successful and unsuccessful students engaged in adaptive transfer, found successful students used the challenges they faced as opportunities to improvise new goals and adapt. Study two, which followed one graduate student during his struggle through the first four semesters of graduate school showed that some students use genre conventions unproductively if they frame them as goals, rather than using them as a creative tool to think through arguments. Study three takes a step back from self-regulation strategies associated with adaptive transfer to measure how a curriculum that teaches genre analysis affects students' self-regulation strategies on new writing tasks by helping them use model texts more strategically.

Taken together, these studies offer instructors pedagogical interventions for teaching self-regulation. Study three suggests that teaching students to analyze genres can be a good starting point for helping them make more strategic choices about how to implement genre knowledge in their own writing. However, studies one and two suggest that there are other self-regulation strategies that could help students engage in adaptive transfer if they were explicitly taught self-regulation strategies as part of a genre analysis curriculum.

TABLE OF CONTENTS

CHAPTER 1:

Toward a framework for understanding problem-solving strategies associated with adaptive transfer

To prepare students for writing in a wide variety of academic genres, writing classes have taken two distinct approaches. Some classes explicitly teach genre moves, while others teach a more general academic discourse. Both of these approaches rely on the assumption that students will be able to transfer their genre knowledge from their writing classes to discipline-specific courses, where writing is typically not explicitly taught. Transfer of genre knowledge occurs when writers recognize a connection between the new genre they are writing and genres they are familiar with, and then they use this connection to inform how they write[1] (Donahue, 2012; Wardle, 2007; Wolfe, Olson, & Wilder, 2014).

Despite teachers' best efforts, many are finding that writers struggle to transfer genre knowledge. Our research shows that students who encounter new genres can often fall back on old habits and genre conventions that worked in the past, rather than change those old habits to fit new genres (Beaufort, 2007; Berkenkotter, Huckin, & Ackerman, 1988; McCarthy, 1985; Navarre Cleary, 2013; Penrose & Geisler, 1994; Reiff & Bawarshi, 2011; Russell & Yanez, 2003). Other cases have shown that students can go to the other extreme. They might believe that none of their prior genre knowledge is relevant and instead move from one course to another trying to accommodate what they see as each instructor's idiosyncratic preferences of writing (Bergmann & Zepernick, 2007; Thaiss & Zawacki, 2006). Both of these patterns illustrate the difficult task student face when they encounter a genre that is new to them.

That scholars have found learning new genres so troublesome for students underscores the importance of a growing movement to identify what abilities enable students to successfully participate in unfamiliar genres and what are the most effective ways to teach those skills to students. This dissertation builds on that movement by intervening in current approaches to teaching transfer, and it offers a renewed focus on writing processes associated with transferring prior knowledge to new genres.

Conceptualizing adaptive transfer

Scholars have long agreed that students need an ability to acquire unfamiliar genres. A genre is the typical patterns in text features, forms, and production processes that have become conventionalized over time (Devitt, 2004; Miller, 1984). An ability to

---

[1] As many transfer researchers have noted, recognizing connections can occur in a variety of ways. "Low-road" transfer is "automatic, stimulus-controlled, and extensively practice." In contrast, high-road transfer occurs through "mindful, deliberate processes that decontextualized the cognitive elements which are candidates for transfer" (Perkins and Soloman 124)

learn genre conventions was initially described by Aviva Freedman (1987), who coined the term genre acquisition as a way of describing how writers learn to participate in writing situations that are unfamiliar. Freedman noticed that students were routinely assigned to write in genres that were new to them and yet learned to do so, often without direct instruction. They acquired an ability to perform the typical text features, forms, and processes as they composed.

However, an ability to learn how to successfully participate in unfamiliar genres is complicated, because each unfamiliar genre presents students with variations on forms and social expectations that are not always apparent and not always easily acquired. These complications have been illustrated in McCarthy's (1985)now well-known study of one undergraduate's experience moving from writing in one course to another. McCarthy concludes,

> The contexts for writing may be so different from one classroom to another, the ways of speaking in them so diverse, the social meanings of writing and the interaction patterns so different, that the courses may be for the student writer like so many foreign countries (p. 260)

McCarthy's conclusion has since been confirmed by many other researchers. For instance, Bergman and Zepernick (2007) showed undergraduates who were unable to see how first-year writing assignments related to writing in their disciplines. Dias et al. (1999) showed undergraduates transitioning into the workplace who saw very little use for the academic writing skills they had learned, leading Dias et al. to characterize academic and workplace writing as "worlds apart." Together, these studies illustrate how the differences in genre that students encounter are often troubling and require new learning.

In response to the troubling variations that students will encounter, researchers have argued that what we need to understand is how students transfer prior knowledge and practices to new situations (Moore, 2012; Wardle, 2007; Meyer, Land, & Baillie, 2010; Perkins & Soloman, 1988). Writing transfer occurs when an individual draws on knowledge or skill learned in one context and uses that learning in some way to inform their performance in another context. By shifting the conversation onto what writers transfer from one context to another, writing studies scholars also shift the focus onto what writing courses can teaching students that will have any effect on their ability to acquire genre conventions when they encounter unfamiliar writing situations.

Writing transfer can be further broken down depending on whether it results in successful or failed participation in new genres (Figure 1). When a writer transfers prior knowledge inappropriately, for instance by using familiar forms and features that fail to be taken up by an audience, it is classified as negative transfer. For instance, negative transfer occurs when first-year undergraduate students attempt to use a five-paragraph

essay structure in a paper that requires a much more complex or extended argument. In contrast, successful forms of transfer, such as when students use prior knowledge to achieve a high level of success, are classified as positive transfer. Scholars rightly point out that the goal of writing instructors and curricula should be to maximize students' ability to avoid negative transfer and engage in positive transfer.

In addition to negative and positive transfer, scholars identify two other types of transfer based on the extent to which a writer re-designs prior knowledge and practices. When prior knowledge is simply imported to new contexts without being changed, this is low-road transfer. While low-road transfer may not always be inappropriate, it is often not sufficient to successfully navigate the complexities of new writing situations. In contrast, when writers radically change their prior knowledge and practices to meet the complexities of a new genre, this is high road transfer (DePalma & Ringer, 2011; Yancey, Robertson, & Taczak, 2014). High road transfer is not always appropriate, just as low road transfer is not always negative, but when students encounter unfamiliar genres, they often need to engage in high road transfer in order to have successful or positive outcomes.

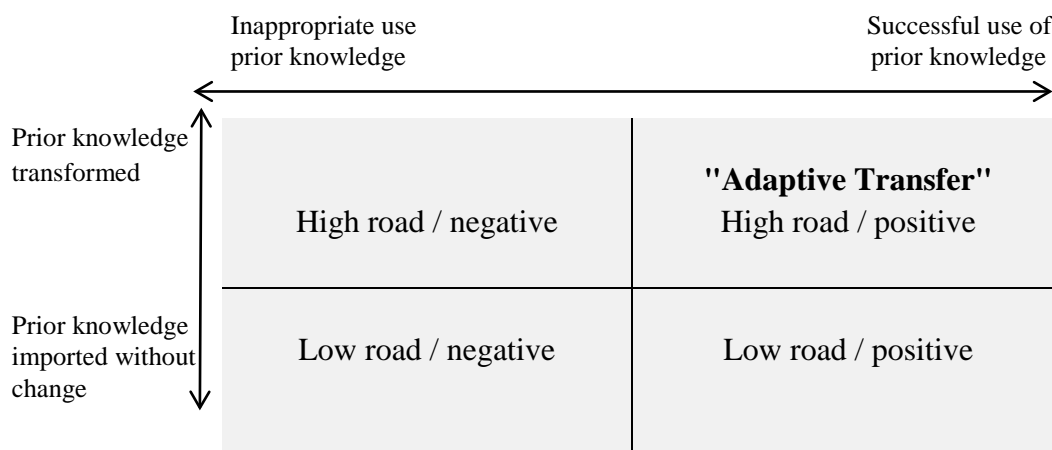|	Inappropriate use prior knowledge		Successful use of prior knowledge
Prior knowledge transformed	High road / negative		**"Adaptive Transfer"** High road / positive
Prior knowledge imported without change	Low road / negative		Low road / positive

Figure 1. Writers engage in different forms of transfer, depending on the level of success they achieve and the extent to which they transform their prior knowledge about writing

To pinpoint more specifically what it means to maximize high road transfer as it relates to writing, scholars have pointed to adaptive transfer. Writing Studies scholars have referred to high road transfer in a variety of terms that include "remixing" (Yancey, Robertson, & Taczak, 2014), "repurposing" and "generalizing" (Wardle, "Creative Repurposing"), "integration" (Nowacek, 2011), and "transformation" (Brent, 2012, p. 581). Despite using a range of terms, scholars all agree that all of these types of high road transfer occur when writers reflect on emerging problems with their writing and change their writing knowledge and practices to resolve their problems.

To minimize confusion, I have to use the term "adaptive transfer" (DePalma & Ringer, 2011) because it explicitly refers to the process as a type of transfer. Adaptive transfer involves "subconscious or conscious applying and reshaping of learned writing knowledge and practices to new writing situations" (DePalma & Ringer, 2011). Researchers studying adaptive transfer have shown that when writers "apply" and "reshape" their writing knowledge and practices, they transform their writing abilities in new ways. More importantly, an ability to engage in this transformation is a skill unto itself.

Current approaches to teaching adaptive transfer

There has been a longstanding tradition that advocates for explicitly teaching students the text forms and social contexts associated with specific genres. This explicit teaching approach starts by teaching students language patterns associated with specific text types and analyzing how those patterns correlate with typical social behaviors and expectations (Hyland, 2011; Swales, 1990). By explicitly teaching patterns in text features and social contexts, the aim is to demystify specific genres by helping students recognize and take up appropriate ways of participating in those genres.

The explicit teaching approach has faced criticism from scholars in Rhetorical Genre Studies (RGS) who are concerned that learning textual patterns can lead students to merely reproduce those patterns and not adapt them to meet variations in genres that may arise in new, local situations. Thus, RGS scholars propose a more rhetorical approach to learning genre. The rhetorical approach exposes students to the social contexts of a genre and encourages them to use their knowledge about those contexts to infer appropriate conventions. Advocates of this approach argue that an ability to infer conventions can equip students to make sense of how to adapt conventional text forms and features in light of social expectations. The goal is to prepare students to invent appropriate text features to meet the needs of the context, rather than importing learned patterns (Devitt, 2004; Devitt, Reiff, & Bawarshi, 2004).

In an attempt to integrate explicit teaching of genre with a rhetorical approach, Ann Johns (2008, 2015) proposes a third pedagogy that integrates rhetorical study of genre with explicit teaching. First, she advocates teaching students to take on the role of writing researchers in their disciplines by preparing them to analyze social contexts. Second, her approach explicitly teaches students a more generalizable set of genre features, called "macro genres" (Carter, 2007), in order to help students recognize the broad, flexible textual features that are shared across multiple different contexts. Third, she teaches students to recognize variations in genres.

Whether explicit, implicit, or hybridized, genre-based pedagogies like those outlined above have laid a foundation for more recent pedagogies designed specifically to teach adaptive transfer. Scholars studying adaptive transfer have advocated a shift from teaching students to write to instead teaching students about writing. For instance, Downs

and Wardle (2007) propose making the content of writing courses focus primarily on research from the fields of Rhetoric and Composition. This research would get students to learn theories about how people use writing for different purposes, an in effect prepare them to think like writing researchers. Alternatively, Yancey et al. (2014) argue that rather than learn about existing theories of writing, students should develop their own theory of writing—an approach they call "teaching for transfer." They have found that students who learned a vocabulary for talking about writing were able to apply it to new situations. While these are the two of the most popular approaches for teaching adaptive transfer, there are others based around a similar assumption: a vocabulary for talking about writing can help students adapt what they know to new genres (for an overview of other approaches, see Yancey et al. (2014) p. 44).

What all of these approaches have in common is teaching students a vocabulary or conceptual framework they can use to thinking about writing, though they differ on the types of vocabulary and how it should be applied. Scholars have found a relationship between having a more sophisticated vocabulary for talking about writing and success in adapting to new types of writing. It is believed that students who engage in adaptive transfer are equipped to analyze the genres they are composing (Devitt, 2004; Reiff & Bawarshi, 2011; Yancey et al., 2014). For instance, Jarratt et al.(2009) argue that student writers they studied had a hard time developing their genre knowledge because they "lacked a basic vocabulary" for talking about writing. In addition, Reiff and Bawarshi (2011) provide evidence to suggest a relationship between a writer's ability to articulate subtle similarities and differences between genres and their ability to engage in adaptive transfer.

While pedagogies like TFT and WAW have addressed adaptive transfer directly, they share a common focus on teaching a vocabulary that facilitates genre analysis. This emphasis on genre analysis is something pedagogies like TFT and WAW have in common with older genre-based pedagogies. They all prepare students to transfer writing knowledge and practices by teaching them how to analyze features of texts and contexts. Whether students are taught to analyze genre or develop their own theory of writing, the assumption is that they will go on to new writing tasks and be able to infer what is expected of them.

Limitations to current approaches processes

While a vocabulary for talking about genre may help some students analyze unfamiliar genre features, it is entirely possible to not have a vocabulary to talk about a genre yet still acquire the genre successfully. This tacit acquisition of genre occurs as writers develop a "felt sense" (Freedman, 1987) of conventional expectations and practices. A writer's felt sense of a genre refers to their tacitly evolving knowledge about what counts as appropriate ways of participating in a new situation. Freedman (1987)

argues that a writer develops a felt sense of a genre by tacitly taking into account a variety of social cues in order to understand what is expected in a piece of writing. This is how, Freedman argues, the undergraduate students she studied were able to learn how to write legal briefs despite having no explicit instruction. Given that writers can develop a felt sense of genre, it also seems likely that writers can also engage in adaptive transfer without a vocabulary for consciously analyzing genre features.

When we look closer at the cases of two student writers, we see there are many writing processes that factor into adaptive transfer, including students' decision-making strategies, their emotions, and their identities. As a case in point, some writers have genre knowledge but not the ability to change the strategies and behaviors they have used in the past.[2] Cleary describes a writer--Tiffany--who wrote her academic essays in the same way as she wrote personal journal entries. Tiffany described this process as "flowing," a terms she used to describe writing everything in one, continuous shot. Despite Tiffany's knowledge of academic conventions, she nonetheless resisted changing her writing process. For instance, she resisted conventional academic grammar conventions when she discussed the expectations she encountered in her first-year writing assignments: "Is that the rule? You're supposed to do this because you should have put the -ed there. Ah, okay. I really did not care for English" (Cleary, 2013, p. 674). While Tiffany demonstrates awareness of a convention when she says "put the -ed there," she does not appear to buy into this convention. Instead, she is reluctant to put these expectations into practice. Perhaps this reluctance comes from, as Cleary suggests, the way in which academic genre expectations appear to challenge Tiffany's sense of identity. This moment of resisting grammar conventions illustrates a larger pattern for Tiffany: she knows what she *should* do, but ultimately fails to adapt her writing processes.

> Tiffany described the same cycle of feeling lost, procrastinating until she had no choice but to "just write," lamenting not using the writing strategies she had learned, and resolving to do better next time. However, the next time inevitably followed the same well-worn pattern. (p. 671)

Scholars of adaptive transfer might argue that Tiffany lacked a sufficiently complete understanding of the conventions, but this is not the whole story. It seems she did understand what was expected but struggled to put those expectations into practice. Perhaps it was because of Tiffany's resistance that she could not get herself to utilize the "strategies she had learned" to change her process. Instead, we see Tiffany continue to fail her first-year writing assignments despite having a sense of what was expected.

---

[2] As Nilson points out, knowing about one's performance ("metacognition") is separate from controlling one's performance—what she and others call self-regulation. Metacognition refers to one's awareness of cognitive processes, whereas self-regulation refers to awareness and control of one's cognitive processes, behaviors, and environment.

In contrast to writers who have genre knowledge yet fail to adapt, we see writers who adapt to unfamiliar genres despite their initial lack of knowledge. For example, Russell and Yañez (2003) show us Beth, a Journalism student enrolled in a required History class, who initially failed to understand the norms of historical analysis. Beth's confusion about history writing is illustrated when she complained about a failed book review assignment.

> [The instructor] wrote all these comments on my [paper] about how it didn't have, like what was the argument of the book? . . . I was frustrated that he didn't tell [me] that the first time around. (p. 345)

While Beth initially misinterpreted what it meant to review "the argument" of a book for her history course, we learn that the instructor did in fact "repeatedly" discuss the conventions in class. Beth's lack of understanding the conventions appears to go even deeper. Like Tiffany Beth resists what she does understand of the conventions, as Russell and Yañez describe, "Beth felt […] damned if she wrote her way and damned if she's write his [the instructor's] way" (p. 345). Like Tiffany, this is a struggle that goes beyond simply knowing about genre expectations.

Unlike Tiffany, Beth's story has a happy ending. Despite Beth's initially flawed understanding of History writing, she persisted in meeting with her instructor and succeeded in adapting her knowledge. Her final project was perceived as successful by her History instructor. In addition, Beth indicates she "learned a lot about Irish history and about historical writing. Specifically, I learned about how historical and journalistic writing are different" (p. 355). Despite Beth's initial frustration with history writing, she ended up seeing it as valuable for her journalistic ambitions rather than a hindrance. While Russell and Yañez attribute Beth's newfound realization to her success, Beth's success also seems to emerge from the strategies she took up to deal with her frustration, or as Russell and Yañez note, the way she "used" the challenges she encountered to adapt to history writing (p. 333-334). This suggests that, in contrast to Tiffany, Beth's strategies for responding to challenges were productive. Yet beyond her instructor meetings and implied persistence, we learn very little about these seemingly productive strategies.

While more successful writers like Beth might develop a bigger vocabulary for talking about writing, it's not clear if their vocabulary is a cause or consequence of adaptation. For instance, Beth seems to have used the challenges she faced as an opportunity to expand her knowledge of history writing. If this is the case, Beth's knowledge about history writing may have been an effect of the strategies she used to use contradictions productively.

It is important to point out that most writing transfer scholars do not address the possibility that knowledge about writing could in fact be a consequence, rather the cause, of more complex, strategic behaviors. What if Beth learned about history writing because

she had strategies that enabled her to do so? What if Tiffany's strategies had the opposite effect? To move forward with understanding more about how writings strategies factor into adaptive transfer, we need a more nuanced explanation for why some writers know what specific writing problems they face yet fail to act on that knowledge, while others persist in a variety of strategies and adapt successfully.

In order to provide a more robust explanation of why student writers like Beth are highly adept at adaptive transfer while writers like Tiffany are not, we first need to sort out what role a student's vocabulary for analyzing writing plays in their processes for adapting. By teaching students to develop a vocabulary for analyzing genres, adaptive transfer researchers hope that students will use this vocabulary to make strategic decisions on subsequent writing tasks. To confirm or deny this assumption, we need to investigate how pedagogies designed to teach students to analyze writing end up affecting their processes for composing subsequent writing tasks.

In addition, we need to see what other processes students are engaging in that help them adapt to new writing situations. Identifying processes associated with adaptive transfer can help instructors let students in on how successful writers operate in new situations, expanding what Gallagher (2016) has called the "behavioral repertoire" that our students bring with them.

Dispositions associated with adaptive transfer

One area that has drawn attention to behaviors for adaptive transfer, but still falls short of identifying teachable strategies for navigating adaptive transfer processes, are studies of writers' dispositions. Dispositions are ways of thinking, being, and doing that become available to an individual engaged in a social context (Wardle 2012). Scholars studying dispositions claim that writers transfer dispositions developed in one class to another. For instance, Bereiter (1995) studied one writer as she moved on from classroom that used computer-supported peer feedback system to achieve "friendly, supportive spirit of collaborative inquiry" among students in the class (31). As the student moved on from the class, she appears to transfer the "collaborative" disposition to a new class in which peer feedback was not friendly and supportive but predominantly unfriendly and critical. Despite the unfriendly environment, the student appears to transfer a friendly and supportive disposition when she "recruited a circle of friends who carried on the sort of cooperative discourse she was accustomed to" (32). Bereiter (1995) argues that the student's positive experience in the collaborative course led her to transfer a productive set of behaviors to the new environment. The good news from this is students' strategies for writing can be shaped by classroom culture. The bad news is that it might not always be clear what it is about classroom culture will rub off on students and result in the behaviors students transfer.

Even if we could identify how classroom culture generates transferable

dispositions, studies of dispositions tend to lack a nuanced understanding of behaviors associated with adaptive transfer. Instead of isolating productive behaviors, dispositions lump together a series of behaviors into binary categories that are better at describing general personality traits than they are at actual practices that can be taught to students. For instance, Driscoll and Wells have proposed "generative" and "disruptive" dispositions. The generative/disruptive dichotomy characterizes habits for reflecting on situations. Generative dispositions emerge when writers are able to "engage in mindful abstraction and put forth the mental effort to generalize from past learning to new situations" (Driscoll and Wells 6). On the other hand, "disruptive dispositions" occur when writers shut down generalizations, failing to imagine a practice in one context as possibly relevant for any other. Alternatively, Wardle (2012) proposes "problem-exploring" and "answer-getting" as dispositions that characterize how writers address problems. Problem-explorers demonstrate "a willingness to engage in a recursive process of trial and error" (p. 4). In contrast, answer getters "seek right answers quickly and are averse to open consideration of multiple possibilities" (p. 4).

Furthermore, it is questionable the extent to which instructors can teach dispositions. Perhaps instructors could influence students' dispositions by designing classroom contexts in which students have ample opportunities to take up adaptive behaviors. Wardle argues that instructors should structure classroom contexts in ways that promote behaviors associated with "problem exploring" and limit behaviors associated with "answer getting." This may involve offering opportunities for revision and feedback, or giving more weight to writing processes over the final product of a writing assignment. However, these structures only passively encourage certain behaviors and it is likely this is not enough, especially for students who may actively resist. Nevertheless, these recommendations make sense and already seem to be part of the status quo of current writing pedagogy.

Rather than lump behaviors together into dispositions, we need to get a more fine-grained look at what specific practices writers are engaging in when and how those practices are associated with adaptive transfer. One example of a practice that can enable students to leverage their prior knowledge and adapt to new contexts is 'not-talk.' Not-talk is a form of adaptive transfer that can occur when writers compare new types of writing to prior genres that are dissimilar as well as similar. For instance, the following student demonstrates not-talk.

> I have never written a paper like this before really, uhm, I wrote a *term paper in my junior year, uhm, about a novel, but I mean that was a lot different....* (Reiff & Bawarshi, 2011, p. 328, emphasis in original)

Here we see a student using not-talk to comparing and contrasting their paper to "a term paper…that was a lot different." As Reiff and Bawarshi argue, writers who engage in 'not

talk' may also be better positioned to break down and re-purpose their genre knowledge. The 'not-talk' strategy led to "boundary crossing," a synonym for adaptive transfer. Furthermore, we can teach this strategy. In a pilot study by Wolfe (2018), a curriculum that focused on teaching genre analysis resulted in students doing more not-talk.

While not-talk is a strategy associated with adaptive transfer, it is just one strategy that students could transfer to new rhetorical situations, and since their study asked students to reflect retrospectively on the writing they were being assigned, it is unclear if student writers actually use not talk as a strategy during their composing process, nor is it clear whether this strategy helps writers successfully adapt to new rhetorical situations.

A framework for studying adaptive transfer processes: Self-regulation

To study the processes involved in adaptive transfer, this dissertation adopts a framework of self-regulation. Self-regulation describes a process whereby individuals exert control over their knowledge and behaviors in order to develop and modify 1) their goals and motivations for learning, 2) their plans for achieving those goals and maintaining motivation, and 3) their recognition of, and reactions to, challenges that get in the way (Nilson, 2013; Pintrich & De Groot, 1990; Zimmerman & Kitsantas, 2007). I argue that self-regulation processes can help us develop a more nuanced understanding of the strategies associated with successful adaptive transfer.

A theory of self-regulation offers a more nuanced view of a writer's strategies than more traditional writing process models. While traditional models of process help us understand writing as a series of recursive stages--such as planning, drafting, editing, and revising--self-regulation provides a lens to make sense of the complex decision-making that writers undergo throughout their composing process. This focus on decision-making strategies can help instructors better understand what to teach writers to help them adapt their processes in new situations.

Educational researchers have developed a model of self-regulation, which I have adapted to study adaptive transfer (Zimmerman & Risemberg, 1997). This model includes three phases: Forethought, Performance, and Self-reflection. In the Forethought phase, learners manage an understanding of the task as well as their motivation for doing it. In the Performance phase, writers manage the behaviors and environments during the act of actually doing the task. In the self-reflection phase, writers evaluate their performance against a predetermined standard, and they manage reactions to their performance. This model also includes a set of strategies that learners use as they transition among phases. For instance, learners might establish causal attribution to self-reflect on their performance. Depending on how learners use these strategies, they may be more or less successful at self-regulating their learning.

This project adapts self-regulation as a lens to make sense of the strategies writers use to engage in adaptive transfer. While Zimmerman (1990) depicted SRL strategies in three separate "phases" as part of a cyclical process, this cyclical and stage-like model does not accurately map onto the more messy process of adaptive transfer. Instead, the so-called "phases" of planning, performing, and reflecting co-occur and intertwine (Negretti, 2012). Therefore, I want to move away from Zimmerman's "phases" but keep his categories as a starting point for identifying self-regulation strategies that are important for adaptive transfer.

To operationalize this model, I abandon the notion that these strategies unfold in cyclical "phases" but hold onto the categories themselves as a heuristic for the kind of "moves" writers can make in their decision-making. Table 1 presents the self-regulation phases as categories of decision-making moves. The first grouping is based on the "Forethought phase" and includes writers' strategies for setting goals and managing motives. The second grouping, based on the "Performance phase," includes a writer's strategies for carrying out text production, such as setting a timer to write or keeping track of how many words have been written. The third grouping, based on the "Self-evaluation phase," includes strategies for evaluating progress and reacting to evaluations, such as getting feedback on a draft and deciding what to do with the feedback.

Table 1: A list of some of the strategies writers use to self-regulate, adapted from Zimmerman and Kitsantas (2007)

Planning		*Performing*	*Reflecting*	
Task analysis	*Motivation management*	*Self-control*	*Self-judgment*	*Self-reaction*
Goal setting Planning	self-efficacy outcome expectancy developing task interest adjusting goal orientation	self-instruction mental imagery task strategies attention focusing time management	self-evaluation identify conflicts causal attributions	self-satisfaction & affect adaptive/defensive

Figure 2 illustrates how these categories of self-regulation strategies might show up in a writer's decision-making process as they compose a text. The annotated example, adapted from Negretti (2012), shows a writer self-regulating while composing an essay for a first-year writing class. While writing, the student intertwines moments of self-reflection, goal-setting, and performance strategies. Negretti (2012) has drawn on self-regulation theory to provide a rich description of the processes developed by undergraduate student writers. On top of this, Negretti's (2012) study describes how students evolve their self-regulation strategies over the course of a semester of writing,

and she suggests that students' development of self-regulation strategies occurs alongside their rhetorical awareness of audience, purpose, and content. As a result of this descriptive research, Negretti (2012) suggests that some strategies might not be as useful as others. However, she provided no evidence that would support these hypotheses. We are missing an evaluation component that could tell us which ones may be disruptive and which are useful for adaptive transfer.

Student says: "I don't have all the research completed, so I have gotten down a few paragraphs of a basic idea which I can expand further when other sources are found. I have to look at outside resources, then look up the symptoms from a medical website. Cite that information, probably another 4-6 hours left of research." (Negretti, 2012)	Self-reflection Goal-setting & Performance

Figure 2. Self-regulation episode of student writer. Self-reflection, goal-setting, and performance intertwine.

A closer look at Negretti's (2012) descriptions of self-regulation shows some of the strategies appear to help students engage in adaptive transfer. Students demonstrated what seem to be helpful self-regulation strategies particularly toward the end of their semester. For instance, one student works through a challenge to gain awareness of audience and a new sense of purpose.

> "I felt like I was going in circles. I would read the text and then read it again. I would start writing, then I would erase it, then I would type again, and I would erase it…[later saying] I have learned about my audience…I should not be assuming that the audience shares the same views as I do, be clearer in my introductions and thesis…I need to put myself in the reader's shoes." (p. 160)

Here we see a student overcoming a challenge and gaining an enhanced understanding of "audience," which then leads to a new goal for appealing to audience by getting into "the reader's shoes."

In contrast, other strategies seem to interfere with adaptive transfer. For instance, Negretti (2012) found that early on in the course, many students simply repeated the assignment instructions when they were setting goals for writing. One student repeats the instruction by setting a goal to "Use descriptive words and well described scenes, writing dialogue…I don't know how to do that" (p. 160). This strategy appears to be an unsuccessful way of setting a goal for a task, if for no other reason than the student seems confused and unable to overcome the problem.

In this project, I argue that adaptive transfer occurs as writers take up strategies involved in self-regulated learning: adaptive writers self-reflect on their performance,

identify conflicts or difficulties, change their goals, strategies, and motivations, and they engage in new types of performance. For instance, a writer like Russell's and Yañez's (2003) journalism student might have, during meetings with her instructor, self-reflected on her problems by identifying reasons for her failed performance, and then set new goals. She might also have self-reflected in order to change her understanding of the task, set new goals and strategies, and perhaps achieve a renewed sense of self-efficacy, outcome expectations, and interest in the task.

Once we have identified SRL strategies specific to adaptive transfer, we can teach them. In fact, a substantial body of research has shown self-regulation can be taught in K-12 settings (De La Paz, Ferretti, Wissinger, Yee, & MacArthur, 2012; Graham & Harris, 1996). While this success is encouraging, it is expected that that college writing would draw on more sophisticated self-regulation strategies.

The goal of my project is to identify and teach self-regulation strategies for college writing. Teaching the benefits of productive self-regulation strategies could be an effective way of engaging student writers in adaptive transfer. As part of an assignment, students might be explicitly taught self-regulation strategies associated with adaptive transfer, and then practice those strategies in their own writing. Or students might actively observe self-regulation strategies used by other writers. Several researchers have shown students who learn strategies through observing them improve their performance at a higher rate than those who receive more traditional instruction (Kitsantas, Zimmerman, & Cleary, 2000; Rijlaarsdam et al., 2008; Zimmerman & Kitsantas, 2002). Thus, we can predict that showing students examples of writers using self-regulation strategies to adapt to new types of writing would also improve their ability to engage in adaptive transfer.

To figure out which self-regulation strategies instructors should teach to students, we need to pinpoint what are the top self-regulation strategies that help as well as the ones that interfere with writers adapting to unfamiliar genres, and we need to investigate to what extent existing writing curricula might help students develop these strategies.

Overview of the dissertation

This dissertation includes studies that identify self-regulation strategies instructors might teach to writers to enhance their adaptive transfer skills, and it measures how one assignment designed to teach adaptive transfer affects students' strategies for composing subsequent source-based research essays.

The first study is an observational classroom study that compares the strategies used by more and less successful graduate students as they learned to compose a research proposal for the first time. When composing the proposal, more successful writers were unique in using the challenges they faced to improvise new goals and expectations for their project. Although clear transformation of prior knowledge appeared to occur, this study did not isolate it as a variable. Instead it focused on identifying the self-regulation

strategies that we could teach. This study describes several self-regulation strategies that factor into writers' ability to adapt their rhetorical knowledge and practices, and it suggests an instructional intervention that can explicitly teach these strategies to students.

The second study is a longitudinal case analysis of a graduate student as he developed self-regulation strategies over time. The longitudinal component gets us closer to identifying how self-regulation strategies transfer from one context to the next. Learning to use troublesome genre conventions productively was a key factor in helping the graduate student adapt to the writing assigned in his academic program. He adapted quickly once he was able to see the challenges he encountered as opportunities to learn rather than indicators of his deficiency. This study illustrates self-regulation strategies associated with this ability, it provides evidence that self-regulation strategies for adapting to genres do change, and it shows that these changes can help writers move from struggle to success.

The third study takes a different approach. Instead of focusing on the strategies writers use to adapt, it analyzes how pedagogical interventions designed to teach adaptive transfer affect students' self-regulation strategies when working on a subsequent writing task. This quasi-experimental study compared the effect that an argument-based and genre-based pedagogy had on the self-regulation strategies students used to compose a source-based research essay. The results from this study suggest that self-regulation strategies related to using model texts to adapt genre knowledge can be cultivated by teaching students a vocabulary to talk about genre.

References

Beaufort, A. (2007). *College writing and beyond: A new framework* (1st ed.). Utah State UP.

Bereiter, C. (1995). A dispositional view of transfer. In *Teaching for transfer: Fostering generalization in learning*.

Bergmann, L., & Zepernick, J. (2007). Disciplinarity and Transfer: Students' Perceptions of Learning to Write. *Writing Program Administration*, *31*(1–2), 124–149.

Berkenkotter, C., Huckin, T. N., & Ackerman, J. (1988). Conventions, conversations, and the writer: Case study of a student in a rhetoric Ph. D. program. *Research in the Teaching of English*, 9–44.

Brent, D. (2012). Crossing boundaries: Co-op students relearning to write. *College Composition and Communication*, *63*(4), 558–592.

De La Paz, S., Ferretti, R., Wissinger, D., Yee, L., & MacArthur, C. (2012). Adolescents' Disciplinary Use of Evidence, Argumentative Strategies, and Organizational Structure in Writing About Historical Controversies. *Written Communication*, *29*(4), 412–454. https://doi.org/10.1177/0741088312461591

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), 134–147. https://doi.org/10.1016/j.jslw.2011.02.003

Devitt, A. J. (2004). *Writing Genres*. Carbondale: Southern Illinois UP.

Devitt, A. J., Reiff, M. J., & Bawarshi, A. (2004). *Scenes of writing: Strategies for composing with genres*. Pearson.

Dias, P., Freedman, A., Medway, P., & Pare, A. (1999). *Worlds apart: Acting and writing in academic and workplace contexts*. Routledge.

Donahue, C. (2012). Transfer, Portability, generalization: (How) does composition expertise "carry"? In K. Ritter & P. K. Matsuda (Eds.), *Exploring Composition Studies: Sites, Issues, Perspectives* (pp. 145–166). Utah State UP.

Downs, D., & Wardle, E. (2007). Teaching about writing, righting misconceptions:(Re) envisioning" first-year composition" as" Introduction to Writing Studies". *College Composition and Communication*, 552–584.

Freedman, A. (1987). Freedman,_Learning_to_Write_Again--Discipline-Specific_Writing_at_University.pdf. *Carlton Papers in Applied Language Studies*, *4*, 45–65.

Gallagher, C. W. (2016). What Writers Do: Behaviors, Behaviorism, and Writing Studies. *College Composition and Communication*, *68*(2), 238.

Graham, S., & Harris, K. R. (1996). Self-regulation and strategy instruction for students who find writing and learning challenging. In M. C. Levy & S. Ransdell (Eds.), *The Science of Writing: Theories, Methods, Individual Differences, and Applications*. Mahweh, NJ: Lawrence Erlbaum Associates.

Hyland, K. (2011). DISCIPLINES AND DISCOURSES: SOCIAL INTERACTIONS IN THE CONSTRUCTION OF KNOWLEDGE. In *Writing in Knowledge Societies* (p. 193). WAC Clearinghouse. Retrieved from http://wac.colostate.edu/books/winks/winks.pdf#page=204

Jarratt, S. C., Mack, K., Sartor, A., & Watson, S. E. (2009). Pedagogical memory: Writing mapping and translating. *Writing Program Administration*, *33*(1–2), 46–73.

Johns, A. M. (2008). Genre awareness for the novice academic student: An ongoing quest. *Language Teaching*, *41*(02). https://doi.org/10.1017/S0261444807004892

Johns, A. M. (2015). Moving on from Genre Analysis. *Journal of English for Academic Purposes*, *19*, 113–124. https://doi.org/10.1016/j.jeap.2015.04.005

Kitsantas, A., Zimmerman, B. J., & Cleary, T. (2000). The role of observation and emulation in the development of athletic self-regulation. *Journal of Educational Psychology*, *92*(4), 811.

McCarthy, L. P. (1985). A Stranger in strange lands: A college student writing across the curriculum. *Research in the Teaching of English*, *21*(3), 233–265.

Meyer, J. H. ., Land, R., & Baillie (Eds.). (2010). *Threshold concepts and transofrmation learning*. Rotterdam, the Netherlands: Sense.

Miller, C. R. (1984). Genre as Social Action. *Quarterly Journal of Speech*, *70*, 151–167.

Moore, J. (2012). Mapping the Questions: The state of writing-related transfer research. *Composition Forum*, *26*.

Navarre Cleary, M. (2013). Flowing and Freestyling: Learning from Adult Students about Process Knowledge Transfer. *CCC: College Composition and Communication*, *64*(4), 661–687.

Nilson, L. B. (2013). *Creating self-regulated learners*. Sterling, Virginia: Stylus Publishing.

Nowacek, R. S. (2011). *Agents of Integration: Understanding Transfer as a Rhetorical Act*. CCCC and NCTE.

Penrose, A., & Geisler, C. (1994). Reading and Writing Without Authority. *College Composition and Communication*, *45*(4), 505–520.

Perkins, D. N., & Soloman, G. (1988). Teaching for Transfer. *Educational Leadership*, *46*(1), 22–32.

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, *82*(1), 33.

R. Negretti. (2012). Metacognition in Student Academic Writing: A Longitudinal Study of Metacognitive Awareness and Its Relation to Task Perception, Self-Regulation, and Evaluation of Performance. *Written Communication*, *29*(2), 142–179. https://doi.org/10.1177/0741088312438529

Reiff, M. J., & Bawarshi, A. (2011). Tracing Discursive Resources: How Students Use Prior Genre Knowledge to Negotiate New Writing Contexts in First-Year Composition. *Written Communication*, *28*(3), 312–337. https://doi.org/10.1177/0741088311410183

Rijlaarsdam, G. C. W., Braaksma, M. A. H., Couzijn, M. J., Janssen, T. M., Raedts, M., Van Steendam, E., … Van den Bergh, H. (2008). Observation of peers in learning to write: Practice and research. *Journal of Writing Research*, *1*, 53–83.

Russell, D. R., & Yanez, A. (2003). "Big picture people rarely become historians": Genre systems and the contradictions of general education. In C. Bazerman & D. R. Russell (Eds.), *Writing Selves/Writing Societies*. WAC Clearinghouse.

Swales, J. M. (1990). *Genre Analysis: English in academic and research settings*. New York: Cambridge University Press.

Thaiss, C. J., & Zawacki, T. M. (2006). *Engaged writers and dynamic disciplines: research on the academic writing life*. Portsmouth, NH: Boynton/Cook.

Wardle, E. (2007). Understanding "Transfer" from FYC: Preliminary Results of a Longitudinal Study. *Writing Program Administration*, *31*(1–2), 65–85.

Wardle, E. (2012). Creative Repurposing for Expansive Learning: Considering "problem-exploring" and "answer-getting" dispositions in individuals and fields. *Composition Forum*, *26*.

Wolfe, Joanna. (2018). *Does Comparative Genre Analysis prepare students to analyze unfamiliar writing prompts?* Presented at the Conference on College Composition and Communiation, Kansas City, MO.

Wolfe, JOANNA, Olson, B., & Wilder, L. (2014). Knowing What We Know about Writing in the Disciplines: A New Approach to Teaching for Transfer in FYC. *The WAC Journal*, *25*, 42.

Yancey, K., Robertson, L., & Taczak, K. (2014). *Writing across contexts: Transfer, composition, and sites of writing*. Boulder, CO: Utah State UP.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, *25*(1), 3–17.

Zimmerman, B. J., & Kitsantas, A. (2002). Acquiring writing revision and self-regulatory skill through observation and emulation. *Journal of Educational Psychology*, *94*(4), 660–668. https://doi.org/10.1037//0022-0663.94.4.660

Zimmerman, B. J., & Kitsantas, A. (2007). A writer's discipline: The development of self-regulatory skill. In S. Hidi & P. Boscolo (Eds.), *Writing and Motivation* (pp. 51–69). Boston: Elsevier.

Zimmerman, B. J., & Risemberg, R. (1997). Becoming a self-regulated writer: A social cognitive perspective. *Contemporary Educational Psychology*, *22*(1), 73–101.

CHAPTER 2

**Self-regulation and genre acquisition: Composing research proposals in
a graduate-level seminar**

Abstract

To prepare students to acquire unfamiliar academic genres, researchers have begun to develop pedagogies that teach students to analyze genre to develop their understanding of genre conventions. However, knowledge about conventions by itself is neither sufficient nor necessary for successful genre acquisition. In some cases, students may have knowledge about a genre but still fail to acquire processes for successful genre acquisition. In other cases, students may initially lack knowledge and gain it as an effect of strategic writing processes. Drawing on a theory of self-regulation, this study investigated the processes associated with successful genre acquisition by analyzing the strategies more and less successful graduate student writers used to navigate problems that emerged when composing their first research proposal. While the less successful writers reacted to problems by avoiding or obsessing over them, the more successful writers used problems to improvise new goals and practices. In addition, evidence suggests more successful strategies may be a factor in developing students' ability to think critically about genre conventions. Pedagogical implications suggest students could benefit from learning more explicitly about the self-regulated learning strategies they use to cope with writing problems. One way to do this could be through observational learning.

Keywords: Genre acquisition, self-regulated learning, research proposal, problem-solving, writing pedagogy

Introduction

It is widely recognized that student writers struggle to acquire genre knowledge in unfamiliar writing situations (Beaufort, 2007; Devitt, 2007; Dias, Freedman, Medway, & Pare, 1999; Freedman, 1993; McCarthy, 1985; Reiff & Bawarshi, 2011; Yancey, Robertson, & Taczak, 2014). Students have characterized these struggles as "butting heads" with academic writing (Berkenkotter, Huckin, & Ackerman, 1988), encountering "double binds" (Russell & Yañez, 2003), and overcoming "contradictions" (Castelló, Iñesta, & Corcelles, 2013). To prepare students to overcome these challenges and successfully participate in unfamiliar genres, there have been attempts to understand the skills associated with genre acquisition and how instructors might best teach these skills to students.

To prepare students to acquire unfamiliar genres, scholars have developed pedagogies that teach students a framework for analyzing genre. For instance, scholars in Systemic Functional Linguistics and English for Specific Purposes offer ways to teach students typified text structures and purposes (e.g. Swales (1990) CARS model for writing academic introductions). Or, pedagogies like those proposed by Wilder and Wolfe (2009) offer a method for teaching students discipline-specific "topoi"—or patterns typical of how arguments are constructed in a discipline, (Wilder, 2012; Wolfe, Olson, & Wilder, 2014). Likewise, Carter (2007) recommends teaching students "metagenres," which are generalized "ways of doing" that are shared across disciplines, such as problem-solving in Engineering and Business or empirical inquiry in Microbiology and Political Science. What these pedagogical approaches share is a focus on explicitly teaching a framework for understanding genre conventions of particular disciplines.

Scholars studying writing transfer propose teaching a terminology that can be applied to a wide variety of contexts. For instance, Yancey et al. (2014) teach students terms like "audience," "genre," "exigence," and "discourse community," and then ask students to use these terms to reflect on texts. (p. 57). Similar pedagogical approaches improve how students talk about writing by asking them to conduct research on writing as part of their first-year writing course (Downs & Wardle, 2007). The underlying assumption behind these approaches is that students' knowledge about writing can help them make sense of new writing situations, which in turn could inform how students participate in those situations. Like the genre-based approaches, these transfer-oriented approaches also focus on teaching students to develop conscious knowledge about unfamiliar genres, under the assumption that their knowledge about genre can be translated into successful practices for participation.

While an ability to analyze genres can be helpful, it is neither necessary nor sufficient for genre acquisition. Freedman (1987) has shown that students engage in tacit processes as writers develop a "felt sense" of a genre. Writing processes also appear to be a significant factor in two cases where students encounter unfamiliar genres. In some cases, students demonstrate knowledge about genre, yet still fail to leverage their knowledge and develop a successful writing process. For instance, in the case of Tiffany (Cleary 2013), we see a struggling writer who seemed to know the difference between writing for academic essays and her personal journal but still refused to change her process. Instead, Tiffany fell back on a strategy she was familiar with, which she described as "flowing," to compose her personal journal entries and academic essays. As

a result, she set herself up to compose her essays at the last minute in one burst, and she received failing grades on her assignments for the course. Tiffany's case shows a writer relying on a seemingly unproductive composing process that she was unable to change, despite being aware that it was problematic. We could interpret Tiffany's failure as a lack of procedural knowledge, despite her declarative knowledge. While she saw what the expectations for writing were in her class, she was unable to change her process.

For other writers, having knowledge about writing is not a necessary precursor for achieving success in new writing situations. In contrast to Tiffany, writers can initially lack a framework for thinking about a type of writing, yet develop one as their writing process unfolds. Russell and Yañez (2003) show this in the case of Beth, a Journalism student in a History class who struggled to acquire an ability to compose her historical analysis essays. Throughout the course Beth expressed frustration, but she persisted in meeting with her instructor and eventually realized how to compose a successful historical analysis that met her instructor's goals as well as her own. While Russell and Yañez (2003) attribute Beth's success to her newfound knowledge about the activity system of her History class, they say much less about the behaviors she used to acquire this knowledge. While we know she met several times with her instructor, we do not know how her process for composing enabled her to gain insight into her problems and apply that insight in a way that radically transformed her project. While it is possible Beth's newfound knowledge about history writing helped her compose, it is also possible that this knowledge developed as an effect of her process.

Cases like Beth and Tiffany make it clear we need to not only attend to what writers know about writing, but perhaps more importantly we need to attend to the processes writers use to engage with challenges that emerge when acquiring new genres. Writers like Beth, who successfully acquire a new genre, seem to take up processes that result in success, whereas writers like Tiffany seem to demonstrate processes that are less appropriate for acquiring new genres. What can we learn from writers like Beth that we can use to teach to help writers like Tiffany develop more successful genre acquisition strategies? To address these questions, the current study draws on self-regulation as a lens to investigate tacit decision-making processes associated with genre acquisition.

Using self-regulation as a lens to study processes associated with genre acquisition

Genre acquisition is a process where writers develop new knowledge and practices to realize the social purposes and textual forms that have become typical and expected in a specific writing situation (Freedman, 1987). Genre acquisition unfolds over time as students refine their sense of the writing by "shuttling back and forth between felt sense and the unfolding text" (p. 102). A felt sense is like a writers' intuition for 'good' writing. By shuttling between "felt sense" and the "unfolding text," writers refine what they know about the genre and how to participate (Popken, 2001). This shuttling characterizes what is involved when writers adapt to new writing situations, but does not fully explain what specific processes that enable writers to acquire new genres. To get at these processes, we need a framework that provides a more fine-grained look into how writers make decisions and strategize their practices.

To study genre acquisition processes, this study draws from a theory self-regulation (SR). SR is an ability to monitor and manage one's knowledge, behaviors, and emotions in order to realize and achieve learning goals (Pintrich, 2004; Zimmerman,

1990). SR scholars have categorized processes in terms of how students set goals, carry out practices, and self-evaluate their accomplishments in order to identify obstacles and how to overcome them. Using this SR framework, scholars have been able to identify strategies that help students more effectively acquire new knowledge and skills (D. L. Butler & Winne, 1995; Castelló, Iñesta, & Monereo, 2009; Paris & Paris, 2001; Zimmerman, 1990). For instance, SR scholars have shown that highly self-regulated learners spend more time setting goals for their learning, reflecting on progress, and altering goals based on their reflections. When these skills are explicitly taught to students, those students show improvements in learning (Butler & Britt, 2011).

Scholars have also shown that an SR framework is well suited to study writing. A group of scholars have used SR to study the self-regulation strategies that can help writers monitor and manage their writing process. This effort is rooted in Zimmerman's (1990) theory of self-regulation. Zimmerman's theory distinguishes three categories of strategies, all of which help writers monitor and adjust their writing process. The forethought category describes the strategies writers use to construct a mental model of the text they have yet to write. These strategies include the tactics writers use to articulate their goals and motives for writing. The performance category focuses on strategies writers use to draft their text, such as setting a timer to block of focused writing time, choosing a productive writing environment, or establishing some other constraints that contribute to text production. A self-reflection category refers to the strategies writers use to evaluate and react to their progress (Zimmerman & Kitsantas, 2007). Self-reflection strategies involve tactics for identifying strengths and weaknesses in text produced so far and deciding how to react to problems.

Scholars using SR to study writing have shown that SR strategies are a key component of a writer's ability to acquire rhetorical knowledge and abilities. For instance, when compared to more skilled writers, elementary school children who experience difficulty learning in school demonstrated a more limited set of SR strategies for setting goals, self-reflecting, and revising their papers (Graham & Harris, 1996). As a result, scholars have developed ways to teach SR strategies to students. One such program, called Self-regulated Strategy Development, has shown that SR strategy instruction can help adolescent students produce higher quality writing than those compared to those who were not taught these strategies (Graham and Harris 1996). In addition, instruction in SR has helped community college students taking developmental writing courses increase writing achievements and motivation (Macarthur & Philippakos, 2013). This link between writers' SR strategies and the quality of their text suggests that these strategies may be part of students' processes for acquiring new genres.

Studies of more advanced undergraduate and graduate student writers suggest that SR strategies develop in conjunction with students' genre knowledge. Castellò and Iñesta (2013) show the SR strategies used by PhD students who are learning write a research article are related to students' ability to overcome challenging problems and develop a more refined understanding of how to compose research articles in their academic field. One such development occurred in students who began to treat the text they were composing as a tool for thinking about their research rather than a product they are making, a trait similar to that demonstrated in some experienced scientific writers (Florence & Yore, 2004). When studying undergraduates, Negretti (2012) found that students' SR strategies developed over time and were "intertwined" with their

understanding of a writing task. His account provides a rich description of the types of self-regulation strategies undergraduate students might use when composing a research paper.

While Negretti (2012) and Castellò et al. (2013) suggest student writers' SR strategies are associated with their ability to acquire genres of academic writing, if we are to decide which strategies to teach to students, we need to move beyond descriptive accounts by analyzing how these strategies are associated with successful and unsuccessful genre acquisition. Without understanding the quality of SR processes, writing instructors may not be able to make informed decisions about which SR strategies they might encourage their students to adopt and which to avoid. To better understand how to teach genre acquisition strategies to students, we need to know more about what SRL strategies distinguish writers who are more and less successful at acquiring new genres.

Studying students' strategies for genre acquisition would help us teach these strategies by allowing students to learn by observing these strategies in action. Observational learning has been shown to expand student writers' ability to learn new writing tasks. For instance, students who observed writers coping with a revision task outperformed students who shown a writer performing flawlessly (Zimmerman & Kitsantas, 2002), and students who observed their peers working on a task have also been shown to be more adept in changing their writing process and producing higher quality texts (Rijlaarsdam et al., 2008). Thus, it makes sense to seek out examples of the coping strategies writers use as they are learning to write in new writing situations.

It is important to note: In any study of writers' processes, a central challenge lies in the danger of oversimplifying a highly complex and personal process by focusing on isolated actions and events. This limitation was not a problem for descriptive studies like Zimmerman, which seek to catalogue types of SR strategies. However, isolated strategies do not explain the more complex processes and outcomes involved in genre acquisition. Thus, it is necessary to broaden our focus to SR strategies that interact with each other.

To avoid oversimplification, this study adapts SR as a lens to analyze how writers set goals, manage motives, and evaluate and react to their accomplishments. Interactions among writer's goals, problems, and accomplishments provide a way to make visible the strategies associated with genre acquisition. Problems are particularly important in this framework, because, as we saw in Beth and Tiffany, students' strategies for reacting to problems can make or break their ability acquire new genres, and problems can act as catalysts that set in motion an interaction among goal-setting, text production, and self-evaluation strategies. By focusing on how problems factor into students' SR strategies, it is possible to build a bottom-up interpretation of SR strategies that are associated with genre acquisition (similar to a "regulation episode" in Iñesta & Castelló, 2012). This bottom-up focus places attention on how students shift among self-reflecting on accomplishments and updating goals in accordance with problems. I take as an assumption that these shifts occur as writers encounter problems, self-reflect on accomplishments, and return to their goals, and that by asking writers to talk about these shifts throughout their writing process, we can account for changes in writers' genre knowledge as they acquire unfamiliar conventions. This framework can help account for what happens when students develop a felt sense of the genre.

Research questions

To study genre acquisition strategies of more and less successful genre acquisition, the following questions were posed:

1. What SRL strategies distinguish students who achieve high degrees of success from those who achieve a high degree of success from those who achieve lesser degrees of success on the same writing project?
2. To what extent do SRL strategies factor into a student's ability to develop knowledge about writing?

Research design

This study analyzed the self-regulated learning episodes of four graduate students working on a writing task--a research proposal--which was new to all of them. Of the participants selected, two were more successful and two less successful. To hone in on their SRL strategies, participants were asked both during and after the project to keep a log of their goals for writing, how well they accomplished those goals, the problems they faced, and their plans for what to do moving forward. These logs were analyzed for patterns in the role problems played in their self-regulation processes.

The site for study

The site for this study was a tutor training practicum required for students who were training to tutor in the university's writing center. The practicum consisted of twelve students who had been selected based on a recommendation from one of their professors and vetting by the center's Director and Associate Director. The practicum introduced students to a range of writing principles and strategies that they could use to tutor graduate and undergraduate students. A central concept that students were expected to show mastery of was "the novelty moves." The novelty moves are adapted from Swales' (1990) Create a Research Space (CARS) model of research article introductions. Following Swales' (1990) analysis of research article introductions, the novelty moves consist of four categories of claims: 1) "Explaining significance, 2) "Describing the status quo," 3) "Identifying a research gap," and 4) "Filling the gap with new research" (see Appendix A for a full description of these terms). Learning these moves offers tutors a framework to help them discuss with clients the technical research articles that are often the focus of tutoring sessions at that center (Reineke, Glavan, Philips, & Wolfe, forthcoming).

The final assignment for the practicum involved tasked students with using the novelty moves and other principles for writing they had learned in the course to compose an original research proposal. According to the instructor, the rationale behind the proposal assignment was to give tutors the experience the challenge of applying what they had learned so they could better empathize with tutees going through similar processes. Students began the assignment in the last five weeks of the semester. As part of composing, the instructor first required students produce an annotated bibliography in which they summarized sources central to their literature review, and then they used the novelty moves to write up an outline of their research. Toward the last week of the semester, students were also required to provide peer review feedback on two of their classmates' drafts and to meet with their two peer reviewers in an instructor-led conference to discuss feedback and plans for revision. Overall, this site provided a group

of well-reputed writers who were being trained in using knowledge about writing to adapt writing practices.

Participants

Six students consented to participate in the study[3], but only four were chosen for the final analysis. The four selected students were chosen because they were all Masters students enrolled in the English department, and all four encountered similar problems when composing the proposal. Only one (Connor) had prior tutoring experience, and all four mentioned having no prior experience with composing research proposals. In addition, the four participants were selected because they represented a range of success on the proposal assignment. Table 1 shows two participants (Kara and Connor) were characterized as successful in adaptive transfer and two (Allison and Leslie) were unsuccessful. Successful and unsuccessful characterizations were made based on participants' final grade, instructor feedback, and self-evaluation two months after completing the project. The two successful writers achieved high grades and positive feedback, while the unsuccessful writers achieved low grades and negative feedback.

Table 1. Participants and their evaluation as determined by their grade, instructor feedback, and self-evaluation.

	Grade	Instructor Feedback	Self-Evaluation
Kara	A	This was easily the strongest synthesis in the class.	I felt really successful. I was really proud of the final project.
Connor	A-	This paper evidences a tremendous amount of revision and is much stronger than the draft from the peer review. […] A- when taking into consideration how far this paper has come in a short time.	The take-away is I'm learning things - I don't have to get an "A" to show that I'm learning.
Allison	B	This paper cites some good sources and presents some interesting material, but more work is needed to think through the implementation details.	I did ok, but wasn't super happy with what I turned in
Leslie	B-	The essay is very hard to follow. […] I am a little surprised by the paper since the literature review part, […] seems like the same draft submitted for the peer review.	I probably didn't do as well as I could have

---

[3] Of the consenting participants, there were four graduate students and two undergraduates. All participants gave consent in accordance with IRB protocol.

Data Collection

The writers participating in this study allowed me to follow their writing process through three data sources: process logs, retrospective interviews, and final drafts of their proposal with instructor comments.

Process Logs

All students in the practicum were required by their instructor to keep a process log protocol as they composed their research proposal, but were not informed of the study until the last day of the semester. The rationale behind keeping a process log was that it would serve as a beneficial pedagogical activity that would enhance students' reflective awareness as they were composing the genre. In-process protocols have been useful in promoting students' reflective awareness and thus have helped researchers capture writing practices that successful and unsuccessful writers report on when prompted (Bereiter & Scardamalia, 1987; Flower & Hayes, 1977; Higgins, 1993). As a type of in-process protocol, process logs have been used effectively to observe how writers narrate their process as it unfolds without creating the burden imposed by a full think-aloud protocol (Li, 2012).

Writing Process Log

Please record your responses to the following prompts.

<u>Before your start your writing session:</u>

    1. What are you goals for this session?

<u>After your writing session:</u>

    2. How well did you accomplish your goals in this session?

    3. When pursuing these goals, what problems did you encounter?

    4. What helped or hindered you in addressing these problems?

    5. What alternatives, if any, did you consider?

    6. What will you do next?

Figure 1. Process Log Protocol used by participants

Participants answered a series of questions before and after they started working on their research proposals (Figure 1). The protocol questions prompted writers to relate their goals, accomplishments, and problems and evaluate their current progress with their sense of what future tasks and expectations they still needed to pursue. Participants were asked to complete the protocol each time they worked on their proposal. Responses were recorded using an audio recorder.

To code the process logs, I segmented the transcripts into t-units and coded each t-unit as a goal, problem, or accomplishment. Table 2 presents the definitions of my coding categories. Goals mark a writer's expectations and plans for writing; accomplishments mark statements of progress; and problems mark moments where writers are dissatisfied with goals or accomplishments. This scheme was not intended to map precisely onto Zimmerman's (1990) three categories of SR, but instead capture how students were integrating these different aspects of SR. The problem category reveals where students might be adjusting goals in relation to accomplishments as they experienced tension or frustration in their writing.

Table 2. Coding Scheme Definitions and Examples

Code	Definition	Example
Goal	A future expectation, outcome, motive, or practice	"My goals for this session are to produce a first draft of my paper, as much as I can get done."
Problem	Uncertainty, frustration, or some other lack that prevents a satisfying accomplishment or goal.	"Like I actually do not know if the research question comes in the very beginning or at the end of a literature review"
Accomplishment	Writers define or evaluate activities or feelings that had occurred in the past.	"So today I went from Perelman, classical rhetorical, to another author"
Other	Statements that do not indicate the writer's goals, problem, or accomplishments.	"The date is 12-13, and it is 1:00pm"

Reliability was established with the help of a second coder. Inter-rater reliability was calculated with an accuracy of 96% and kappa of .95.

An additional layer of analysis was conducted to measure how students' self-regulation strategies correlated with their ability to reflect on the conventions of research proposal writing. Process logs were analyzed for how frequently (per 1,000 words) writers mentioned rhetorical terms taught in the practicum. Table 3 presents the list of these terms. Tracking how often writers mentioned terms taught in the practicum in their logs allowed us to see how writers were incorporating the terminology they had learned in the course in their plans and reflections while writing their proposals. Frequency of terms mentioned in interviews could lend insight into the extent to which this terminology stuck with writers after the course.

Table 3. Terminology explicitly taught in tutor training practicum

Literature Review	Novelty Moves
Methodology	Research Question
Annotated Bibliography	Gap
Proposal	Status Quo
Abstract	Significance

Retrospective Interviews with Students and Instructor

To aid interpretation of the process logs, interviews were conducted with each of the students two months after they completed the project. Interviews began with a series of general questions into each participant's understanding of the assignment, their process for completing the assignment, their self-assessment of their work, and how the process log influenced their work. Following general questions, the participants was presented with three critical incidents (Higgins, Long, & Flower, 2006, p. 21) from their log. Students were introduced to a particularly difficult problem that emerged and then asked to comment on what they remember about that problem. The interviewer read aloud the incident to participants and then asked them to comment. Interviews were transcribed and then analyzed using a grounded coding approach in which the author identified recurring topics that emerged among the writers. In addition, interviews were coded for how frequently students used terminology taught explicitly in the course (see Table 2), and a close reading of each interview transcript was conducted in order to analyze successful and unsuccessful students' conscious knowledge about the research proposal genre two months after having completed it.

Proposal drafts

While not the main focus of this study, the drafts of students' research proposals offered additional context behind the participants' processes. Participants were asked to submit the draft the composed for the peer review session and the final draft they submitted for grading. To analyze drafts, the author conducted a close-reading of instructor comments and compared changes that writers made from their peer review draft to the final when available. While changes for Allison were unavailable[4], the drafts of the two successful writers (Kara and Connor) show that they more radical changes than the less successful writer (Leslie).

Findings
More successful writers balanced problems, goals, and accomplishments

To understand how students' mentions of goals, problems, and accomplishments unfolded across their process logs, codes were mapped onto a chronological timeline. Figure 1depicts each student's articulation of goals, problems, and accomplishments over the course of their log. Each marker represents a t-unit of a goal, problem, or accomplishment. The t-units coded as goals appear on top, accomplishments are on bottom, and problems are in the middle. Vertical lines mark where a new process log entry begins and ends. To provide an even comparison, only the first several entries of

---

[4] Allison did not submit a draft for peer review.

each log are shown. However, Kara and Connor's logs continue further (for a full breakdown, see Appendix B)

Figure 1 shows the less successful writers dealt with problems on two extremes. Problems were nearly absent from Leslie's log. She had by far the fewest number of problems (6%) and highest number of accomplishments (53%). Leslie's problems were few, isolated, and brief. All of Leslie's six problems were isolated and un-elaborated, each consisting of only one t-unit. Unlike the other writers, none of her problems were rhetorical: for instance, she mentioned problems like not having enough time, being distracted, and figuring out how to "transfer" her notes into an outline.

On the other extreme, Allison's log was dominated by problems. Her log contained the highest number of problems (42%) out of all the writers, and her problems occurred in one long almost continuous string, one after the other. In addition, Allison did not intertwine goals as evenly as the other writers. She set the fewest goals (10%), and during her last session her goals drop off completely.

While the unsuccessful writers either avoided or were overwhelmed by problems, the two successful writers balanced problems, goals, and accomplishments more evenly. Figure 1 shows Kara and Connor raising several clusters of problems and intertwining mentions of goals and accomplishments. This is evident in Connor's first, third, and fifth log entries and all of Kara's log entries. This more balanced distribution of problems, goals, and accomplishments was reflected throughout Kara's and Connor's entire logs.

In addition to balancing problems, the more successful writers also set goals more continuously when compared to less successful writers. Figure 1 also shows Kara and Connor mentioned goals throughout the beginning, middle and end of each session recording, while Allison's goals dropped off completely in her last session, and Leslie only set goals when prompted by the process log protocol.

These patterns suggest that the more and less successful writers demonstrated different approaches to self-regulating their writing process. A more detailed look at their process logs, provided in the next section, identifies and offers examples of these self-regulatory strategies in action.
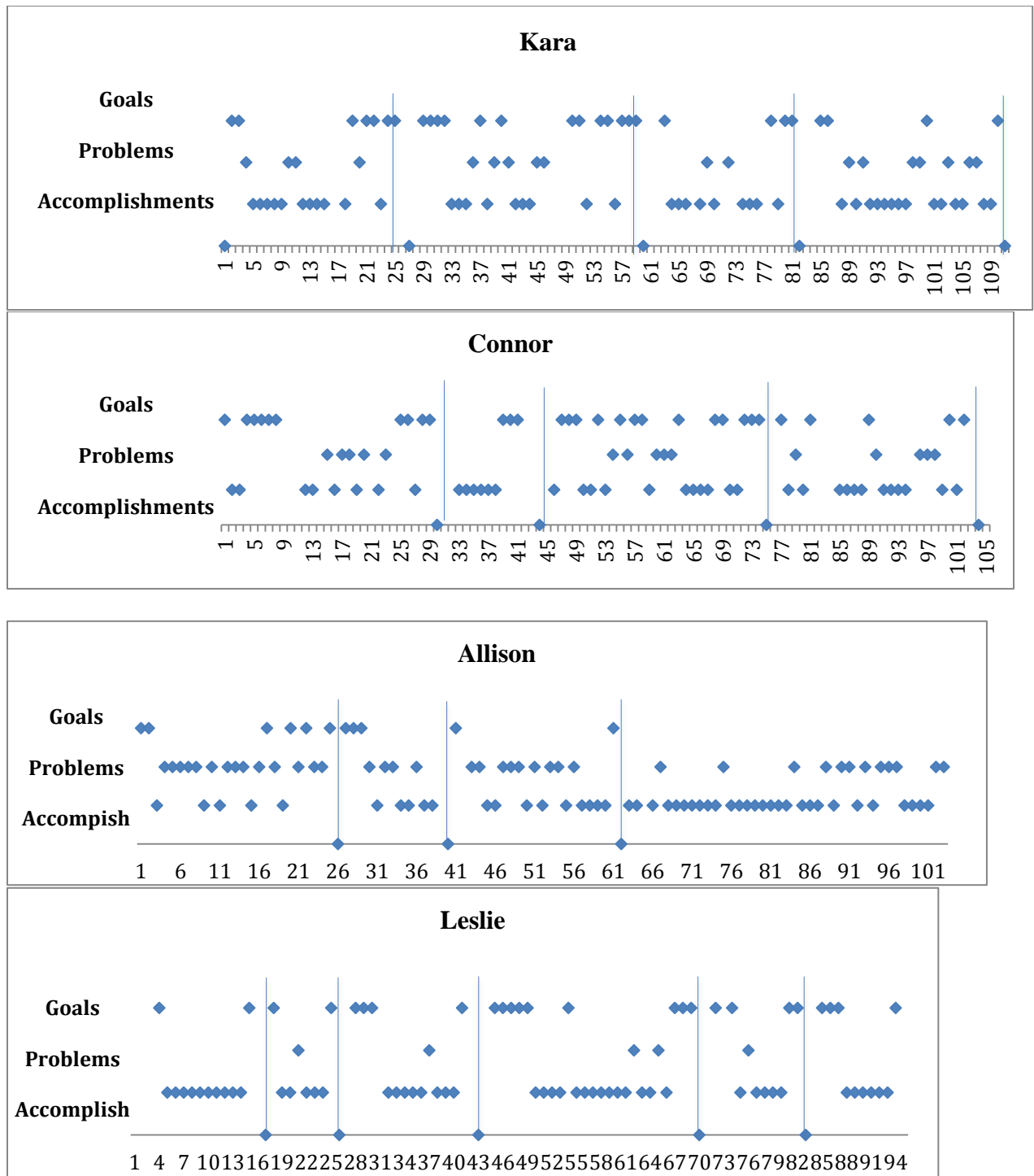
Figure 2. Process logs for Kara, Connor, Leslie, Allison (first 90 t-units). Lines mark where writing sessions end/begin. Blank spaces indicate t-units coded as "other."

Solution-oriented problem framing

While Figure 1 showed more successful writers balancing problems, goals, and accomplishments, a closer look at the process logs revealed these more successful writers using problems more effectively than less successful writers in three distinct strategies.

The successful students framed problems in terms of solutions. Table 4 shows examples of the more successful writers framing problems in terms of possible solutions. For example, Kara framed two possible solutions when she recognized herself struggling to figure out, "is prosody its own section?" or should it be folded into another section. She makes a similar move later on when she realized "I do not really have the background information to make that relevant." By pinning down her struggle and identifying what she does *not* have, Kara seems to open possible solutions for her problems. Similar to Kara, Connor also framed solution-oriented problems, but unlike Kara his solutions were less specific and less frequent. Connor's more general solutions are evident when he realized his draft is "reader-based prose" and not "writer-based prose," and when he realized he was not ready for "an extra layer of literacy" required for doing his research.

This solution-oriented problem framing is in striking contrast to Allison, who consistently framed problems as dead-ends. This is evident when Allison concludes her problems by saying, "everything has been done already," "there's no point in proposing that," "that's really frustrating," and "of course the articles I need were left out." These conclusions imply that there is no way forward for solving the problem, and thus she has hit a dead-end. Allison appears to relinquish her responsibility to the problem, and instead attribute responsibility to something seemingly outside her control. While Figure 2 may give the impression that Allison elaborates on problems, really what she does is jump around from problem to problem, compounding them without proposing solutions.

Unlike the other writers, mentions of problems were absent from Leslie's log. Only one of Leslie's five problems dealt with rhetorical concerns. Four of Leslie's problems dealt with her ability to stay focused and finish her tasks. She mentioned becoming "distracted" or "rushed for time." Her only problem that did deal with her writing was not rhetorical. When she had trouble "figuring out how I was going to move all of my notes over [into an outline]" she seems more focused on how to copy and paste text from her notes rather than think through her argument.

Table 4. Kara's and Connor's problems opened up solutions, while Allison's shuts down solutions.

Problems framed as possible solutions	Problems framed as dead-ends
But the [paper is] kind of like in chunks. The sources are not integrated very well. And I also am struggling to figure out like, **is prosody its own section or should it be part of the section about the importance of intonation in general?** (Kara)	I think it's a little choppy with the transitions, **but I hope it still makes sense.** (Allison)
So one problem I encountered is that […] I talk about the importance of intonation and the features of intonation, and then I get to the novelty moves. And that's where I'm a little bit stuck. I do not know **if I'm supposed to have research there, or just like connecting it [my project] to the [the study site] or what**. (Kara)	Right now, I'm trying to propose a study, but I'm having a hard time deciding what exactly to propose**, because it seems everything's been done already**. (Allison)
I have this feeling that I do not trust my writing, because if I'm understanding it more as I'm writing about it, that means my draft is probably going to reflect someone who's thinking and learning as opposed to delivering information. **So, maybe its writer-based prose and I have not yet moved to reader-based prose.** (Connor)	I found that so many people have already done corpus studies to see what idioms to teach. **So there's no point in really proposing that.** (Allison)
	Every time I found a source that I felt like I could use, I just could not get access to it. […] **and that's really frustrating**. (Allison)
	Um, and then also there are a couple of books that seem really good that had a bunch of articles, but of course in the preview the articles I wanted to read were left out. […] **So that's really frustrating** (Allison)

Interestingly, the only time Allison framed a solution-oriented problem; she bucked her usual pattern of becoming frustrated and ended up solving the problem.

> So I had a lot of trouble organizing my paragraphs and even facts within the paragraphs and deciding **do I do an introduction and then a synthesis, like literature review, or do I just combine both into one big introduction.** I ended up kind of doing the latter and making it just one big intro with different subheadings. (Allison)

Here, the way Allison frames her problem sounds similar to Kara. She does identify potential alternative solutions when she says "do I do an introduction and then a synthesis" or "just combine both." Then in the very next sentence, she explains what action she took to solve the problem. Perhaps using more of the solution-oriented problem strategy, like that of Kara and Connor, could have helped Allison deal more effectively with the other problems she encountered.

Using problems to shape goals

In addition to solution-oriented problem framing, a successful writer (Kara) also used problems to shape her goals. Table 5 shows Kara repeatedly recognizing problems and then relating her problem to her next goal. For instance, Kara recognized key issues from her peers' feedback, and then sets a goal to address these issues; and she after she noticed "gaps" in her paper, she set a goal to "focus on topic sentences" and "make a story." This strategy even appears as a pattern in Figure 2, which shows that more than any other writer, Kara followed a problem with a goal.

By contrast, Allison and Leslie's goals were not contextualized. Apart from one exception from Allison, their goals stood alone, which we can see when she states "I'm going to try and write the introduction," or "I'm going to try and get most of my research done". We also see lack of context for goals when Leslie sets a goal "to start outlining my paper," or "to read to create an annotated bibliography." These goals are not explicitly shaped by prior accomplishments or problems. As reflected in Figure 2, these writers primarily set goals when the process log protocol prompted them to do so.

Table 5. Kara (more successful) uses problems to improvise new goals. In contrast, less successful writers set stand-alone goals.

Problems used to improvise goals	Stand-alone goals
[After peer review,] I realized what I thought was a clear gap was not. And that I also realized that people did not follow what I thought were the main ideas. […] **So my goal for this session is to** look at people's comments and also to especially focus on [the instructor's] suggested organization and flesh that out and try it out in my paper. (Kara)	Today I'm going to try and write the introduction. And just get all my information out and get all the novelty moves down. (Allison)
I will now be working on the new organization now that I have my old ideas into a new organization. I need to, like there are obviously some gaps. **So I'm going to** start at the beginning, but not the introduction. And I need to make sure that the flow is working. [I will] start at the beginning and really focus on topic sentences especially. And my goal is to make a story. (Kara)	For this session, I'm going to try and get most of my research done. (Allison) I'm about to start outlining my paper, just to see the overall structure and how I want my notes and things to be organized. (Leslie)

Responding to problems by creating a narrative of progress

Unlike Kara, Connor did not often use problems to shape his goals. Instead, he repeatedly reacted to problems by creating a narrative of progress. When reflecting on problems, Connor tended to shift his focus on the problem to talk about the accomplishments and progress he had completed.

> I just do not feel like [I have] good writing at this point, and I'm a little nervous turning it in, which I hope to do tomorrow night. **But anyways what's a positive note?** So I jumped around in the writing of the paper, and actually ended up […] getting the outline for my prototype down as well as the methods for studying if the workshop works. So that's good. (Connor)

> I did not get back to writing unfortunately, because I became lost in the research spiral of doom and spent, well let's see, […] there's only so much reading on metaphor before I start to lose my mind. […] **But I think the good news is** that I have enough research and enough people to substantiate anything I attempt to say in my paper. And I took some notes too. So I have an idea of the outline of my paper (Connor)

In these excerpts, Connor creates a narrative of progress by using his problems as a way to separate productive and unproductive accomplishments. This is evident when Connor mentions that he is "a little nervous turning it [his draft] in" to his peers and then quickly re-directs the narrative away from that problem by asking himself, "What's a positive note?" In the second excerpt, he encounters what he calls "the research spiral of doom," but then re-directs the narrative of his session away from the "dooming" negative aspects of that experience by also focusing on "the good news."

Kara also created positive narrating moments such as when she re-directed the narrative of problematic writing sessions by pausing to stop herself from dwelling on a problem and then positively affirmed, "I guess I *did* accomplishment some of my goals."

While it was not typical for Connor to use problems to set new goals, on at least one occasion, his narrative of progress is intertwined with setting new goals. For instance, when faced with a problem staying motivated, Connor looks to a productive accomplishment to preface his goals.

> Sitting back down to write now, avoiding it. So, well actually let me review what I've done thus far. Ok so I have my five pages. **My goals are** to introduce the, I guess second part of the review which is to show how metaphor can apply to engineering, science, and instruction. (Connor)

Here it appears that acknowledging a productive accomplishment is Connor's of way of staying motivated for what he needs to do next. Even though Connor is "avoiding it," he turns to what he's "done thus far" and sets a writing goal.

In stark contrast to Connor and Kara, the student who faced the most problems (Allison) does not ever re-direct her reflection to seek positive accomplishments. As we've seen in Table 4, her 'dead-end' problems always ended on negative aspects, such as venting her "frustration" or stating that there is "no point" in continuing to pursue an idea.

Perhaps a good place for Allison to start learning an effective self-regulation strategy could be to encourage her to break her habit of focusing too much on the negative and instead raise at least one positive outcome.

Re-conceptualizing writing knowledge and process
The sections above show that the successful students had a positive orientation to problems. In addition to this positive orientation the successful writers were much more articulate about how they talked about their writing two months after completing it.

A close reading of each student's interviews shows that the more successful writers re-conceptualized their rhetorical knowledge two months after the project.

> Kara:
> Finding my way in narrowing the topic, and really the novelty moves were pretty challenging for me, because I kept thinking […] "Ok, this is the gap that I'm gonna fill" and I would write it. And then at various points there would be like "there's no gap" and I'm like "What? It's right there!" **And so I learned a lot about what gaps are – like what's a real gap – that I've actually been able to help other people with.**

> Connor:
> For me if I were to describe that course, the arc would be **arrival at that moment where all my research needs to clearly identify a gap** and have it be useful to students. […] And I actually think it kind of parallels like early writing and writing we teach in first year writing programs of "oh get a working thesis." It's kind of like "get a working research question." **And so it's instead of thesis-driven essay, it's a research question-driven project**

Here we see Kara and Connor demonstrating a complex understand of the proposal genre. This is evident when Kara that, for her experience, she "learned a lot about what gaps are." and when Connor describes the course as an "arrival" where he realized he "needs to clearly identify a gap." In addition, Connor transforms his fundamental understanding of the essay from a "thesis-driven essay" to "a research question-driven project." These recollections suggest that Connor and Kara developed their knowledge about the proposal genre.

In stark contrast, less successful writers were resistant to changing their knowledge and practices. When asked about their process two months after they completed the project, Allison and Leslie lamented how they resented pressure they felt from the assignment parameters and instructor to change their writing process.

> Allison:
> I always try to write in order. […] like if I'm working on one section I like to kind of finish that before I move on. But this one I don't know why, I wrote the introduction first but I just kept going back and changing it. Because I kept talking about different things. Or I kept having to add new information to make sure it fit with the rest of the paper. It was – oh, it was a pain in the ass!

Leslie:
Usually when I've been assigned a research paper or something, you have a projected due date but there's no interaction in between, so you're left to just do everything on your own. And this was a lot of checking up between the process. [….] I guess as a writer I prefer to just be in my own head and have a continual process where it's just must and not interrupted by other influence.

Both Leslie and Allison were pressured to change their process but resisted those pressures. Allison found it problematic to "write in order" as she usually does, but rather than learn from being encouraged to write more recursively, she experienced it as a "pain in the ass." Leslie was also required to change her process because of the way the instructor a scaffolded the assignment and she experienced the iterative drafting process imposed by the assign as "a lot of checking up." These statements suggest, in contrast to Kara and Connor, Allison and Leslie resisted developing their knowledge about the proposal genre.

One surprising finding provides some evidence that suggests knowledge about the genre may not have been a factor in Connor's ability to successfully compose the genre. Table 6B shows that during the interview, two months after completing the project, the more successful students used a much higher number of terms than the less successful writers. This finding is further evidence that the successful students developed their knowledge about the genre. However, what is remarkable is the difference between Connor and Allison during the project (Table 6A) and after the project (Table 6B). Connor's process log, recorded during the project, used fewer rhetorical terms than Allison. Then, after the project, Connor's use of terms increased while Allison's use of terms decreased. If Connor's knowledge about the genre were a factor in his success, we would expect him to use rhetorical terms far more frequently than Allison in the process log. That the data contradicts this expectation is surprising.

What can account for this dramatic difference between Allison and Connor? These cases cannot be explained by the vocabulary writers learned through the course to analyze the genre they were composing. All of the writers had been taught and applied the same terms throughout the course, and yet when it came to adapting to the assignment, Allison used those terms relatively frequently but seemed unable to adapt. By contrast, Connor used those terms much less frequently and yet was more successful at adapting.

One possible explanation is that the Connor's framework for thinking about the research proposal could have developed as an effect of the self-regulation strategies he used to react with problems. This possibility could make sense if Connor's narrative of progress helped him engage with problems as potentially solvable and through this process develop a deeper understanding of genre conventions. In contrast, Allison's unresolved frustration appears to prevent her from engaging with problems. Such lack of engagement may have also prevented her from the kind of working through or constructing conventions that Connor and Kara experienced. While we are limited from make strong claims about causality, it seems worth further exploring the possibility that self-regulation strategies may help writers engage more deeply in their experience working through or even constructing genre conventions as they relate to a particular project.

Table 3A. The rhetorical terms taught in the course and the frequency (per 1,000 words) with which writers mentioned them in their process logs.

	Kara	Connor	Allison	Leslie
Text type/section				
Literature Review	5.7	.7	.8	2.8
Methodology	2.4	.7	.8	-
Annotated Bibliography	.6	.4	-	1.9
Proposal	.2	-	.8	-
Abstract	.2	-	-	-
Rhetorical Move				
Novelty moves	1.8	3.2	3.1	-
Research question	.7	.4	-	-
Gap	1.6	-	.7	-
Status quo	.2	-	-	-
Significance	.2	-	-	-
Total	13.5	5.6	7.0	4.7

Table 3B. Frequency (per 1,000 words) of rhetorical terms mentioned during a structured interview conducted 2 months, after project completion.

	Kara	Connor	Allison	Leslie
Text Types				
Literature Review	1.9	.9	.2	-
Abstract	-	1.1	-	.3
Proposal	-	-	3.0	1.8
Rhetorical Moves				
Gap	3.1	2.9	-	-
Research Question	.3	1.8	-	-
Novelty moves	1.1	-	.2	-
Total # of mentions	6.4	6.6	3.4	2.1

Discussion

This study suggests that a writer's self-regulation strategies for coping with problems that emerge during the writing process may play a role in their ability to acquire unfamiliar genres. This is not to say that there are a rigid set of strategies that writers should adopt or avoid. Nevertheless, it is important to recognize the self-regulation strategies students use to acquire unfamiliar genres, and acknowledge that these strategies can play a role in their ability to navigate the inevitable problems that arise. The successful writers in this study appear to acquire the research proposal genre more

effectively and employed strategies that seem to help them react more productively to problems. One way the successful writers seem to react productively to problems is by elaborating problems in terms of potential solutions. For example, when mentioning difficulties with revising their drafts, both successful writers framed those difficulties in terms of the potential underlying causes, which seemed to open up a way forward. A second strategy successful writers might use problems productively is to use problems as a means to develop goals. For example, problems were used to improvise goals when Kara directly related how she was going to work on her draft in light of a specific shortcoming. A third strategy might also involve reacting to problems by deliberately seeking out accomplishments. For example, one successful writer repeatedly mentioned what seemed like crippling challenges with conducting research (i.e. the so-called "spiral of doom"), but found a way forward by looking for "the good news" in what he had accomplished. These three strategies may have helped the writers acquire genres by helping them engage more deeply with the activities involved in composing.

      The more successful writers not only engaged with problems more productively, they were also able to walk away from their experience with a more articulate theory of the genre. This was evident when the more successful writers updated their theory of the genre two months after completing their project. Their updated theory of the genre seems to be reflected in both their use of terminology taught in the course and their descriptions of what they had learned about research "gaps" (Swales, 1990). By contrast, the less successful writers failed to update their theories of writing. One of the less successful writer's descriptions of the assignment provided a chronological account of her process while another expressed frustration with the assigned tasks. It was surprising to find that genre knowledge alone didn't help these writers develop a theory of writing. They were all taught a framework for thinking about the "moves" of a research proposal and one of the less successful writers demonstrated this framework during her process, suggesting she had absorbed it. However, two months after the project she failed to make some obvious changes to her understanding of the genre. It seems reasonable to suggest that strategies for working productively with problems, such as reflected in the successful writers, may help students develop more robust theories of writing. A next step for research might be to test whether teaching problem-solving strategies explicitly can help students reflect more productively on their encounters with new genres.

      One way to teach this could be to revise our models of the writing process to include strategies for recognizing and reacting to problems. Many traditional approaches construct process as a series of stages. For instance, *Writing Matters* presents a writing process as idea generation, narrowing your topic, organize your ideas, and draft your project. Similarly, Diane Hacker's *A Writer's Reference* breaks down process into planning, drafting, and revising. This traditional way of talking about process can help writers compartmentalize and reduce the cognitive load of their writing labor, which may actually imply that 'good' writers are efficient and do not experience problems. In each of these steps, planning/drafting/revising, an expert reader might infer that problems are part of the process (Florence & Yore, 2004), but this might not be apparent to students (Castello & Iñesta, 2012; Castelló et al., 2013). Students might especially be unaware that they should expect to encounter problems in the planning stage, and that these problems can actually a resource to develop a project. Perhaps one of the most important things students can learn about process is that problems are a valuable part of writing.

Teaching these kinds of self-regulation strategies could be carried out through observational learning. Observational learning tasks students to study the behaviors of readers and writers as they use the texts students are being asked to compose. Observational learning has been shown to help students develop skills for specific writing tasks (Zimmerman & Kitsantas, 2002) and improve planning strategies (Braaksma et al. 2004; Raedts et al. 2007). Given these benefits, it is reasonable to assume that observational learning may also be useful for teaching students self-regulated learning strategies that aid genre acquisition. These observations could help students develop understand "what works" in a genre (Rijlaarsdam et al., 2008, p. 63).

Rather than teaching process in steps, observational learning may help students construct their own strategies from the ground up. To do this, instructors could use a three-step sequence: First, students are asked to observe two writers--one more and one less successful--as they recognize and react to a problem they are facing with a particular assignment. Next, students compare how each writer reacted and judge which writer appears to be more effective in their strategy for dealing with the problem and why. To facilitate observational learning in the writing classroom, instructors might show students examples of writers from this study. For instance, students could compare Kara's reaction to problems to Allison's, and be clued in to the level of success of each writer. Comparisons could take place before a writing assignment begins with the goal of cueing writers to be more aware of their own reactions to problems as they draft the assignment. Observational learning could also help writers gain metacognitive awareness of their own use of self-regulated learning strategies. Students could benefit from keeping a log, analyzing their own strategies for coping with problems and compare their strategies with other writers facing similar problems.

To apply observational learning to teach self-regulation, strategies I have developed a pedagogical intervention designed to explicitly teach the self-regulation learning strategies outlined here. Appendix C shows a handout that shows students what it might look like when writers put these self-regulation strategies into practice, and it walks students through applying these strategies to their own writing process. As part of working with this handout, students could also keep their own process log and periodically evaluate their log entries to see if they use the strategies, or what other strategies they are using, and compare their strategies with their classmates also working on the same writing project. Further research should investigate how teaching these self-regulation strategies to students can affect their ability to engage in successful genre acquisition when working on new and unfamiliar writing tasks.

Appendix A

Carnegie Mellon University
Global Communication Center

Establish Novelty with Four Rhetorical Moves

Researchers use four moves to show how their work is important, relevant and new.

1) Explain the Significance
Explain why someone would care about this research—your audience for this 1st move should be broader than your primary target audience (if possible, why the general public would care). In humanities research, the significance may just be the currency of the issue: the fact that people are talking about it.

2) Describe the "Status Quo"
Describe current or conventional practices that are being used by researchers within the defined/limited scope of your field (e.g., reviewing current practices, literature or state of affairs).

3) Identify A "Gap"
Show that the current practices or state of research (i.e. "status quo") in your field are incomplete, unsatisfactory or inconclusive and demonstrate a need for this gap to be filled.
A common way to signal a gap is the word "however."

4) Fill That Gap With Your Present Research
Show how your current research or research proposal is a timely, necessary, or innovative solution to effectively **fill the existing gap.**
If you're not sure how your research is "filling a gap," it could be novel in one or more of these ways:

• A **new theory** or **hypothesis**: explain a shortcoming in the existing theory to set up a new hypothesis
• **New solution**: propose a solution to an existing problem or unresolved controversy; you must explain the problem and why your solution is better than other solutions
• **New methodology**: critique methodology of previous studies and suggest improved methodology
• **New domain**: investigate a previously unstudied population, site, material, or other phenomenon

Note: try to avoid utilizing words like "neglected," "failed," or "ignored" when critiquing researchers in your field. Instead, frame your contribution in positive terms: "While X pioneered the field of Y, my work contributes/supplements X…"

While these moves do represent the overall trajectory of an introduction to a research article, they are not necessarily linear. A writer can backtrack at any point and move from discussing a gap in the research (move 2) to again summarizing previous research (move 1). However, excessive movement back and forth between moves can confuse readers.[1]

---

[1] Adapted from Swales, John. Genre Analysis: English in Academic and Research Settings. Cambridge: Cambridge UP, 1990. Although Swales' research is focused on scientific writing, these "Swales moves" are found in almost all academic disciplines as well as in technology development scenarios.

Appendix B

Table B. Percent of t-units in process logs coded for accomplishment, goal, problem, and other

	Accomplishment	Goal	Problem	Other	n=
Kara	41%	26%	20%	12%	385
Connor	37%	26%	15%	22%	234
Allison	46%	10%	42%	3%	101
Leslie	53%	28%	6%	13%	90

Appendix C

Re-thinking Problems as Part of your Writing Process

All writers encounter problems. You may have had trouble deciding how to start a project, develop content, find evidence, structure your argument, revise in response to critical feedback, and so on. You're not the only one. Even highly experienced writers encounter these issues and more!

But problems can be productive! The difference between experienced and inexperienced writers is that experienced writers know how to react to problems productively. While inexperienced writers tend to see problems as a sign of failure, many experienced writers have learned to use problems as an opportunity to make progress.

1. Use problems as opportunities rather than roadblocks

Problems can inspire new goals	Avoid glossing over problems
When Kara struggled to start her paper, she developed alternative, more manageable goals.	*Leslie misses an opportunity to develop her project by glossing over an organizational issue*
"My goal was to write a draft, but I just did not know how to start. So I decided that **rather than set out to write the whole draft, I should just write what I am familiar with right now, then go back and develop it further**." (Kara)	"When I was writing, I ran into the problem of not knowing how to organize the information in my notes. But I ended up just copying and pasting key info." (Leslie)

Try it out: To orient to problems as opportunities, think through the following questions:

1. What is the goal you're trying to accomplish at this point in the project?

2. What is the most difficult problem you are encountering?

3. In response to this problem, what is one alternative, smaller goal you can pursue that will help you move forward?

2. Respond to problems by creating a narrative of progress

Create a narrative of progress	Avoid focusing merely on frustration
When trying to structure his paper, Connor…	*When Allison struggled to start her paper, she did <u>not</u> set more manageable goals.*
"I just do not feel like [I have] good writing at this point. **But anyways what's a positive note?** So I jumped around in the writing of the paper, and actually ended up […] getting the outline for my prototype down as well as the methods for studying if the workshop works. So that's good." (Connor)	"I'm having a really hard time figuring out what I should focus on in my paper. It seems that everything has been done already. **It's really frustrating.**" (Allison)

Try it out: Despite the problems you're facing, describe at least one thing that you have accomplished so far?

References

Beaufort, A. (2007). *College writing and beyond: A new framework* (1st ed.). Utah State UP.

Bereiter, C., & Scardamalia, M. (1987). Two Models of Composing Processes. In *The Psychology of Written Composition*. Hillsdale, NJ: Erlbaum.

Berkenkotter, C., Huckin, T. N., & Ackerman, J. (1988). Conventions, conversations, and the writer: Case study of a student in a rhetoric Ph. D. program. *Research in the Teaching of English*, 9–44.

Butler, D. L., & Winne, P. H. (1995). Feedback and Self-Regulated Learning: A Theoretical Synthesis. *Review of Educational Research*, *65*(3), 245. https://doi.org/10.2307/1170684

Butler, J. A., & Britt, M. A. (2011). Investigating Instruction for Improving Revision of Argumentative Essays. *Written Communication*, *28*(1), 70–96. https://doi.org/10.1177/0741088310387891

Carter, M. (2007). Ways of Knowing, Doing and Writing in the Disciplines. *College Composition and Communication*, *58*(3), 385.

Castello, M., & Inesta, A. (2012). Texts as artifacts-in activity: Developing authorial identity and academic voice in writing academic research papers. *University Writing: Selves and Texts in Academic Societies*, 179–200.

Castelló, M., Iñesta, A., & Corcelles, M. (2013). Learning to Write a Research Article: Ph. D. Students' Transitions toward Disciplinary Writing Regulation. *Research in the Teaching of English*, *47*(4), 442.

Castelló, M., Iñesta, A., & Monereo, C. (2009). Towards self-regulated academic writing: An exploratory study with graduate students in a situated learning environment. *Education and Psychology*, *7*(3), 1107–1130.

Devitt, A. (2007). Transferability and genres. In *Locations of Composition* (pp. 215–228). New york: SUNY Press.

Dias, P., Freedman, A., Medway, P., & Pare, A. (1999). *Worlds apart: Acting and writing in academic and workplace contexts*. Routledge.

Downs, D., & Wardle, E. (2007). Teaching about writing, righting misconceptions:(Re) envisioning" first-year composition" as" Introduction to Writing Studies". *College Composition and Communication*, 552–584.

Florence, M. K., & Yore, L. D. (2004). Learning to write like a scientist: Coauthoring as an enculturation task. *Journal of Research in Science Teaching*, *41*(6), 637–668. https://doi.org/10.1002/tea.20015

Flower, L. S., & Hayes, J. R. (1977). Problem-Solving Strategies and the Writing Process. *College English*, *39*(4), 449. https://doi.org/10.2307/375768

Freedman, A. (1987). Freedman,_Learning_to_Write_Again--Discipline-Specific_Writing_at_University.pdf. *Carlton Papers in Applied Language Studies*, *4*, 45–65.

Freedman, A. (1993). Show and tell? The role of explicit teaching in the learning of new genres. *Research in the Teaching of English*, 222–251.

Graham, S., & Harris, K. R. (1996). Self-regulation and strategy instruction for students who find writing and learning challenging. In M. C. Levy & S. Ransdell (Eds.), *The Science of Writing: Theories, Methods, Individual Differences, and Applications*. Mahweh, NJ: Lawrence Erlbaum Associates.

Higgins, L. (1993). Reading to argue: Helping students transform source texts. *Hearing Ourselves Think: Cognitive Research in the College Writing Classroom*, 70–101.

Higgins, L., Long, E., & Flower, L. (2006). Community literacy: A rhetorical model for personal and public inquiry. *Community Literacy Journal*, *1*(1), 9.

Iñesta, A., & Castelló, M. (2012). Towards an integrative unit of analysis: Regulation Episodes in expert research article writing. *WRITING RESEARCH*, 421.

Li, Y. (2012). Undergraduate students searching and reading Web sources for writing. *Educational Media International*, *49*(3), 201–215. https://doi.org/10.1080/09523987.2012.738013

Macarthur, C. A., & Philippakos, Z. A. (2013). Self-regulated strategy instruction in developmental writing: A design research project. *Community College Review*, *41*(2), 176–195.

McCarthy, L. P. (1985). A Stranger in strange lands: A college student writing across the curriculum. *Research in the Teaching of English*, *21*(3), 233–265.

Navarre Cleary, M. (2013). Flowing and Freestyling: Learning from Adult Students about Process Knowledge Transfer. *CCC: College Composition and Communication*, *64*(4), 661–687.

Paris, S. G., & Paris, A. H. (2001). Classroom applications of research on self-regulated learning. *Educational Psychologist*, *36*(2), 89–101.

Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, *16*(4), 385–407.

Popken, R. (2001). Felt sensing of speech acts in written genre acquisition. *Journal o f the Assembly for Expanded Perspectives on Learning*, *7*, 10–19.

Reiff, M. J., & Bawarshi, A. (2011). Tracing Discursive Resources: How Students Use Prior Genre Knowledge to Negotiate New Writing Contexts in First-Year Composition. *Written Communication*, *28*(3), 312–337. https://doi.org/10.1177/0741088311410183

Reineke, J., Glavan, M., Philips, D., & Wolfe, J. (forthcoming). Novelty moves: training tutors to help graduate writers articulate the significance of their research. In S. Lawrence & T. M. Zawacki (Eds.), *Re/writing the center: Pedagogies, practices, partnerships to support graduate students in the writing center*. Utah UP.

Rijlaarsdam, G. C. W., Braaksma, M. A. H., Couzijn, M. J., Janssen, T. M., Raedts, M., Van Steendam, E., … Van den Bergh, H. (2008). Observation of peers in learning to write: Practice and research. *Journal of Writing Research*, *1*, 53–83.

Russell, D. R., & Yañez, A. (2003). "Big picture people rarely become historians": Genre systems and the contradictions of general education. In C. Bazerman & D. R. Russell (Eds.), *Writing Selves/Writing Societies*. WAC Clearinghouse.

Swales, J. M. (1990). *Genre Analysis: English in academic and research settings*. New York: Cambridge University Press.

Wilder, L. (2012). *Rhetorical strategies and genre conventions in literary studies: teaching and writing in the disciplines*. Carbondale: Southern Illinois University Press.

Wilder, L., & Wolfe, J. (2009). Sharing the Tacit Rhetorical Knowledge of the Literary Scholar: The Effects of Making Disciplinary Conventions Explicit in

Undergraduate Writing about Literature Courses. *Research in the Teaching of English*, *44*(2), 170–209.

Wolfe, J., Olson, B., & Wilder, L. (2014). Knowing What We Know about Writing in the Disciplines: A New Approach to Teaching for Transfer in FYC. *The WAC Journal*, *25*, 42.

Yancey, K., Robertson, L., & Taczak, K. (2014). *Writing across contexts: Transfer, composition, and sites of writing* (1st ed.). Utah State UP.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, *25*(1), 3–17.

Zimmerman, B. J., & Kitsantas, A. (2002). Acquiring writing revision and self-regulatory skill through observation and emulation. *Journal of Educational Psychology*, *94*(4), 660–668. https://doi.org/10.1037//0022-0663.94.4.660

Zimmerman, B. J., & Kitsantas, A. (2007). A writer's discipline: The development of self-regulatory skill. In S. Hidi & P. Boscolo (Eds.), *Writing and Motivation* (pp. 51–69). Boston: Elsevier.

CHAPTER 3

Genre as part of process: Developing knowledge of academic writing in graduate school. [*with* CP Moreau]

Abstract
Writing is an important part of graduate students' enculturation into their discipline, yet many also struggle to develop effective writing processes and report high levels of anxiety and frustration. Growing interest in teaching writing at the graduate level has raised questions about how graduate students develop knowledge and practices appropriate for new genres. Current pedagogical approaches focus on helping students develop knowledge about genres specific to their field, but these approaches are less equipped to help graduate students develop the writing processes they might need to put their knowledge about genre into practice. This study investigates the role strategic knowledge played in one graduate student's developing relationship with academic writing. Findings identified two strategies that may factor into how graduate writers relate to genre conventions in their discipline: 1) using genre as a performance, and 2) using genre as part of a process.

Introduction
Writing is an important part of graduate students' enculturation into their discipline. Yet, many also struggle to develop effective writing processes and report high levels of anxiety and frustration (Micciche & Carr, 2011). Genres such as research proposals, seminar papers, and dissertations can help graduate students develop new ways of thinking and being that are valued in their discipline (Bazerman, 2009; Berkenkotter & Ravotas, 1997; Carter; D. R. Russell, 1997), but many face difficulties beyond learning textual forms. Graduate students are not only learning the forms and features of successful research writing but they also transform their ways of thinking and being to align with those valued by members of an academic community. That this process is complex and challenging makes it necessary to understand what obstacles graduate students face when learning new genres and how they can learn to navigate those obstacles effectively.

There is increasing interest in how to teach writing at the graduate level. One common approach focuses on explicitly teaching of genre features as a way to help writer develop metacognitive awareness of genre (e.g. Bawarshi & Jo Reiff, 2010; Bhatia, 2014; Devitt, Reiff, & Bawarshi, 2004; Flowerdew, 2015; Johns, 2008; Swales). By making writers aware of genre conventions, they may be better positioned to recognize typical features of texts, the social contexts these features support. While explicit teaching can help, some scholars worry that students might treat conventions as a formula, thus constraining them from responding effectively to unique needs of new writing situations. An alternative approach has argued that writers may not develop flexible genre knowledge unless they are encouraged to disrupt their prior assumptions about academic writing. Graduate writing assignments might be designed to be deliberately difficult so that graduate students can develop new, and presumably more productive, relationships with academic writing (Dryer, 2012; Reid, 2009).

Metacognitive awareness is certainly an important part of acquiring new genres; however, scholars studying writing self-regulation show that it is just one component of writing. In addition, expert writers also demonstrate a sophisticated repertoire of strategic knowledge, monitoring and controlling their writing processes in a complex cycle of self-regulation. A theory of self-regulation describes the strategies that writers use to construct goals and revise practices in light of feedback on their accomplishments (Bandura, 1991; Zimmerman, 1990). These self-regulation processes are broken down into three categories. *Forethought* strategies include the ways writers construct goals and motivations for their writing. *Performance* strategies refer to the tools or procedures writers use to carry out their practices. *Self-reflective* strategies refer to the ways writers evaluate and react to their accomplishments. These strategies influence each other, such as when a writer evaluates the quality of a draft and realizes a new understanding of the tasks (Zimmerman & Kitsantas, 2007). Such interactions have been shown to occur as writers encounter problems, make evaluations, and rethink goals/motivations (Iñesta & Castelló, 2012).

Some researchers have argued self-regulation plays a key role in a writer's ability to acquire new genres. Negretti (2012) observed that students' perception of tasks and their writing strategies changed alongside each other, and he argues aspects of self-regulation feed back into metacognitive awareness recursive relationship. Where Negretti was focused on first-year undergraduate students, Castellò et al. (2013) studied PhD students learning to write a research article as part of a seminar that taught the research article as a genre, and they found that students were able to overcome challenges when they used their text as a "tool to think" rather than an "end product" (Castellò & Iñesta, 2012). However, in both Negretti's and Castellò et al.'s work, their studies were not designed to track how specific strategies played a role in graduate students' development over multiple semesters and writing projects.

In order to develop ways to integrate instruction in strategic knowledge into existing writing pedagogy at the graduate level, we need more specific examples of the strategies graduate students use to negotiate conflicts and acquire new genres over a longer period of time. This study uses the case of one graduate student writer to further investigate the relationship of genre knowledge and self-regulation, and to identify more specific self-regulation strategies that can help graduate students overcome the challenges of learning about and participating in academic genres of graduate school.

Methods
The Setting
The study took place over two years at a private research university's English department that offers an MA and PhD program. The university is reputed for its emphasis on empirical research. The MA program involves one year of intense study and is designed to help students explore a range of issues and theories in the field of Rhetoric. Students in the MA program often apply to the PhD and treat this transition as a continuation of their graduate studies. Students in the PhD program are strongly encouraged to specialize in a research area and expected to master genres for empirical research writing. To do so, they are encouraged by faculty to used published research in their field as a model for their own writing, and some faculty explicitly teach these conventional structures as part of their course.

Participant: Eric[5]

   Eric came to the program with a liberal arts background and experience teaching and tutoring writing. He began the program as an MA student and after applying to the PhD in his first semester he was accepted and enrolled into the PhD program during his second semester. Since Eric himself considered the PhD as a continuation of his graduate studies, we also treated it as such. Over the first four semesters of graduate school, Eric demonstrated a strong ability to reflect on writing and genre conventions, a high level of motivation to engage with graduate-level work, yet he struggled to successfully compose the empirical research genres expected of him. As one faculty member described Eric, "he writes like a talented liberal arts student" who "hasn't figure out the genre expectations" but "wants to succeed well enough, on his own terms."

   We see Eric as a writer who was not failing or deficient, but whose writing and thinking was different than the conventions expected by his faculty. One of his instructors characterized this difference by observing Eric to favor "imaginative new insight supported by effective description over an evidence-based argument." In many ways, this struggle resembles that of "Nate" (Berkenkotter et al.), who also experienced many challenges reconciling his investment in expressive writing and the empirical research writing he was asked to participate in as a PhD student.

Data Collection

Table 1 shows three types of data collected.

Table 1. Data Collection

Data	Quantity
Fall 2015 (Semester 1)	
Interview, end of semester	43:58 minutes; 4,973 words*
Process log, one class	7 entries; 2,946 words;
Drafts and instructor feedback	3 courses; 23 pages; 34 comments
Spring 2016 (Semester 2)	
Interview, end of semester	49:55 minutes; 4,976 words*
Process log, one class	6 entries; 6,030 words
Drafts and instructor feedback	3 courses; 35 pages; 74 comments
Fall 2016 (Semester 3)	
Interview, end of semester	43:37 minutes; 3,961 words*
Process log, one class	9 entries; 3,579 words
Drafts and instructor feedback	2 courses; 41 pages; 58 comments
Spring 2017 (Semester 4)	
Interview, end of semester	38:46 minutes; 3,361 words*
Process log, one class	9 entries; 7,080 words
Drafts and instructor feedback	1 course; 22 pages; 1 final comment

Excluding interviewer questions

[5] IRB approval was obtained

Process Logs

In-process protocols have been useful in discovering the writing practices that successful and unsuccessful writers report on when prompted (Bereiter & Scardamalia, 1987; Flower & Hayes, 1977; Higgins, 1993). As a type of in-process protocol, process logs have been used to observe how writers narrate their process as it unfolds without creating the burden imposed by a full think-aloud protocol (Li, 2012). The protocol in this study asked Eric to answer a series of questions before and after they started writing (Appendix A). Questions were designed to capture how Eric's perception of tasks and understanding of academic writing developed in relation to the problems he faced.

Interviews

Semi-structured interviews were recorded and transcribed after the end of each semester in order to capture a broader view of Eric's writing experiences. Each interview was guided by the same set of questions (Appendix B). The questions focused on Eric's experiences of course assignments for which he recorded process logs, and they generally followed the questions included in the log protocol.

Drafts, Institutional Documents, and Feedback

A portion of Eric's rough and final drafts were collected along with all instructor feedback. All drafts did not include feedback, and those without feedback were not included in the study. Only one of Eric's drafts received instructor feedback during his third PhD semester. To supplement this, feedback was also collected from a mid-semester review of Eric's progress. The drafts and instructor feedback were used to analyze Eric's experience from the perspective the instructors he worked with. Instructor comments were analyzed for common topics that emerged when instructors critiqued Eric's writing. These critiques enabled us to compare faculty perceptions with Eric's descriptions and provide a more robust description of his development.

Analysis

Process logs, interviews, and documents were analyzed in several phases. Interviews and logs were transcribed and imported into qualitative analysis software. The lead researcher coded for themes that emerged in each transcript, and themes were consolidated and modified to identify significant themes and triangulate those themes across the three sets of data. As is typical of longitudinal studies, the coding scheme evolved over the course of the study as insights into the research question became evident across the three sources of data.

To provide a fine-grained picture of Eric's development, we used the data sources to construct a longitudinal narrative of Eric's experience with academic writing over the course of his first four semesters of graduate school. The narrative triangulates all three data sources in order to describe Eric's struggles with academic writing and the developments that took place in his awareness of academic genres. To further refine our narrative, we asked Eric to review it and provide comments. In addition, comments on the narrative were also solicited from two faculty members who had worked with Eric. These comments were used to construct a more accurate and fair representation of Eric's development

In addition, we analyzed Eric's process logs to identify the strategic knowledge Eric used to monitor and manage his writing process during each semester. To identify strategic knowledge, we focused on Eric's goal-setting and self-reflection strategies, as these are two major components of Zimmerman's (1990) self-regulation cycle. This allowed us to interpret how Eric navigated the struggles he faced and whether his strategies were related to development in his genre awareness.

Longitudinal Narrative
Semester 1

During his first semester, Eric enrolled in a tutor training practicum in which he was explicitly taught a set of conventions for composing academic research, which included a set of conventions he referred to as the "novelty moves." The novelty moves, based on Swales' "Create a Research Space" model of academic introductions, are a series of argumentative milestones that academic writers typically use to persuade readers there is a need for new research. For Eric, these moves became a way for him to talk about his role in activity of academic writing activities. These terms included moves like "filling a gap," "introduce the status quo," and "establishing significance" for a topic. In addition, he used these terms when he tutored other graduate and undergraduate writers as part of his role in the writing center.

For the final project in his tutor training practicum, Eric was assigned to a write a research proposal. The genre conventions he learned helped him talk about what he was doing, but they did not enable him to successfully carry out the moves he had learned in his proposal. Eric described the proposal project as a "lit review" for which he had to "fill a gap" by proposing a new project. In this paper, Eric proposed "a handout on how STEM students can use metaphor in their own writing" (Interview, Semester 1). Even though he had the genre knowledge to describe the project, he experienced a great deal of struggle.

> The process to [write the lit review] was hard, because I started with a really huge topic that was metaphor. And so going from metaphor to finding a gap that's present in the [research topic] was almost a little unwieldy. Partly because I have to go to the library and read on metaphor, and you're reading everyone since Aristotle has written about metaphor so. Yeah, it was stressful. (Interview, Semester 1)

Eric experienced a great deal of difficulty synthesizing the research for his project. In his process logs, he described a "spiral of doom," in which he became lost in scholarship surrounding his topic. Eric managed to compose a draft only to receive critical feedback that his proposal did not fill a gap (instructor comment). Following this criticism, Eric felt he had to "basically rewrite" his paper after the semester ended. This experience also seemed similar to his other papers, as he said, "I would spend all this time writing a final paper, turn them in, and they'd say you're going to fail" (Interview, Semester 1).

For Eric's final research proposal, he was rewarded for the "tremendous amount of revision" (instructor comment) he made, but his proposal still failed to meet his instructor's standards for engaging in sufficient depth with the scholarship surrounding his topic. Instructor comments on his final proposal criticized his review of the research literature.

> This draft evidences a tremendous amount of revision. [Your proposal starts] to highlight the conversation/debate about what our goal is for scientific metaphor. However, I feel you back off from this debate a bit, wanting to gloss over the controversies rather than dig into them to uncover the reasons *why* different researchers hold different positions. (Instructor comment, Semester 1)

Eric's revision was enough to earn him an 'A' for the course, but these comments made clear that he still needed to develop his ability to "dig into" research. This struggle to engage deeply with research literature would continue to follow Eric until his fourth semester.

At the end of the semester, Eric walked away from his research proposal experience having learned a theory of academic genre conventions and contexts that he planned to use on next semester's projects.

> If I were to describe that course, the arc would be arrival at that moment where all my research needs to clearly identify a gap and have it be useful to students. [In future projects,] I'd try to have an actual gap I'm trying to fill, and I'd stick to the [University] mantra of "my research fills a gap." (Interview, Semester 1)

Eric internalized the convention of a research "gap" to such an extent that he identified it as a "mantra" of the university and intended to work toward a gap as a primary goal for future research projects. As we will see, these terms like gap, lit review, and status quo would continue to play a central role in how Eric made sense of his course writing projects and his experience in the program more broadly.

Despite developing an understanding of the "gap" as a convention, Eric struggled to situate his motives within the values he associated with academic writing at his program. At the end of his first semester, Eric expressed this tension by replacing the school's motto with a more antagonistic motive.

> Eric: I don't think our motto should be "my heart is in the work." It should be "my research fills a gap." […] Here I feel it's, I use the term militant, because I think it's so focused on progress, application, progress, application. If it's not that then it's your fault as a researcher. […] I don't want to be a paper-producing factory. (Interview, fall 2015)

These excerpts show Eric responding negatively to the values put in place by program and the type of writing required. This struggle to come to terms with the motives and values of his program followed Eric into his second and third semesters.

Semester 2

During the second semester, Eric was accepted to the PhD program, and he saw this semester as an opportunity to set the foundation for his future work as a PhD student. He continued to develop his repertoire of genre knowledge but also faced criticisms similar to the first semester. This is best illustrated by his experience in an independent study he took called "Rhetoric and Place," in which he was advised by a highly

experienced faculty member. He described his paper for that course as "an exploratory case study" (interview, spring 2016). His adviser instructed him to write his paper using a three-stage process that built on Eric's knowledge of the "lit review." Eric described using the lit review as a series of three steps for composing his independent study paper.

> Eric: First you just do an analysis [of an artifact]. You look at it really in depth and see what recurs. […] And then the second step is the framing [which] further explains, elaborates, or illuminates [the analysis]. And the third part is the lit review. So this question is part of a greater conversation. (Interview, Semester 2)

As Eric described this process, he used terms, such as such "analysis," "framing," and "lit review" that he had learned in the previous semester.

Despite these developments, he continued to be critiqued on his ability to engage in sufficient depth with the research surrounding his topic. From Eric's perspective, his final paper for the independent study was a successful exploration into an emerging field of research that he wanted to pursue as a PhD student. He described his final paper as "really successful, because it's interdisciplinary [and] is actually a pilot study for what I want to study more" (Interview, Semester 2). Even though his instructor agreed that his paper explored a new area of research, her comments on the final draft raise a similar critique from the previous semester: he had not engaged with the research in sufficient depth.

> You've opened up a promising line of research. As you say, though, these are just preliminary steps. […] You still have a way to go towards refining your methods of analysis and fully integrating your work into the existing literature. […] And sometimes your references to the literature on place seem superficial. (Instructor comment, Semester 2)

The critiques shown here reflect those he received in his first semester, which cautioned against glossing over ideas and encouraged him to "dig deep." While these comments may seem to depict Eric's failure as a writer, other data sources suggest he was experimenting with how to situate his own interests within the context of the program. For instance, his description of his paper as "my most favorite paper I have ever written in a non-creative environment" (Interview, Semester 2) suggests that "creative" writing experiences were a point of comparison for the more recent "non-creative" writing he was doing.

The value he placed on creative exploration may underlie the challenge he encountered when he decided to switch research topics mid-semester. His independent study was initially designed to deal with issues surrounding environmental rhetoric as it concerned rhetoric and place; however his change in research interests forced him to re-examine the themes of his independent study.

> Eric: I thought my area of interest would be environmental rhetoric, so rhetoric and place would be a natural synergy there. And then after mid-term, no more environmental rhetoric. Now I'm studying human enhancement technology, so what's that have to do with rhetoric and place? (Interview, Semester 2)

One factor that may have prompted Eric to change research topics mid-semester is his struggle to construct an identity for himself as a scholar in the program. Mid-semester, Eric also learned he had been admitted to the program as a PhD student and planned to continue on. Eric described his change in research interests as part of his identity within the program.

> I guess the challenge would be accepting the interdisciplinary nature of my research and what it entails. […] As an applicant, you're […] like, "I'm going to be Mr. Rhetoric. Here's my Mr. Rhetoric identity." Now that you're in its more like well, maybe now I'm more "Mr. Human-Enhancement Technologies, and maybe a little Rhetoric," and that's ok. (Interview, Semester 2)

In retrospect, Eric viewed his admitted status as a relief that that made it possible to try out a new research interests that might deviate from his perception of the type of interest the program might value.

Semester 3

As Eric continued on in the program as a PhD student, he continued to face critique on his writing and received a letter from the program director placing him on academic "probation." Similar to the previous semesters, these critiques focused on his inability to engage the research literature in sufficient depth, tendency to switch research topics, and situate his interests within the program requirements.

This third semester was the first time all of Eric's three courses were centered on highly technical skills. One course, for example, focused on learning to code computer programs which could aid discourse analysis. Throughout the semester, he faced a series of struggles that he described as increasingly stressful. Eric described the semester as if he was "running on a treadmill picking up books, writing papers, getting things thrown at my face, stumbling, changing topics" (Interview, Semester 3).

Unlike the previous semesters where Eric developed his knowledge of academic conventions, this semester he began to question it. Eric rooted the primary source of his problem in his ability to compose literature reviews.

> All my problems are lit reviews this semester. As I've been thinking about this, I thought well I've already done one in [previous semesters]. So why is this an issue for me? Did I not learn or whatever? (Interview, Semester 3)

Here, Eric questions his knowledge about literature reviews and he suggests that these conventions are something he should have already mastered once and for all.

Similar to the previous semesters, Eric struggled to settle on a single topic for his research. Like his second semester, he again enrolled in an independent study, and again changed his research interest halfway through the semester.

> I thought I was going to study human enhancement rhetoric. And then I changed my mind. But I'm already this far into coursework. And then I have to say oh actually I want to study listening. [*Said sarcastically*:] What a great idea to

change topics mid-semester! […] My course selection didn't align to this."
(Interview, Semester 3)

Eric's decision to change his research interest mid-semester may have actually exacerbated his struggle to compose effective literature reviews, since the new topic that he selected did not "align" with his coursework selections.

Eric's struggle to compose academic research led him to reexamine how his research interests were situated in the program. Eric felt his motives were not valued. He characterized his motives as "learning," "being curious," and "exploring." Even though he wanted to engage with the research literature, he did not see this engagement valued within the context of his program.

> I want to do research and answer these questions, because I think they're interesting, and I think I get joy from exploring these issues and really digging deep and engaging with scholarship and etc. But that doesn't really matter – those motivations. (Interview, Semester 3)

Here, Eric assumes motives like "exploring" and "digging deep" do not really matter to faculty in his graduate program, despite previous instructor comments encouraging doing just that. It appears these motives mean something different to Eric. One of his instructors interpreted this struggle as a tension between his background as an "exploratory learner of liberal arts" and the expectations of a "professional research-oriented degree."

These struggles came to a head when Eric was put on academic probation at the end of the semester. As a result of that decision, the faculty drafted a letter that detailed three areas where Eric lacked abilities to be "an independent scholar and thinker that is typically expected of first year PhD." In particular the letter cited a lack in Eric's abilities to:

- Take concepts from a literature and meaningfully instantiate them in your work
- Position [his] own thinking in relation to the argument
- State [his] own views of concepts from the literature and make claims evidence-based claims.

These criticisms suggest Eric was not meeting department standards for developing his "own views" or "own thinking" in relationship to existing scholarship. This echoed previous instructor criticism that Eric did not "dig deep" into scholarly conversations and that his references seemed "superficial."

Despite the challenges he faced, Eric's knowledge of genre conventions offered him a way to plan how to do things differently next semester. Eric decided that he might be more successful if he grounded his research more in the arguments available to him through secondary research. He said, "I could see next semester […] where I don't start off with this fancy project first. I just start off with what's the conversation" (interview). In addition, he makes it a goal to buckle down on how he is using the "steps" he learned in his previous semester, saying "I need to really be disciplined and do it in the order that they end up in" (Interview, Semester 2).

Semester 4

Eric's fourth semester marked a shift in his experience and success with doing research and situating his own scholarly identity within the context of the program. He stopped viewing genre conventions as competing with his personal goals, and he started using genre conventions in service of his goals.

His project for that semester was a synthesis of theoretical concepts, and it carried high stakes, because according to his probation letter, poor academic performance would lead him to be expelled from the program. The theory paper he composed this semester consisted of two phases: first Eric had to submit a prospectus, receive instructor feedback and then compose a final paper. When Eric met with his instructor to talk about his prospectus, he concluded from her feedback that he "failed" the prospectus and must rewrite the prospectus with a different topic. Then, in a meeting about his revised prospectus, Eric was again met with feedback that his instructor was "concerned" about his project. Following this feedback, Eric decided to again revise his topic and go ahead with writing and submitting a final paper.

The writing Eric produced that semester successfully met program standards. Though he did not get feedback on his final paper for the theory class, he did receive a "B+" in the course and was removed from probation at the end of the semester. In addition, the feedback he received on his annual review and another course paper praised him for the level of depth he achieved in dealing with scholarly material.

> You pulled off an impressive piece of analysis with this paper. You used the theoretical perspectives quite effectively to see multiple sides of this [issue]. The way you framed [your topic] was substantive and persuasive. (Comment, semester 4)

This praise shows Eric's instructor recognizing his ability to engage with research in sufficient depth. The instructor characterizes his "analysis" as "impressive" and his framing as "substantive and persuasive."

After the end of the semester, Eric walked away with a new conceptualization of the literature review as a genre convention. He no longer talked about the literature review as a task, but instead described it more as a heuristics that could be used to help him engage more deeply with research.

> Eric: This paper, the lit review seemed extra clear and helpful and productive for me in a way that it hadn't in previous semesters […] before it was always a task I needed to do to write a paper. It was like: lit review, ok, check. Whereas now I saw, oh this helps you write the paper. […] I see its part of getting closer to the boundaries of a field. And I can't be a scholar if I'm not on the boundaries. (Interview, Semester 4)

Here, Eric re-theorized his understanding of the literature review as a means to engage research and get "closer to the boundaries of a field." This desire to get closer to "the boundaries" also seems to create a sense of scholarly identity for Eric when he says, "I can't be a scholar if I'm not on the boundaries." This suggests that, like previous

semesters, Eric is re-thinking the role of genre in his writing, but unlike previous semesters he understands genre not as prescriptive but as "inventive."

In addition, Eric described a change in his composing process. In previous semesters, he had approached texts as a product that demonstrated his academic ability. However, in this semester he began to focus more on using his texts to generate arguments.

> Eric: I didn't set out to write a 20-page paper. I set out to write lots of little arguments that were part of a bigger argument. And then I would add in little arguments, or I would reframe them. And that happened across the board in all my papers. It wasn't like write this big paper. It was make a claim and back it up. (Interview, spring 2017)

Eric's focus on constructing arguments contrasts his earlier perception of the graduate program as a "paper-producing factory." In addition, Eric re-framed what he previously experienced as "failure." He said, "I didn't fail three times. […] I was just inching closer and closer to the boundaries of the conversation." He began to see his struggles as part of a process of "inching closer and closer to the boundaries of the conversation" (Interview, Semester 4).

Eric summed up his development over the past two years when he described how he now saw his knowledge about academic genres as a means to composing process. We see such a development expressed in our final interview with Eric, when he described integrating the conventions of literature reviews into his strategies for composing research papers.

> I think **I previously saw lit reviews as a task** to situate your paper. And I guess that's still true. But **now I see it as a part of the process** to help you determine what you should write about in your paper. (Interview, semester 4)

Here, Eric realizes that to compose research, he must use what he knows about genre as a means to develop his thinking. Over the course of four semesters in graduate school Eric had moved from seeing the lit review "as a task" to "part of the process." This development is similar to the successful ways PhD students in Castelló et al. (2013:444) used the texts they composed as "tools" in a "meaning-construction process." This use of texts also resembles the expert scientific writers in Florence et al. (2004) who used their drafts as a resource to identify the next problems that needs to be solved. Thus, it appears that with this final paper, Eric began to develop a more expert approach to composing academic texts.

Self-regulation strategies

The development in Eric's perception of genre conventions accompanied a development in his self-regulation strategies. An analysis of Eric's self-regulation strategies showed that when he succeeded to use genre as "part of a process" during his fourth semester, he shifted how he set goals and reacted to problems. This section presents those shifts by comparing strategies between two phases: strategies used during his semesters 1-3 and those used during his fourth semester.

Shifting from text-based goals to argument-based goals

As he composed his fourth semester project, Eric shifted from setting generic goals to setting project-specific goals. His process logs for the first three semesters show his goals primarily focused on producing generic text types or moves.

> My goals for this session are **to produce a first draft of my paper**, as much as I can get done. And, ideally that's everything. (Log, Semester 1)

> So my goals are to, I'm not going to […] at least **have a bibliography** with an object of study. That's step 1. Step 2 is to **formulate a research question**. Step 3 for the argument, I don't really feel like I need to do at this stage, but maybe I can **put some notes down**.
> My goals for the writing session are to **produce the bibliography**, **articulate a research question**. (Log, Semester 2)

> So my goals are to basically **go through the IMRD steps** of writing my lit review as part of the introduction, finding the gap, and so then all I have to do is **go through the analysis**, **go through my project**, and **be set up for the paper**. Oh boy, ok. So I guess my goal is to **do the introduction**, **methods**, **and then later I can do results, analysis and discussion**. (Log Semester 3)

> When writing out my research question, I immediately started to think about the novelty moves. And **it's kind of like a formula.** So in a quadratic equation or whatever, if you can solve – if you have one of the variables, it can help you to solve other variables. So, instead of just having a blank formula, **the formula was writing a research paper. And I had the research question.** (Semester 3)

These examples show Eric setting generic goals, which we see when he intends to "produce a first draft," "formulate a research question," "go through the IMRD steps," and use the "novelty moves" as "kind of like a formula." These goals could be applied to a wide range of projects. Setting generic goals do not seem to allow Eric to adapt his knowledge about genre in the process of composing.

Eric's generic goal-setting strategy seemed to inhibit him from developing genre knowledge in service of his composing process. This may have contributed to his self-described failure and lack of motivation that we saw in the longitudinal narrative when Eric questioned whether he had "really learned" how to write a literature review and felt defeated by the critical feedback he was receiving. In this way, Eric's seems to treat conventions as a static set of principles as opposed to a set of flexible heuristics.

When Eric did achieve more success in the fourth semester, he also changed in his goal-setting strategy from setting generic goals to setting goals that were specific to the problems he was encountering in his project. Eric's process logs during the fourth semester show him focusing on specific arguments that he was trying to make in his project.

So I have this theory I am explaining, Foucault, and I'm looking at rituals, objects, and who gets to talk. So, goodness this is tough. **So my goal is to elaborate what Foucault means by rituals**; **elaborate what Foucault means by who can talk? There needs to be a word for that. I'll say credentialing**. (Log, Semester 4)

My goal is to talk about, or **describe, name, the complex concepts of Foucault's theory of discourse and language** […] **connect it to genre theory** […] **incorporate the parts from Condit** where relevant into my paper [and finish my] **analysis or explication of Foucault's theory as it applies to genre**. (Log, Semester 4)

Ok, my goals are—well I took the prospectus prompt, and I turned it into an outline to make sure to do everything she wanted in the prospectus, so nothing is left undone. So now it's time to do some invention. […] I'd like to fill in as much of the prospectus as I possibly can and also **have the goal of where I need to go next**. Both to kind of **get a draft**, but also **point towards where the omissions in my prospectus are, so I can determine what I need to do next.** (Log, Semester 4)

Here, Eric is focused on setting specific goals to generate arguments for his paper. This is evident when Eric sets goals to "elaborate what Foucault means by rituals," and "connect [Foucault's concepts] to genre theory." In addition, he sets a goal to determine "where I need to go next" in his paper. These goals suggest Eric is thinking specifically about how to address the problems he encountered in his paper.

This type of thinking also seems to contrast the generic goals he set during the first three semesters. Instead of trying to fit his process into a set of rigid genre structures, he appears to treat these structures more tacitly. Even though Eric does not use genre terms explicitly, we speculate that the conventions he had learned were operating behind the scenes. What we see in the foreground are the arguments Eric wants to develop. He is no longer creating a literature review, but using those conventions to guide his thinking about the research.

Learning to persist with problems
In addition to developing a project-specific goal-setting strategy, Eric also developed new strategy for self-reflecting on his writing performance. During the first three semesters, Eric's process logs show him reacting to critiques as an indication of his own deficiency.

I have this feeling that I do not trust my writing, because if I'm understanding it more as I'm writing about it, that means my draft is probably going to reflect someone who's thinking and learning as opposed to delivering information. (Log, Semester 1)

But the downside is, it feels sloppy, and I have lots of highlights and stuff all over the place […] so it feels more like a draft than anything presentable. (Log, Semester 2)

A larger problem I encountered was it's hard to be motivated to write a project, to take a stance, and be affirmative, when the purpose of doing so is to be countered and critiqued by the peer evaluator, in this case the instructor. […] It's like saying do a bunch of work so you can be told the work you did was wrong. (Log, Semester 3)

Here we see Eric talking about problems as indications of deficiencies in his own performance when he interprets his "sloppy" draft as a "downside," feels that critique is an indication that his work "was wrong," and loses "trust" in his writing because it seems to reflect "thinking and learning" rather than succeed in "delivering information."

Eric's tendency to treat problems as a sign of his own deficiency may explain why he ignored his instructor's critiques that his writing did not dig deep enough into the scholarly literature during his first three semesters. This explanation is further supported in a concern Eric raised with the process log protocol. In our third semester interview, Eric revealed that he did not like reflecting on problems, because he felt it hindered his ability to find solutions.

Eric: I guess reflecting on the problem makes it seem bigger. The signpost that there's a problem is that you're stuck, for me I guess

(Interview, Semester 3)

Here, Eric wanted to avoid reflecting on his problems, because he is concerned reflection will make the problem "seem bigger," indicate that he's "stuck." This approach to problem solving suggests that the evaluations on Eric's performance were not feeding back to inform his goals or strategies. Instead, they appear to be more of a hindrance to his motivation.

During the 4th semester, Eric no longer shied away from problems but reacted to them as opportunities to develop his arguments. His process logs during the fourth semester show him persisting with problems in order to generate new solutions.

There was just one feature of his theory that was particularly difficult, one feature I was using that took me a long time to sort out. But **I just stayed with it and I wrote a few paragraphs and I ended up cutting them and I was fine with that, because I felt like I was getting closer every time I cut something.** (Log, Semester 4)

I had this problem of **not really fully understanding the quote** or a particular part of language in Foucault. And **so I would just write out the question**, "what does Foucault mean by "devilish features of discourse?" […] and then I would answer that, and then I'd make my argument. I don't know if those questions will stay in the final version, but **they got me to talk about explicitly what I see in the text, and how I'm using it.** (Log, Semester 4)

What problems did I encounter? It was a lot of information to manage, […] but as **the argument frame was changed by the lit review, there were lots of kind of structural changes, big chunks that I had to be delicate about moving into the final draft**. […] Instead of working within the text, I just opened a new file and started moving the chunks over, [and that helped me] **adjust the framing throughout.** (Log, Semester 4)

Here we see Eric treating problems as opportunities to generate and refine his arguments. When he encountered a problem, he "just stayed with it," composed exploratory writing and let the "argument frame" be changed by the "lit review." It appears Eric no longer shies away from problems, but instead persists with them as a means to revise his knowledge of subject matter and his organizational scheme for the text.

Discussion

The narrative of Eric's experience and the self-regulation strategies he used offer two ways genre knowledge and self-regulation strategies intertwine (Negretti, 2012). In the first three semesters, his strategies and knowledge intertwine as Eric uses *genre as part of a performance*. While he seems to understand the genre conventions of academic literature reviews, his goals during those semesters—for instance, to "produce a lit review" or "have a gap"—suggest a subservient relationship to genre conventions, which he resists when he said, "I don't want to be a paper-producing factory" (Interview, Semester 1). Eric's genre-as-performance strategies were also evident in his reaction to problems. He perceived problems as an indication of his deficiencies as a writer and scholar, suggesting that his main focus was on performing well in the genre. While he was aware of the conventions, his focus on performance appears to lead to frustrated attempts to translate his awareness into practice.

In his fourth semester, Eric demonstrates what we see as a more productive interaction between self-regulation and genre knowledge when he uses *genre as part of a problem-solving process*. He sums this up by saying, "I now see it [the lit review] as *part of the process* to help you determine what you should write about." (Interview, Semester 4, emphasis added). Rather than avoid problems, or treat them as a measure of performance, he used them as a source of invention, experimenting with solutions as a way to make progress, which resembles expert writers' use of writing, and its challenges, as a tool to re-articulate and refine thinking (Castelló et al., 2013; Florence & Yore, 2004; Prior 1998). Rather than set goals for producing genre features, his goals during the fourth semester focused on pursuing specific arguments. That many of these project-specific goals did not reference genre features, suggests that the genre conventions were subservient to his arguments. These strategies may have helped Eric use genre conventions heuristically, in service of his project.

Entanglements between genre knowledge and self-regulation strategies seem to work together as graduate students develop as writers and scholars in their field. However, much of graduate students' "strategic knowledge" (Flower, 1994:195; can be occluded from instructors, advisers, and the students themselves (see also "competence" in Beaufort & Iñesta, 2014). Strategic knowledge emerges as writers put understanding of a task into action. Such knowledge can remain hidden in the narratives constructed in

academic articles, especially those following an IMRD structure. When this happens, one reasonable assumption for graduate student writers is that more experienced faculty do not struggle with writing, or that a writer's struggles should remain hidden. This narrative may be further enforced for new graduate students, or those applying to PhD programs, eager to show faculty they are 'good' students and scholars of their discipline. While graduate students have many opportunities to learn about the genres of their discipline, they have fewer, if any, opportunities to develop their strategic knowledge.

Incorporating strategic knowledge may improve upon shortcomings of existing efforts to teach writing in graduate school. One common approach is to explicitly teach students about the genre conventions in their discipline (Autry & Carter, 2015; Grav & Cayley, 2015; Johns, 2008; Sundstrom, 2014). However, this can fall short if, as we saw in Eric's case, as students' strategic knowledge leads them to reproduce conventions rather than use them in service of their own interests (Bhatia, 1999). An alternative proposal could prompt graduate students to re-think their assumptions about writing by asking them to engage in writing assignments that are deliberately difficult. Such assignments may "deroutinize" (Dryer, 2012:442)graduate students' assumptions about academic writing (see also Reid, 2009). However, such disruptions, like those Eric faced in his first three semesters, may backfire if students lack strategic knowledge for deconstructing old routines and developing new ones.

Classroom instruction in writing could help graduate students develop a vocabulary to talk about their self-regulation strategies. Writers might be taught to talk about their strategies for setting goals, managing motivation, evaluating and reacting to accomplishments (Zimmerman, 1990; Zimmerman & Kitsantas, 2007). An ability to talk about and analyze writing processes may help writers better develop their own as they encounter new genres. In addition, strategic knowledge can be taught through observational learning, where students observe and analyze other writers use to compose the written genres of their discipline. Rijlaarsdam et al. (2008) and Zimmerman & Kitsantas (2002) have shown that one way to teach coping strategies for writing is through observational learning. Such an approach would expose students to an array of alternative composing processes, but perhaps more importantly demonstrate the myriad ways writers cope with problems.

For a more practical application, instructors might re-think how they talk about genres in their writing assignments. For programs that devote course time to focused study of writing, perhaps they should consider include readings that offer a vocabulary for talking about their self-regulation strategies. If the goal is to produce a type of text, then writers may devalue an important, messy process of invention and focus instead on whether or not they are 'correct' in their delivery. This message implies writers must serve in the production of genres and not the other way around. Instead, instructors may ask students to "use research proposal conventions to develop an argument / solve a problem / address an issue." Such modifications in phrasing may signal to student writers that their goal is not to produce a specific genre convention but rather use it to serve a goal that is perhaps more central to the work of their discipline and interests.

APPENDIX A: PROCESS LOG PROTOCOL
Writing Process Log
Please record your responses to the following prompts.

Before your start your writing session:
   1. What are you goals for this session?

After your writing session:
    2. How well did you accomplish your goals in this session?
    3. When pursuing these goals, what problems did you encounter?
    4. What helped or hindered you in addressing these problems
    5. What alternatives, if any, did you consider?
    6. What will you do next?

APPENDIX B: INTERVIEW PROTOCOL
1. How would you describe the paper you worked on this semester?
2. What was your process like for composing that paper?
3. What was challenging about the task?
4. Why do you think you experienced those challenges?
5. What helped you overcome those challenges?
6. Did you do anything differently than previous semesters?
7. What do you think you'll do for next semester?

References

Autry, M. K., & Carter, M. (2015). Unblocking Occluded Genres in Graduate Writing: Thesis and Dissertation Support Services at North Carolina State University. In *Composition Forum* (Vol. 31). ERIC. Retrieved from https://eric.ed.gov/?id=EJ1061566

Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, *50*, 248–287.

Bawarshi, A. S., & Jo Reiff, M. (2010). *Genre: An introduction to history, theory, research, and pedagogy*. West Lafayette, Ind.: Parlor Press.

Bazerman, C. (2009). Genre and cognitive development: Beyond writing to learn. *Pratiques. Linguistique, Littérature, Didactique*, (143–144), 127–138.

Beaufort, A., & Iñesta, A. (2014). Author profiles: Awareness, competence, and skills. In E.-M. Jakobs & D. Perrin (Eds.), *Handbook of Writing and Text Production* (142–158). Boston: Walter de Gruyter Gmbh.

Bereiter, C., & Scardamalia, M. (1987). Two Models of Composing Processes. In *The Psychology of Written Composition*. Hillsdale, NJ: Erlbaum.

Berkenkotter, C., & Ravotas, D. (1997). Genre as Tool in the Transmission of Practice Over Time and Across Professional Boundaries. *Mind, Culture, and Activity*, *4*(4), 256–274. https://doi.org/10.1207/s15327884mca0404_4

Bhatia, V. K. (1999). Integrating Products, Processes and Participants in Professional Writing. In C. N. Candlin & K. Hyland (Eds.), *Writing: Texts, Processes and Practices*. London: Longman.

Bhatia, V. K. (2014). *Analysing genre: Language use in professional settings*. New York: Routledge.

Brent, D. (2011). Transfer, Transformation, and Rhetorical Knowledge: Insights from Transfer Theory. *Journal of Business and Technical Communication*, *25*(4), 396–420. https://doi.org/10.1177/1050651911410951

Castellò, M., & Iñesta, A. (2012). Texts as artifacts-in activity: Developing authorial identity and academic voice in writing academic research papers. *University Writing: Selves and Texts in Academic Societies*, 179–200.

Castelló, M., Iñesta, A., & Corcelles, M. (2013). Learning to Write a Research Article: Ph. D. Students' Transitions toward Disciplinary Writing Regulation. *Research in the Teaching of English*, *47*(4), 442.

Devitt, A. J., Reiff, M. J., & Bawarshi, A. (2004). *Scenes of writing: Strategies for composing with genres*. Pearson.

Downs, D., & Wardle, E. (2007). Teaching about writing, righting misconceptions: (Re) envisioning "first-year composition" as "Introduction to Writing Studies." *College Composition and Communication*, 552–584.

Dryer, D. B. (2012). At a mirror, darkly: The imagined undergraduate writers of ten novice composition instructors. *College Composition and Communication*, 420–452.

Florence, M. K., & Yore, L. D. (2004). Learning to write like a scientist: Coauthoring as an enculturation task. *Journal of Research in Science Teaching*, *41*(6), 637–668. https://doi.org/10.1002/tea.20015

Flower, L. (1994). *The Construction of Negotiated Meaning: A Social Cognitive Theory of Writing*. Carbondale: Southern Illinois University Press.

Flower, L. S., & Hayes, J. R. (1977). Problem-Solving Strategies and the Writing Process. *College English*, *39*(4), 449. https://doi.org/10.2307/375768

Flowerdew, J. (2015). John Swales' approach to pedagogy in Genre Analysis: A perspective from 25 years on. *Journal of English for Academic Purposes*, *19*, 102–112. https://doi.org/10.1016/j.jeap.2015.02.003

Grav, P. F., & Cayley, R. (2015). Graduate Student Writers: Assessing Needs across the "Linguistic Divide." *Writing & Pedagogy*, *7*(1), 69–93. https://doi.org/10.1558/wap.v7i1.17236

Higgins, L. (1993). Reading to argue: Helping students transform source texts. *Hearing Ourselves Think: Cognitive Research in the College Writing Classroom*, 70–101.

Iñesta, A., & Castelló, M. (2012). Towards an integrative unit of analysis: Regulation Episodes in expert research article writing. *WRITING RESEARCH*, 421.

Johns, A. M. (2008). Genre awareness for the novice academic student: An ongoing quest. *Language Teaching*, *41*(02). https://doi.org/10.1017/S0261444807004892

Li, Y. (2012). Undergraduate students searching and reading Web sources for writing. *Educational Media International*, *49*(3), 201–215. https://doi.org/10.1080/09523987.2012.738013

Micciche, L. R., & Carr, A. D. (2011). Toward graduate-level writing instruction. *College Composition and Communication*, 477–501.

Prior, Paul. (1998). *Writing/Disciplinarity: A Sociohistoric Account of Literate Activity in the Academy*. Routledge.

R. Negretti. (2012). Metacognition in Student Academic Writing: A Longitudinal Study of Metacognitive Awareness and Its Relation to Task Perception, Self-Regulation, and Evaluation of Performance. *Written Communication*, *29*(2), 142–179. https://doi.org/10.1177/0741088312438529

Reid, E. S. (2009). Teaching writing teachers writing: Difficulty, exploration, and critical reflection. *College Composition and Communication*, *61*(2), W197.

Rijlaarsdam, G. C. W., Braaksma, M. A. H., Couzijn, M. J., Janssen, T. M., Raedts, M., Van Steendam, E., … Van den Bergh, H. (2008). Observation of peers in learning to write: Practice and research. *Journal of Writing Research*, *1*, 53–83.

Russell, D. R. (1997). Rethinking Genre in School and Society: An Activity Theory Analysis. *Written Communication*, *14*(4), 504–554. https://doi.org/10.1177/0741088397014004004

Sundstrom, C. J. (2014). The Graduate Writing Program at the University of Kansas: An Inter-Disciplinary, Rhetorical Genre-Based Approach to Developing Professional Identities. In *Composition Forum* (Vol. 29). ERIC. Retrieved from https://eric.ed.gov/?id=EJ1022020

Yancey, K., Robertson, L., & Taczak, K. (2014). *Writing across contexts: Transfer, composition, and sites of writing* (1st ed.). Utah State UP.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, *25*(1), 3–17.

Zimmerman, B. J., & Kitsantas, A. (2002). Acquiring writing revision and self-regulatory skill through observation and emulation. *Journal of Educational Psychology*, *94*(4), 660–668.

Zimmerman, B. J., & Kitsantas, A. (2007). A writer's discipline: The development of self-regulatory skill. In S. Hidi & P. Boscolo (Eds.), *Writing and Motivation* (pp. 51–69). Boston: Elsevier.

CHAPTER 4

**The effects of teaching Comparative Genre Analysis on first-year students'
use of model texts**

Abstract
Instructors often use model texts to teach writing, but many are concerned that models do students a disservice by imposing a rigid and simplistic formula that students imitate, rather than developing flexible genre knowledge that can be adapted to new contexts. One hypothesis is that students will use models more strategically if taught Comparative Genre Analysis (CGA), because CGA prepares students to see how text features are adapted to audiences. To test this hypothesis, this study analyzed the effects a CGA curriculum had on students' use of model texts compared to a curriculum that taught students to analyze arguments. Findings showed students in CGA courses were more likely to seek out different types of model texts, use those models for more fine-grained purposes, and were unique in their ability to articulate their use of models in terms of choices rather than straightforward imitation. This provides evidence that teaching genre analysis could prepare students to identify models' textual features as rhetorical choices tailored to a specific audience and situation.

Introduction

There has been longstanding interest in using model texts as a tool to teach writing, yet surprisingly little research on how to do so effectively. In the 60s and 70s, instructors began to advocate for using model texts as a way to teach students to imitate highly valued forms of writing. For instance, one early scholar argued that model texts help students imitate patterns of writing.

> We can give students a specific model for composition, help them analyze the patterns it involves, and then have them invent their own ideas to fit the pattern. (McCampbell, 1966, p. 772)

It is no surprise that this pedagogy of imitation has faced criticism, but despite this criticism, instructors continue to use model texts in the classroom. Stolarek (1994) found that 76% of instructors used model texts in the classroom, and my own interactions with instructors within my own department and at other Universities reveal that it is still a common practice among instructors to request student permission to use their essays anonymously in future classes as examples to show other students.

Scholars rightly worry that models promote "slavish imitation" (Sargeant, 2014; Werner, 1989) to a set of rigid or prescriptive formula for writing, which in effect inhibits students' ability to adapt rhetorical knowledge in new contexts. One reason behind these concerns is that model texts present a reductive version of genre conventions that may seem to students to be oversimplified and prescriptive (Bawarshi & Jo Reiff, 2010; Devitt, 2009; Elbow, 1998; Moffett, 1982; Smagorinsky, 1998). The problem of writers

reproducing prescriptive feature of model texts is also born out in cases where novice technical writers often imitate models inappropriately because they fail to understand how textual forms and features are related to audience expectations (Duffy, Post, & Smith, 1987; L. C. Johns, 1989; Werner, 1989; Winsor, 1996). These scholars caution that students who fail to understand how audiences shape the forms and features of texts will be unable to adapt features from a model text to effectively meet their own audience expectations.

To prepare students to avoid an oversimplified and prescriptive use of models, Rhetorical Genre Studies scholars have argued that students must learn how to critically analyze genre conventions. To do so, RGS scholars developed pedagogies that teach students to read text features as rhetorical choices (Bawarshi & Jo Reiff, 2010; Devitt, 2009; Johns, 2015). These pedagogies have been shown to increase students' rhetorical awareness as it is demonstrated in their own writing. For instance, Boetger (2014) recently showed that explicit genre instruction improved students' awareness of technical writing principles. In addition, Carter et al. (2007; 2004) showed that explicit instruction in a lab report genre helped students apply scientific reasoning in their own lab reports. In addition, Wilder and Wolfe (2009) have shown that explicitly teaching students conventions for making arguments in literary analysis led to significant improvements on the quality of their writing and a marked increase in their reported learning from the course. They have also argued that explicit teaching in genre may improve writing transfer by helping students navigate the rhetorical situations presented by subsequent writing tasks.

Given that genre pedagogies improve student writing, I hypothesized that teaching students to analyze genre would also equip them to see more nuance in the genre conventions represented in model texts. This study examines a particularly promising pedagogical intervention for teaching genre analysis—the Comparative Genre Analysis assignment (Wolfe et al. 2014). Comparative Genre Analysis (CGA) teaches students to compare and contrast "the values and conventions of a genre one is already conversant in with those of other less familiar genres in order to better understand the larger activity systems in which both genres function." (Wolfe et al. 2014, p. 45). This approach operates like other genre-awareness pedagogies that teach students to see text features and forms as strategic rhetorical choices that respond to an audience's values and expectations (Bawarshi & Jo Reiff, 2010; Devitt, 2009; Flowerdew, 2015; Swales, 1990). What makes CGA unique is the focus on highlighting genre changes through comparison. Rather than showing students different shades of one genre, the version of CGA used in this study aims for students to become more hyper-aware of rhetorical choices by using a comparative analysis of two genres to show a contrast between how features of text and argument change when adapted for very different audiences and contexts. This comparison is intended to encourage students to connect their observations of genre similarities and differences to their interpretations of what an audience values and the purposes these genre features reflect.

Wolfe et al. (2014) have claimed CGA introduces students to two important lessons about using models. First, the CGA teaches students how to gain useful insights into one genre by examining how it contrasts with another, different genre. Second, by examining how information changes across genres, students may be prepared to notice how genre features reflect choices writers make in relation to an audience. As a result,

teaching CGA is likely to help students make more sophisticated use of model texts on subsequent writing tasks. As Wolfe et al. explain, "CGA can teach students to extract genre features from model texts and learn what questions to ask in new rhetorical environments" (Wolfe et al., 2014, p. 61). In other words, since CGA helps students read model texts more critically, we might also expect it to help students identify choices for writing. However, there are no studies that test the effects CGA may have on how students use model texts.

To test how CGA affected students' ability to use models on a subsequent writing task, this study compared a CGA-based first-year writing curriculum and a more traditional first-year writing curriculum that taught argument analysis. While the primary focus is on CGA, the comparison allows us to gain further insight into the following research questions:

1. To what extent does teaching Comparative Genre Analysis affect the likelihood that students will use models to inform their writing? Are students who learn CGA more likely to seek out models?
2. How does teaching Comparative Genre Analysis affect the purposes that students name for using models?
3. How does CGA affect the strategies that students name for using models? Does the CGA curriculum promote slavish obedience or strategic choice, as intended?

Methods
Research Site

This study compared two versions of a first-year writing curriculum--one version taught CGA and the other taught a more traditional argument-based curriculum--at Carnegie Mellon University (CMU) during Fall 2016 & Fall 2017. During these semesters, CMU's first-year writing curriculum was undergoing its second and third year of a re-design. The original curriculum was set up to teach students how to analyze written arguments, synthesize them into a "conversation," and contribute an original argument (see Figure 1a, based on research from Charney & Neuwirth, 2006). This argument-based curriculum was designed to prepare students to engage critically with arguments in their discipline. Then in Fall 2014, the Writing Program Director re-designed the first-year writing curriculum by shifting the focus from that of argument analysis to one of genre analysis (see Figure 1b, based on research from Wolfe et al., 2014). During Fall 2016 and Fall 2017, both CGA and AA versions of the first-year writing curricula were running simultaneously. This presented a unique opportunity to compare the two curricula and the affect they had on students' decision-making strategies for composing the final project, which remained similar across all sections.
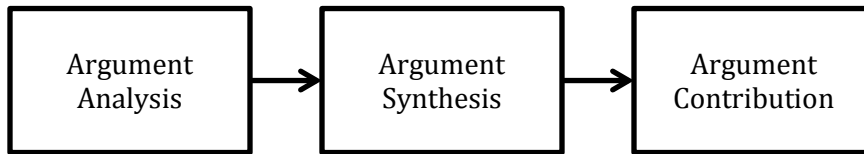
```
┌─────────────┐      ┌─────────────┐      ┌─────────────┐
│  Argument   │ ───▶ │  Argument   │ ───▶ │  Argument   │
│  Analysis   │      │  Synthesis  │      │ Contribution│
└─────────────┘      └─────────────┘      └─────────────┘
```

Figure 2a. Sequence of major writing assignments for Argument Analysis (AA) sections of first-year writing

```
┌─────────────┐      ┌─────────────┐      ┌─────────────┐
│ Comparative │ ───▶ │  Research   │ ───▶ │  Argument   │
│Genre analysis│      │  proposal   │      │ Contribution│
└─────────────┘      └─────────────┘      └─────────────┘
```

Figure 1b. Sequence of major writing assignments for Comparative Genre Analysis (CGA) sections of first-year writing

Argument Analysis Sections (AA)

The Argument Analysis (AA) sections of first-year writing focused on explicitly teaching students a framework for analyzing arguments, and then led students through the three projects described below.

Argument Analysis

The first project in the AA curriculum, called the "argument analysis essay," assigned students to read an expository text and describe how the author builds his or her argument. The assignment prompt for this project broke down this task into four pieces.

> What *analysis* means for this class is, (1) picking out the author's major conclusion as well as the chain of premises, relevant implied premises, and sub-conclusions used to build to that conclusion, (2) describing your "diagram" of the author's argument in your own words, (3) articulating what readers need to "buy into" in order to be persuaded by the argument, and (4) explaining why the author's argument matters or what's at stake. (Argument analysis prompt)

To prepare to compose the argument analysis essay, students were taught a set of heuristics for dissecting arguments. Heuristics were treated as "a set of topics for systematic consideration (Eisenhart & Johnstone, 2008), and in the AA curriculum they included a set of terms that students used to break down arguments, such as its "claims," "evidence," and "assumptions," or terms for analyzing contextual factors, such as "stakeholders," "purpose," and "exigence." These terms were intended to act as a lens through which students could describe pieces of an argument. Instruction in how to apply these heuristics was carried through a series of scaffolded assignments. For instance, instructors engaged students in using these heuristics by discussing analyzing several articles prior to the Argument Analysis project.

Argument Synthesis

The second project, called the "Synthesis essay," tasked students with synthesizing several arguments surrounding a debate or controversial topic. This synthesis was intended to build on skills developed during the argument analysis by shifting from analyzing a single argument to analyzing several arguments in relation to each other. The prompt for the synthesis essay asks students to

> Explain how and why groups of texts offer disparate answers to a debate question of your own making. […] Synthesis will examine at least five texts, using heuristic questions to sort them into political interest groups or intellectual fields. (Synthesis Prompt)

This assignment scaffolds students toward a source-based essay that seeks to resolve the "debate" in the research literature through original research. To do this, students repurpose the heuristics they learned from the argument analysis in order to group several different arguments together by "shared claims" and examine differences in those arguments use evidence and rely on assumptions. The goal of this assignment is to get students to identify a "gap" or "source of conflict" that explains why groupings of arguments present different, and conflicting, sets of shared claims. The "gap"/"source of conflict" that students identify then becomes the central topic that helps them launch into their next, source-based essay: the contribution paper.

Argument Contribution

The "Contribution" essay is the final project in the course, and it was the main focus of data collection procedures. The prompt for this essay asked students to engage with the gap or source of conflict they identified through synthesis and provide a solution with their own researched argument. The prompt states:

> From your own work in this course, you must argue for your own position that responds to a question you have constructed. But your contribution will not stand alone. Imagine every author that we have read so far—and perhaps one or two authors that you find on your own—standing in judgment of your position. (Contribution Prompt, AA)

To introduce students to different approaches to conducting this kind of academic research, the AA contribution assignment asks students to choose one of two approaches. The first approach students can choose is to conduct a "case study." A case study asks students to choose an artifact—a person, event, or object—and use their artifact to discuss the "strengths and weaknesses" of different perspectives within the scholarly literature they have synthesized (Contribution prompt). The second approach students can choose is to conduct a "theoretical discovery." A theoretical discovery asks students to draw on additional source material to assert a new perspective that is "missing" from the literature they synthesized.

In addition, the AA contribution prompt advised students that they should develop a structure that fits their topic by making appropriate use of "subheadings" and by including an "abstract." As further advice on how to develop a structure, the AA

contribution prompt directed students to view sample papers in undergraduate research journals.

Comparative Genre Analysis Sections (CGA)

The Comparative Genre Analysis (CGA) curriculum explicitly taught students a framework for analyzing genre, and then led students toward using that framework in a series of three assignments. These assignments built up to the Contribution essay, which was highly similar to the AA contribution essay and also a primary focus of data collection for this study.

Comparative Genre Analysis

The comparative genre analysis (CGA) assignment asks students to compare textual features between two genres. The genres selected that instructors assigned for this comparison were texts that were written for different situations but focused on the same premise, such as a research article and an op-ed or radio interview that accommodated the research to a public audience. To highlight distinct differences in text features and situations, the CGA assignment prompt asked students to compare a text written for an "expert" audience to one that was written for a "non-expert" audience.

> [Compose] a 3-4 page, double-spaced paper that explains what we learn when we compare two genres—one written for experts and one written for non-experts. (Comparative Genre Analysis Assignment Prompt)

The "expert" and "non-expert" labels intentionally reduced the nuanced complexity of the genres in order to highlight extreme differences in how language changed in relation to audience. A side effect of the CGA assignment was that it also introduced students to the "moves" (Swales, 1990) typical of empirical research papers. One set of moves was the IMRD format--Introduction, Methods, Results, and Discussion. The "expert" genres were research articles organized in an IMRD format, and the instructors talked about this as a rhetorical choice. In addition, instructors also introduced a set of moves for introducing empirical research, based on Swales CARS model. A benefit of focusing on the CARS model and IMRD is it helped students recognize contrasts with the "non-expert" article.

Similar to the AA courses, to prepare students compare changes among expert and non-expert genres, CGA courses taught heuristics for critically analyzing how text features were related to audience and situation. Heuristics included terms to describe formal features of texts, such as "organization," "framing," and "expression," and it included terms to describe situational features of context, such as "stakeholders," "purpose," "audience," and "material conditions." To practice using these heuristics to comparatively analyze genres, instructors guided students through an analysis of several "non-expert" and "expert" texts prior to the CGA assignment.

Research Proposal

It is important to note that the introduction of the CGA assignment prompted a decision to change the second major project from a "Synthesis" to a "Proposal" in an effort to make this project more similar to a genre that students might encounter in the future. The CGA course shifted to a proposal, because it was similar to proposal genres in

other contexts, and it was hoped that these similarities would help students more readily see connections between the proposal they were writing and similar texts in other contexts. While both the Synthesis and Proposal assignments asked students to group together sources into shared perspectives, the proposal assignment focused more attention on identifying a "gap" in the literature, which students were then to "fill" using their own research. For instance, the proposal prompt stated:

> The proposal is a genre that you will see again in your academic future. This assignment will help you learn how to frame the rationale for your project, write an effective research synthesis to contextualize your project, and construct proposed plans for completing the project (i.e., research methods). (Proposal Prompt)

Like the synthesis, the proposal also created a foundation for the Contribution paper. However, the added emphasis on proposing a research project led students to think through the research methods they would use to compose their Contribution paper.

Contribution

The Contribution project assigned in CGA courses mirrored the one in the AA courses. Like the AA contribution, the CGA contribution asked students to choose a "case study" or "theoretical discovery" approach to composing their research. Both of these descriptions used the same language as the AA prompt. However, there are a few key differences. Unlike the AA, the CGA contribution prompt expanded on the section that advised students on how to structure their essay by naming particular organizational patterns and asking students to "choose a macrostructure" for their paper. Macrostructures included "thesis first, IMRD, problem solution, or mimic one from one of our class authors." This may have set students up to be more attentive to making rhetorical choices and seeking out options from sources read in class. While encouragement to choose a macrostructure and seek additional model texts is not altogether different from the AA prompt's emphasis on deliberately developing a structure, it does place more emphasis on naming specific structures. However, it is noteworthy that the AA prompt also directed students to seek out model essays, but did not suggest using those models to choose a structure.

Participants

Six instructors participated in this study. Three instructors were teaching AA sections, and three taught CGA sections. They had all received at least one semester of training and experience teaching the course prior to the study. After giving consent in accordance with IRB guidelines, 72 students participated in the study. 37 were from CGA sections and 35 were from AA sections. In addition, 50 students participated in an additional survey (see Table 1). To preserve anonymity, all names were replaced with a code during the data collection procedures.

Data Collection and Analysis

Data included in-process protocols (Flower), participants' drafts of their major assignments with instructor feedback, and a survey that was issued during the Fall 2017 semester. Procedures for collecting and analyzing these data sources are reported below.

Table 1. Data collection

	Participants
CGA	
Process Logs	37
Surveys	39
AA	
Process Logs	35
Surveys	11

Process Logs

Early in the semester, instructors received an email from the researcher to solicit their participation in the study. Participating instructors were asked to include a process log protocol as an extra credit assignment as part of their Contribution essay. In most cases, the researcher visited instructors' classes to introduce the process log protocol; however, due to scheduling constraints one instructor introduced the protocol herself. The process log protocol asked students to compose a written journal entry each time they worked on their Contribution essay. Students responded to a series of six questions (Figure 2) each time they worked on the Contribution paper.

The protocol did not explicitly ask about students' use of models, because at the time of its invention and initial deployment, the researcher was interested in students' more general decision-making strategies. After the first semester of data collection, it became clear that strategies for using models differed significantly between CGA and AA students. Yet the protocol was kept the same in a second round of data collection in order to provide consistency in the study.

Writing Process Log

Please record your responses to the following prompts.

Before your start your writing session:

   1. What are you goals for this session?

After your writing session:

   2. How well did you accomplish your goals in this session?

   3. When pursuing these goals, what problems did you encounter?

   4. What helped or hindered you in addressing these problems

   5. What alternatives, if any, did you consider?

   6. What will you do next?

Figure 3. Process log protocol used to collect in-process data from CGA and AA students

To analyze process logs, I segmented logs into t-units (an independent clause consisting of subject, verb, and object but not necessarily a full sentence). After segmenting the data, my analysis was carried out in four stages. First, I marked the t-units that mentioned model texts. By coding for mentions of models would enable me to see if the CGA curriculum increased the likelihood that students would use model texts to write their own papers. Second, I coded each mention of model texts to determine if the model was a past Contribution paper provided for reference by the instructor, if it was a non-instructor provided example. If the reference was unclear, I marked it as "other." Third, I analyzed how the CGA curriculum affected students' purposes for using models by identifying what goals students had for using models. This analysis built several codes from the ground-up, and then I combined codes to come up with three main categories (Table 1a).

Table 2a. Codes for analyzing students' purposes for using models

Code	Definition	Example
Specific tasks	Explicitly names looking at specific genre features to accomplish particular goals	I will read other thesis-driven papers so I can see how their abstracts are formatted, then write my own (K-NM)
Organization	Identifies models used to structure or organize a paper or section of a paper	I will consult all of the example papers we looked at in class and examine the choice of structures in the papers. (N-AM)
General or ambiguous	Mentions that samples or models were used but does not specify why.	I will also peer review other papers so I can get more example papers to read (K-NM)

In the fourth stage, I analyzed students' strategies for using models. This perspective allowed me to focus on what kinds of decision-making were used by CGA and AA students' when working with model texts. Through a grounded coding approach, I developed three categories (Table 1b).

Table 2b. Codes for analyzing students' strategies for using models

	Definition	Example
Strategic choice	Mentions identifying specific genre features and using them to inform the students' own writing	I will consult all of the example papers we looked at in class and **examine the choice** of structures in the papers. (N-SM, CGA)
Imitation	Mentions features of models but does not specify using them for writing or indicates copying those features wholesale	It helped to look at previous examples of contribution essays to **get a sense** of what I should be trying to do...(W-AK)
Confusion	Statements that indicate a failed attempt to use a model	I looked back at samples Professor [J] provided […] **I was still confused**. (J-KC)

Surveys

A survey was issued to instructors teaching AA and CGA courses during the Fall 2017 semester (see Figure 3). My survey questions were attached to a departmental survey issued to 4 first-year writing sections. The first two survey questions included four choices on a Likert scale in an effort to capture a more nuanced range of how much students relied on models when composing their Contribution paper. However, this range did not prove to be useful and during analysis, and the responses were collapsed into two categories—"Not at all/Very little" and "Somewhat/A lot."

1. To what extent did you use sample Contribution essays provided by the instructor?
   Not at all   Very little   Somewhat   A lot

2. To what extent did you look at other texts as a sample for your own paper?
   Not at all   Very little   Somewhat   A lot

3. If you answered "yes" to the above two questions about samples, please

Figure 4. Survey protocol

The first two questions were analyzed in a quantitative analysis that compared the CGA and AA responses. The third question, the open-ended explanation for how students used models, was subject to the same purpose and strategy analysis as the process logs (see tables 2a & 2b).

Drafts, Instructor feedback, and Grades

While not the primary focus of this study, data collection also included student writing. At the end of the semester, the researcher accessed student drafts on all assignments, instructor feedback, and grades though each class's online course management platform. This data was used to supply contextual information to the analysis. For instance, in the early, more exploratory phase of analysis, drafts were analyzed to determine which students composed their contribution essay as an IMRD paper, which students conducted a case study, and which composed a theoretical discovery. This analysis helped the researcher explore potential groupings, but was ultimately determined to be inconclusive for this data set. Similarly, other factors like feedback and grades helped guide the initial analysis but do not play a direct role in the current findings.

Findings

CGA students were more likely to use models not provided by the instructor

Table 3 shows that CGA students were more likely to seek out model texts that were not provided by the instructor. Compared to AA students, almost a third more CGA students sought model texts beyond those provided by the instructor. In addition, CGA student were slightly more likely to rely on instructor-provided model texts. While these differences must be interpreted with caution, given the low number of AA responses[6], nevertheless these findings suggest the CGA curriculum increased the likelihood that students would use model texts as examples and that they would seek out additional models.

---

[6] The low response rate may have been due to two factors: 1) There were not as many AA courses running at the time the survey was issued, since most had been replaced with the CGA sequence; 2) Instructors who were teaching AA courses liked teaching them and may have perceived the survey as an attempt to further pressure a changeover.

Table 3. Percent of students who indicated using models "Somewhat" and "A lot" in survey?

	Instructor-provided models	Models not provided by instructor
CGA	72% (28)	72% (28)
AA	64% (7)	45% (5)

The increased use of non-instructor models is also reflected in CGA students' process logs. Three out of fifteen of times CGA mentioned models, they explicitly described using the very "research articles" they were studying for the content of their papers. For instance, one CGA student wrote, "I looked at other research papers and saw how those authors collected and analyzed qualitative data, and used that as a basis for my survey" (N-MV). In contrast, none of the AA students mentioned using a research paper as a model text.

One disappointing finding from the process logs was how little students mentioned models. The high usage of model texts reflected in the surveys is not reflected in the process logs. On average, CGA students mentioned models in only 1.3% of t-units and AA students mentioned models in 1.5%. Instead, students' logs generally focused the assignment sequence of the project, starting with finding sources and deciding on a topic, analyzing sources, drafting paper, peer review, and finalizing it for submission. Throughout this sequence, models were used at multiple points, but probably not as often as instructors might hope.

In Process Logs, CGA students were more fine-grained in their use of models, referring to specific features of the texts

Table 4 shows that students from CGA sections were three times more likely than AA students to use models to figure out specific writing tasks, such as compose an abstract or introduction, incorporate a graph or figure, In contrast, there were around four times more likely to use models for ambiguous or general tasks. Interestingly, students from both AA and CGA sections were equally likely to use models to organize or structure their writing. While organization could be construed as a kind of specific task, I analyzed it as a unique category because prior research has found that using models to figure out organizational patterns seems to be an intrinsic ability for student writers.

Table 4. The purposes that students mentioned in process logs for why they used model texts.

	To organize arguments	To perform other specific tasks	Purpose ambiguous or general
CGA	*5*	*9*	*2*
AA	*5*	*3*	*9*

While using models to perform specific tasks, students in CGA students were also more likely to attend to fine-grained genre conventions of their text.

> One of the samples […] included a bar graph that I felt added strongly to his paper. In addition, **his paper was of a similar genre to mine**, **so I drew some inspiration from that and decided to** make a bar graph of my own…" (Process log, CGA)

> I will read other thesis-driven papers so I can see how their abstracts are formatted, then write my own. […] I tried to sound like [Author's] abstract, **I ended up using some of the patterns found in the abstract**, such as starting the abstract with "This article examines…") (Process log, CGA)

> I looked at other research papers and **saw how those authors collected and analyzed qualitative data**, and **used that as a basis** for my survey (Process log, CGA)

Here we see CGA students use models to identify fine-grained purposes for using models, such as when N-AR identifies a "bar graph" in a paper that "was a similar genre to mine" or when N-AM uses examples to focus on "the final takeaway" of her figures.

Compared to AA students, CGA students discussed choices more often when using models
Table 5 shows students who had been taught the comparative genre analysis curriculum were unique in their ability to see models as offering "choices" and in their ability to attend to specific genre features represented in model texts. In contrast, the AA students either used models prescriptively or, in the case of two students, failed in their attempt to use a model.

Table 5. Students' strategies when using models

	Strategic choices	Imitation	Confusion
CGA	80% (12)	20% (3)	-
AA	-	89% (17)	10% (2)

Strategic choice. CGA students were unique in their use of models for strategic choices. When using models to inform organization, students in CGA sections were also unique in their ability to see models offering a "choice" of structures, while AA students did not mention choice at all when using models.

> My goals are to read the sample essay, **especially the one with IMRAD structure**, and think about the structure of my paper. [After doing this,] **I decided to** follow the IMRAD structure. However, unlike the structure of the sample essay, **I decided to** put syntheses at the beginning of the essay. (Process Log, CGA)

> I think my final structure would not explicitly follow the IMRD nor the problem-solution structure. To figure this out, I will consult all of the example papers we looked at in class and **examine the choice** of structures in the papers. (Process log, CGA)

> After looking at the sample papers that are much more creative structure-wise, I'm not sure if the writing style I'm used to would work. **I have options, but I'm not sure which one is the best and how I should choose among them.** (Process log, CGA)

Here we see CGA students using models to identify choices. This is evident when students "examine the choice of structures," "decided to follow the IMRAD structure" and recognize "I have options." It also appears that these students were not blindly following a set of "rules" for organizing their essays but rather thinking critically about the choices they had identified, such as when we see language like "unlike the [sample,] I decided to put syntheses at the beginning" and "I'm not sure which one is best." While this last excerpt suggests uncertainty among the student, I see this as a productive uncertainty that leads to an evaluative choice to decide which option is "best." This suggests that an ability to comparatively analyze genres gave students some agency over how they used the models.

The CGA students' focus on using models to make strategic choices is also reflected in students' open-ended responses on surveys.

> I looked at the basic structures of the sample papers as well as what aspects they had that were good things to put in a paper and **I transformed those aspects** and put them in my own paper. (Survey, CGA)

> I read through them, **used them as benchmarks** for what writing style I should use and how I should organize the paper. (Survey, CGA)

> I used the way they were formatted to **use it as a framework** for mine. (Survey, CGA)

Here we see CGA students using models to formulate a strategy. For instance, one student looks at "aspects" of the sample papers' structures and "transformed those aspects" to write her own paper; another uses the models' "style" as a "benchmark" for how to organize his own paper; and the third looks to the models' formatting "as a framework." These statements point to students explicitly describing how they adapted features from models to their own writing.

Imitation. In contrast to CGA students, most AA students used models uncritically. Table 5 shows the majority of AA students did not talk about genre or choice when using models. Instead, AA students signaled that the structures they saw in models were more imitative or prescriptive.

> I read through the sample contribution papers and they gave me a good idea about **how the paper organization works**. (Process log, AA)

> I read through the sample contribution papers and they gave me a good idea about **what the abstract is supposed to be about**. (Process log, AA)

> It helped to look at previous examples of contribution essays to get a sense of **what I should be trying to do** with my data and my sources. (Process log, AA)

Here we see AA students focusing only on one set of conventions when they identify "how the paper organization works," or "what the abstract is supposed to be," and "what I should be trying to do." While we cannot say for sure whether students were tacitly considering options, this suggests that the AA students' were not identifying alternative structure and choosing among them.

The language of choice also did not appear in AA students' open-ended responses on surveys. Instead, AA students mentioned looking at model texts but did not explicitly describe how they used those texts for their own writing, such as when one respondent stated, "[I looked at models to see] how they formatted their argument and flow of paper overall for synthesizing texts to the resolution" (AA, Survey).

Discussion

This study compared the effects that two different first-year writing curricula--one that taught comparative genre analysis and another teaching a more traditional argument analysis--had on students' strategies to use model texts to writing a source-based essay. Findings showed students who were taught Comparative Genre Analysis were more likely to use models to make strategic choices. For instance, we see evidence of adaptive rhetorical knowledge in one CGA student's ability to examine model texts to see whether they were of a "similar genre" to her own writing, or other students' ability to use models

to recognize choices. Such use of models has also been reflected in case studies where writers use models as a "gateway to unfamiliar genres" (Brent, 2012, p. 576). For instance, Brent's study of undergraduates learning new types of writing during an internship showed many of those students seeking out model texts, adapting pieces of those models for their own purposes, and in one case deciding to deviate from the standard model text. This kind of strategic use of models is a highly valuable skills that students can learn, given that model texts can be a key tool for learning to write in new contexts (Macbeth, 2010; Werner, 1989) and yet their features need to be adapted in light of new contexts and audiences (L. C. Johns, 1989; Winsor, 1996).

Despite the differences in how CGA and AA students used models, only a small number of students mentioned using models in their process logs, even though CGA students were also more likely to seek out additional texts as models for their own writing. On one hand, this is both a limitation of this study. On the other hand, the limited use of models suggests that writing instructors do more to explicitly scaffold the use of model texts into their students' writing processes.

That strategic use of models occurred in CGA and not AA sections suggests that this skill needs to be taught more explicitly as part of a writing curriculum. Evidence that students in the AA curriculum did not use models strategically supports findings that show simply having models available will not necessarily help students adapt to new genres unless those students have been taught how to use the models critically and strategically. Charney and Carlson (1995) showed, in a controlled study on the effect models had on undergraduate psychology students' ability to compose a methods section, that student who used models demonstrated higher quality texts, specifically on the dimension of organization. While Charney and Carlson (1995) suggest the availability of models can have positive effects on student writing ability, they did not address how explicit instruction in how to use models could affect performance. One study did investigate whether explicit instruction made a difference in how students used models (Abbuhl, 2011). In her quasi-experimental study, Abbuhl compared students who had received models to students who had received models plus explicit instruction in genre conventions. She found that, compared to the models-only group, explicit instruction in addition to models significantly improved students' ability to infer salient genre features and use them appropriately when composing an unfamiliar genre.

The findings also further support that student writers may be able to intuit how to use models to make organizational decisions. Organizational patterns are most readily visible for students using models, as suggested in Charney and Carlson (cf. Macbeth). Interestingly, in Charney and Carlson's between-groups comparison of how psychology students used models to compose a methods section, they concluded that organization was the only factor shown to improve when comparing students who used models and those who did not. Similarly, Macbeth found that when his students used models they "could not see its substance […] but they *could* see its organization" (44). This appears to be the case for the CGA and AA students as well. Perhaps organization was also highly visible for CGA and AA students, and thus using models for the purpose of organizing their own text was not affected by a genre- or argument-based curriculum.

Teaching Comparative Genre Analysis as part of an FYC curriculum may prepare students to use model texts to adapt rhetorical knowledge to new contexts. Adaptations of rhetorical knowledge seemed to occur as CGA students evaluated genre features and

considered how (or whether) specific features were appropriate to implement in their own writing. By considering what was or was not appropriate,, students appear to be thinking through how to adapt conventions from models, rather than assuming that those model texts provided a formula. This kind of thinking resembles the adaptive behaviors of other student writers. For instance, in Reiff and Bawarshi's (2011) study of "boundary crossers," we see students adapting their knowledge of an assigned writing by considering its similarity and difference to multiple other genres. Or, in Russell and Yañez's (2003) case study, we see the adaptive writer Beth actively considering how history writing is similar and dissimilar to journalism. Both of these cases share a kind of comparative analysis that the CGA students undertook when evaluating models by comparing features of those models to their own writing task. While this study is too small to raise any definite conclusions, the evidence here does point to an interesting question: why might have the CGA sections promoted strategic use of models and can we replicate these effects in other classrooms?

One reason why the CGA curriculum may have helped students use models strategically could be attributed to the emphasis on choice that was built into the final essay assignment. In the Contribution essay prompt assigned in CGA sections, instructors included a section that encouraged students to choose whether it would be more appropriate to compose an IMRAD or a "thesis-driven" macro-structure structure for their paper. Choosing a macro-structure may be a particularly important choice given the tight-knit relationship between organizational structures and "ways of doing, thinking, and being" in a discipline (Carter, 2007). This emphasis on choice of structure may have primed students to think more critically about why they were using one set of conventions over another and perhaps seek out other resources, such as model texts, to inform their decision. However, that is not to say that simply prompting students to choose a macro-structure for their text is enough to prime strategic use of models. Rather, it is more likely that students were primed to use models to analyze rhetorical choices after having just recently done this type of analysis in the CGA assignment. There is much more we should investigate about how prompting students to make informed choices engages their ability to think critically about analyzing new rhetorical situations.

In addition the factor of choice, another unique features of the CGA curriculum is its emphasis on teaching genre through comparative analysis of one familiar and one unfamiliar genre. In their argument for teaching Comparative Genre Analysis, Wolfe et al. (2014) show how starting with a genre familiar to readers (they use literary analysis) can provide a foundation that makes it easier to identify changes and similarities in less familiar genres. This comparison between more and less familiar genres was established in the CGA by instructing students to distinguish between "expert" and "non-expert" texts. By making this distinction, and allowing students to establish a foundation by analyzing more familiar "non-expert" texts, the CGA assignment may have better equipped students to see rhetorical features as audience-specific choices and establishing an assumption that there is a lot to learn from comparing variations in text features and rhetorical contexts.

A third factor that needs to be examined further is the role played by the heuristics students are taught as preparation for adapting to new contexts. Since the CGA curriculum taught heuristics that were more focused on analyzing situational and textual features, that may have helped prepare students to analyzing those factors in model texts.

The Argument Analysis heuristics may have been less effective in preparing students to analyze generic features of text, while being more effective in enhancing their ability to make sense of arguments in the models. Teaching a set of heuristics to help students better analyze writing also occurs in other pedagogies that have been proposed. For instance, Yancey et al.'s (2014) Teach for Transfer curriculum proposes teaching students terms like "discourse community," "genre," and "audience" as a way to prepare them to analyze unfamiliar writing contexts. In addition, Bawarshi and Reiff (2010) propose teaching students terms like "scene," and "situation" to prepare them to make sense of unfamiliar genres. Evidence from this study suggests that these heuristic frameworks would have different effects on students' ability to adapt to new contexts. Future research needs to investigate how different heuristic frameworks taught in the writing classroom influence how (and how well) students use model texts to make decisions in their own writing.

It is also possible that CGA students' were further encouraged to view their writing in terms of genre as an effect of the research proposal assignment. By asking students to write a proposal, they may have been cued to think of their research project as having a more specific audience and purpose than students who were more focused on synthesizing arguments.

References

Abbuhl, R. (2011). Using models in writing instruction: A comparison with native and nonnative speakers of English. *SAGE Open*, *1*(3), 2158244011426295.

Bawarshi, A. S., & Jo Reiff, M. (2010). *Genre: An introduction to history, theoory, research, and pedagogy*. West Lafayette, Ind.: Parlor Press.

Boettger, R. K. (2014). Explicitly Teaching Five Technical Genres to English First-Language Adults in a Multi-Major Technical Writing Course. *Journal of Writing Research*, *6*(1), 29–59. https://doi.org/10.17239/jowr-2014.06.01.2

Brent, D. (2012). Crossing boundaries: Co-op students relearning to write. *College Composition and Communication*, *63*(4), 558–592.

Carter, M. (2007). Ways of Knowing, Doing and Writing in the Disciplines. *College Composition and Communication*, *58*(3), 385.

Carter, M., Ferzli, M., & Wiebe, E. (2004). Teaching genre to English first-language adults: A study of the laboratory report. *Research in the Teaching of English*, 395–419.

Carter, M., Ferzli, M., & Wiebe, E. N. (2007). Writing to Learn by Learning to Write in the Disciplines. *Journal of Business and Technical Communication*, *21*(3), 278–302. https://doi.org/10.1177/1050651907300466

Charney, D., & Carlson, R. (1995). Learning to Write in a Genre: What Student Writers Take from Model Texts. *Research in the Teaching of English*, *29*, 88–125.

Charney, D. H., & Neuwirth, C. M. (2006). *Having your say: Reading and writing public arguments*. New york: Pearson Longman.

Devitt, A. (2009). Teaching Critical Genre Awareness. In C. Bazerman, A. Bonini, & D. Figueiredo (Eds.), *Genre in a Changing World* (pp. 337–351). WAC Clearinghouse. Retrieved from http://mjreiff.com/uploads/2/9/1/7/2917319/devitt.pdf

Duffy, T. M., Post, T., & Smith, G. (1987). Technical manual production: An examination of five systems. *Written Communication*, *4*(4), 370–393.

Eisenhart, C., & Johnstone, B. (2008). Discourse analysis and rhetorical studies. In B. Johnstone & C. Eisenhart (Eds.), *Rhetoric in detail: discourse analyses of rhetorical talk and text* (pp. 3–24). Amsterdam ; Philadelphia: John Benjamins.

Elbow, P. (1998). Reflections on academic discourse: How it relates to freshmen and colleagues. In V. Zamel & R. Spack (Eds.), *Negotiating academic literacies* (pp. 183–195). Mahweh, NJ: Erlbaum.

Flowerdew, J. (2015). John Swales's approach to pedagogy in Genre Analysis: A perspective from 25 years on. *Journal of English for Academic Purposes*, *19*, 102–112. https://doi.org/10.1016/j.jeap.2015.02.003

Johns, A. M. (2015). Moving on from Genre Analysis. *Journal of English for Academic Purposes*, *19*, 113–124. https://doi.org/10.1016/j.jeap.2015.04.005

Johns, L. C. (1989). The file cabinet has a sex life: Insights of a professional writing consultant. In *Worlds of Writing: Tracking and Learning in the Discourse Communities of Work* (pp. 145–178). New York: Random House.

Macbeth, K. P. (2010). Deliberate false provisions: The use and usefulness of models in learning academic writing. *Journal of Second Language Writing*, *19*(1), 33–48. https://doi.org/10.1016/j.jslw.2009.08.002

McCampbell, J. F. (1966). Using Models for Improving Composition. *The English Journal*, *55*(6), 772. https://doi.org/10.2307/811516

Moffett, J. (1982). Writing, Inner Speech, and Meditation. *College English*, *44*(3), 231. https://doi.org/10.2307/377011

Reiff, M. J., & Bawarshi, A. (2011). Tracing Discursive Resources: How Students Use Prior Genre Knowledge to Negotiate New Writing Contexts in First-Year Composition. *Written Communication*, *28*(3), 312–337. https://doi.org/10.1177/0741088311410183

Russell, D. R., & Yanez, A. (2003). "Big picture people rarely become historians": Genre systems and the contradictions of general education. In C. Bazerman & D. R. Russell (Eds.), *Writing Selves/Writing Societies*. WAC Clearinghouse.

Sargeant, D. (2014). Using Model Essays to Create Good Writers. In W. Szubko-Sitarek, Ł. Salski, & P. Stalmaszczyk (Eds.), *Language Learning, Discourse and Communication* (pp. 23–36). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-00419-8_2

Smagorinsky, P. (1998). How reading models essays affects writers. In J. Irwin & M. A. Doyle (Eds.), *Reading/writing connections: Learning from research* (pp. 160–176). Newark, DE: International Reading Association.

Stolarek, E. A. (1994). Prose modeling and metacognition: The effect of modeling on developing a metacognitive stance toward writing. *Research in the Teaching of English*, 154–174.

Swales, J. M. (1990). *Genre Analysis: English in academic and research settings*. New York: Cambridge University Press.

Werner, W. W. (1989). Models and the teaching of technical writing. *Journal of Technical Writing and Communication*, *19*(1), 69–81.

Wilder, L., & Wolfe, J. (2009). Sharing the Tacit Rhetorical Knowledge of the Literary Scholar: The Effects of Making Disciplinary Conventions Explicit in Undergraduate Writing about Literature Courses. *Research in the Teaching of English*, *44*(2), 170–209.

Winsor, D. A. (1996). *Wrting like an engineer: A rhetorical education*. Routledge.

Wolfe, J., Olson, B., & Wilder, L. (2014). Knowing What We Know about Writing in the Disciplines: A New Approach to Teaching for Transfer in FYC. *The WAC Journal*, *25*, 42.

Yancey, K., Roberston, L., & Taczak, K. (2014). *Writing across contexts: Transfer, composition, and sites of writing* (1st ed.). Utah State UP.

CHAPTER 5

**Re-thinking the role of writing processes in students' ability
to adapt to unfamiliar rhetorical situations**

It has been over a decade since writing transfer researchers first proposed shifting writing curricula from teaching students to write to teaching them about writing. These pedagogical developments have largely focused on teaching students a vocabulary for analyzing genres. For instance, Downs and Wardle's (2007) Writing about Writing pedagogy makes the content of writing courses focus on Writing Studies research. More recently, Yancey et al.'s (2014) Teach for Transfer pedagogy propose that, rather than learning about existing theories of writing, students should develop their own theory of writing—an approach they call "teaching for transfer." While these are the two most popular approaches, there are others based around a similar assumption: a vocabulary for talking about writing can help students adapt what they know to new types of writing (for an overview of other approaches, see Yancey et al. 44).

As we have seen throughout this dissertation, teaching students about writing is not always sufficient to ensure students will successfully adapt to new writing contexts. In addition to knowledge about writing, writers must be equipped with self-regulation strategies that help them persist with and overcome the problems they encounter in new writing situations.

The first two studies addressed what self-regulation strategies we need to teach as part of writing about writing curriculum. Through these studies we saw that students' knowledge about writing must also be integrated with strategies for regulating writing processes. The third tested out an assignment designed to teach students about writing in order to measure what effects that assignment had on the self-regulation strategies students used on subsequent writing.

The results of these studies offer researchers a new of understanding of how writing strategies for writing factor into students' ability to adapt to unfamiliar genres. Understanding these strategies also helps instructors learn how to teach them to students.

Summary of Studies

The first study, which looked at successful and unsuccessful writers composing in a new genre, found successful students demonstrated more productive orientations to problems. In addition, evidence suggests productive orientations to problems also correlated with successful writers developing more sophisticated knowledge about the genre they were writing. Productive orientations involved writers shifting their attention among their goals, problems, and accomplishments. For instance, when encountering a problem, successful writers reacted by re-framing their problem as a new goal. In addition, successful writers reacted to problems by creating a positive narrative of progress and talking about a new problem as a learning experience. In contrast, less successful writers reacted to rhetorical problems by either ignoring them or focusing exclusively on venting their frustrations with the problem. In light of these differences, I

argued that teaching these strategies to students would help them transfer a more productive orientation to the problems they encounter on subsequent writing tasks.

Whereas study one showed that students need a productive orientation to problems, study two, which followed one graduate student during his struggle through the first four semesters of graduate school, showed that students also need to frame problems with genre conventions appropriately. Problem framing fell short for Eric in the early part of his graduate program. As he struggled to meet program expectations Eric demonstrated a limited framing of the genres he was writing by setting goals that framed genre conventions as a product. Despite some productive responses, Eric got caught up on performing the assigned genres, and he failed to see these conventions as part of an inventional process. It was only after he recognized genre conventions as part of an inventional process that Eric began to achieve a higher degree of success in the program.

Study two provides evidence in support of concerns that a too explicit focus on genre and conventions as products might limit students' development of flexible writing knowledge. Explicit instruction may not be sufficient if it leads students to focus on genre as a product. To help students move beyond framing genre conventions as a product, instructors should introduce students to strategies that can help them use genre moves as part of a self-regulatory process. For instance, students might be taught to watch out for setting goals that only focus on producing genre features, and to complicate these goals, students might be taught to "rival" (Flower 2000) them by inventing multiple, alternative ways of composing specific genre moves. Such instruction may have helped Eric if he knew that his goals for producing genre features were perhaps too simplistic, and that a change in strategy could offer a more productive approach.

Study three takes a step back from self-regulation strategies associated with adaptive transfer to measure how a curriculum grounded in transfer research effects students' processes for composing subsequent research writing. One curriculum designed to teach genre as a problem-solving process is Comparative Genre Analysis (CGA). Wolfe et al. (2014) have hypothesized that if CGA was successful, we would see some evidence of students using genre knowledge to inform a problem-solving process. For instance, Wolfe et al (2014) argue that students taught CGA will demonstrate more sophisticated strategies for using model texts to inform their writing when composing unfamiliar genres. This hypothesis was tested in the third study, which looked for evidence that genre analysis taught in CGA showed up in the self-regulation strategies students demonstrated in their process logs and survey responses. While CGA students did use models effectively, they were making far less use of models than instructors might hope for. Nevertheless, the findings provided evidence that CGA was effective in inspiring this problem-solving approach because students were looking at more models, seeking models independently from the instructor, demonstrating more fine-grained use of models and talking about models more in terms of choice.

Implications and Conclusions

The findings from study three showed that CGA can be a good starting point for teaching students to get around the strict imitation of genre conventions and make more strategic choices about how to implement genre knowledge in their own writing. One reason why CGA works so well could be the way a comparison of two different genres highlights how rhetorical features change in relation to audience and situation. Making

these changes apparent could help students recognize genre features as choices or decisions that writers have made rather than prescriptive formulas to be followed.

However, teaching genre analysis alone may not be sufficient to fully equip students with a robust set of strategies for using genre knowledge as part of a problem-solving process. While CGA students did use models more strategically, there was no indication that other problem-solving strategies fundamentally differed from the AA students. Granted, the nature of the assignment was one that was relatively familiar, thus there may have been less need for problem-solving in this context. Or, it may be that students also need more help and more scaffolding to be equipped to implement more productive self-regulation strategies. Despite its effect on a small number of students who used models sophisticatedly, students' awareness of forms and features by itself does not seem to develop more diverse strategies for solving difficult problems.

As studies one and two suggest, one way to help students gain these more sophisticated views of their writing processes is to teach them productive self-regulation strategies. For starters, instructors can explicitly teach self-regulation as a threshold concept. Threshold concepts are concepts that transform how students understand and interact with a subject area. Adler-Kassner et al. (2012) have argued that concepts like genre, purpose, and audience help transform the way students understand and interact with writing, and they state that teaching these concepts as part of a writing curriculum will enable students to become better writers. However, the threshold concepts they name do not address writing processes. Without this vocabulary, students do not have a way to develop their understanding of the strategies involved in effective writing. Self-regulation theory offers a way to remedy this. This kind of instruction can help learners engage with problems in multiple ways by expanding students' repertoires and awareness of self-regulation strategies they use when writing.

Instructors could explicitly teach students to analyze examples of self-regulation strategies and evaluate how those strategies might correlate with more and less successful processes. Appendix A presents a handout that introduces examples of two strategies associated with successful writers and guides students through comparing and contrasting these strategies as exemplified by the writers from Study 1. These examples could be used to prompt discussion about self-regulation and explicitly teach students to try out productive problem-orientation strategies. These questions, along with a discussion about self-regulation, could serve as the foundation for a writing workshop in which students use productive strategies to work on a draft in progress.

For instructors willing to try out a more involved intervention, we could assign students to keep a process log as part of an essay assignment, and then build in moments for students to use a self-regulation framework to reflect on interesting entries from their logs. Appendix B & C introduces a prompt instructors could use to assign students to complete a log as part of their writing process. The prompt provides procedures for students to keep a log, and it shows an example of what log entries might look like. By keeping logs, students can start to self-evaluate their own writing strategies and compare their strategies with other classmates working on the same assignment. To further scaffold students toward self-evaluating their strategies, Appendix D offers an instructional handout that instructors could use to introduce students to concepts like goal-setting, self-efficacy, problem-solving, and self-reflection in order to help students

reflect on their process logs to identify how they are self-regulating their writing processes.

In addition to teaching problem-orientation strategies, study two suggests a way instructors could also teach students productive ways to frame genre conventions as part of their writing process. To teach this skill, instructors could supplement explicit instruction in genre conventions with examples of writers putting those genre conventions into practice as part of their process rather than an end product. Asking students to keep and reflect on a log should also help them think more critically about how they are framing genre conventions.

Lastly, study three suggests a pedagogical application for teaching students to use model texts more strategically. Instructors could also show students how writers use models in their own writing processes. Appendix E introduces students to strategies for using models and shows examples designed to help students see the differences between using models strategically for specific purposes and using genres ambiguously. Instructors could use this handout as a workshop in class to help students seek out a diverse range of models and reflect on how they might use them in their own writing.

We would expect these interventions to help students engage in more robust and successful forms of adaptive transfer. However, this expectation is worth testing in order to further refine the methods proposed above. One place we might find evidence is in students' process logs. Would more students adopt productive self-regulation strategies as a result of being introduced to self-regulation and explicitly taught differences in writers' strategies? In addition, we might look for evidence that teaching self-regulation had an effect on students' ability to reflect critically on the type of writing they have just completed.

Future research could also test how different instruction delivery methods effect student learning of strategies. Would showing students a transcript be enough to teach these strategic behaviors, or would we want to develop videos, or something more interactive? For instance, Rijlaarsdam et al. (2008) demonstrate how students learn to construct audience expectations by observing a group of readers as they collectively evaluated a text. This approach could be used to teach self-regulation by allowing students to observe the SR strategies of writers as they negotiate problems.

Students who use self-regulation strategies to productively engage with problems may also be more equipped to identify when they are taking up disruptive dispositions, such as "answer-getting," and modify their behaviors to help cultivate more productive, "problem-exploring" dispositions (Wardle, 2012). It seems intuitive that writers whose self-regulation strategies enable more productive, deeper engagement with problems-- such as evidenced in using problems to set goals, or framing problems in terms of solutions--can, over time, influence a students' mindset more generally. For instance, if a struggling writer like Allison deliberately avoids treating problems as dead-ends and instead adopts a strategy of using problems to set new goals, this practice may help her reassess or experience with problems encountered in writing and create a habit of exploring problems or what Dweck (2006) might call a growth mindset. Whether or not it is possible for students to change dispositions--especially within the span of a semester or two--it is likely that developing a repertoire of self-regulation strategies can students better recognize and manage disruptive dispositions.

Last but not least, these studies suggest a theoretical contribution to writing transfer research. The evidence points to self-regulation strategies are a key factor in writers' development of genre awareness and knowledge transfer. The writers with more productive problem-solving strategies described their experience writing in metaphors about the genre, comparing it to a pyramid and describing it in specialized terms that had been taught to them to describe the genre features of their writing. In contrast, the writers who demonstrated unproductive problem-solving strategies did not develop knowledge about the genre, but instead talked about their experience as a chronological sequence of events. While it is unclear whether self-regulation strategies were a factor, it is worth further investigation. Future research should further investigate how instruction in self-regulation factors into writers' ability to develop awareness of unfamiliar genres. Do writers who are taught strategies for orienting and framing problems productively also demonstrate more high road transfer on new writing tasks compared to writers who have not been taught these strategies?

To continue developing our theory of writing transfer, future research should find out more about how self-regulation strategies factor into writing transfer. One step to doing so could be to use self-regulation theory to develop a more robust conceptualization of writing transfer. In addition, we need to continue measuring how various pedagogical interventions, like those that teach genre, affect students' strategies for transferring rhetorical knowledge and practices.

Incorporating self-regulation as part of writing transfer offers a new step forward in this emerging area of research. In the past few decades, research on writing transfer has made great strides in figuring out how instructors can equip students to adapt to new rhetorical contexts--by developing curricula that uses the expertise of Writing Studies to teach students how to become effective writing researchers themselves. Looking ahead, it seems like a natural progression to move beyond the theories of genre that have informed transfer research and also incorporate our understanding of writing processes into our notions of transfer. Doing so can help instructors teach students not only how to become aware of unfamiliar writing situations but also what to do in order to leverage that awareness effectively.

Appendix A. Handout for teaching productive problem-orientation strategies

Re-thinking Problems as Part of your Writing Process

All writers encounter problems. You may have had trouble deciding how to start a project, develop content, find evidence, structure your argument, revise in response to critical feedback, and so on. You're not the only one. Even highly experienced writers encounter these issues and more!

But problems can be productive! The difference between experienced and inexperienced writers is that experienced writers know how to react to problems productively. While inexperienced writers tend to see problems as a sign of failure, many experienced writers have learned to use problems as an opportunity to make progress.

1. Use problems as opportunities rather than roadblocks

Avoid glossing over problems	Problems can inspire new goals
Leslie misses an opportunity to develop her project by glossing over an organizational issue	*When Kara struggled to start her paper, she developed alternative, more manageable goals.*
"When I was writing, I ran into the problem of not knowing how to organize the information in my notes. But I ended up just copying and pasting key info." (Leslie)	"My goal was to write a draft, but I just did not know how to start. So I decided that **rather than set out to write the whole draft, I should just write what I am familiar with right now, then go back and develop it further**." (Kara)

Try it out: To orient to problems as opportunities, think through the following questions:

1. What is the goal you're trying to accomplish at this point in the project?

2. What is the most difficult problem you are encountering?

3. In response to this problem, what is one alternative, smaller goal you can pursue that will help you move forward?

2. Respond to problems by creating a narrative of progress

Avoid focusing merely on frustration	Create a narrative of progress
When Allison struggled to start her paper, she did <u>not</u> set more manageable goals.	*When trying to structure his paper, Connor…*
"I'm having a really hard time figuring out what I should focus on in my paper. It seems that everything has been done already. **It's really frustrating**." (Allison)	"I just do not feel like [I have] good writing at this point. **But anyways what's a positive note?** So I jumped around in the writing of the paper, and actually ended up […] getting the outline for my prototype down as well as the methods for studying if the workshop works. So that's good." (Connor)

Try it out: Despite the problems you're facing, describe at least one thing that you have accomplished so far?

Appendix B. Prompt for assigning process log (p. 1)

Keeping a Process Log

Overview

To receive 1-3% extra credit on your Contribution paper, you must complete the process log assignment. A process log is like a journal in which you reflect on your writing activity as you're writing. To keep a process log, you should compose an entry by responding to the questions below each time you work on the Contribution paper. You will need to submit a log for each time you work in order to receive extra credit.

Procedures

When you start working on the Contribution paper use the following steps:

1. Open up a file in which you keep your log.
2. Copy and paste into your file the questions below (including the date and time).
3. Type up your response to question #1 ("What are your goals?") before you start working on your paper.
4. After you've finished working for the day, type of your responses to the remaining questions

An example of a process log entry can be found on the back of this sheet.

After you've completed entries for each time you worked on the paper, you'll submit your process log document along with your final Contribution Paper. Note: to receive extra credit you must complete logs for each time you work on your paper (amount of extra credit depends on the strength of your log entries).

Process Log

Date/Time:

Before you start working on your project

1. What are you goals for this session?

After you finish working:

2. On a scale of 1-5, how fully did you accomplish your goals in this session? Explain your answer.

3. When pursuing these goals, what problems did you encounter?

4. What helped or hindered you in addressing these problems?

5. What will you do next?

Appendix C. Prompt for assigning process log (p. 2)

Examples of a Writing Process Log Entry

Date: 12/9/16 / 3:00pm

1. What are your goals for this session?

It's December 9th, at almost 3 o'clock. My goal is to outline, and to look at what elements I'll need to address in the literature review so that I lead up accurately, completely, to my methodology. So I'd like to list out those items. And to figure out what the main gaps are in research so that I can get going on them.

2. How well did you accomplish your goals?

This is after I finished my session: As I worked on my paper, my goal was to get some ideas down for what should be in the literature review. And I did that, and I did indeed find some gaps to fill in. But I also got a little bit sidetracked with the methodology outline I made and felt that before I go too much further I would like some feedback on it. And so I prepared something to send to Joanna, um, with that to see if I'm headed in a good direction.

3. What problems did you encounter?

One problem I had, I guess there are so many things. Going back to the literature review, there are so many things that I could include, it is hard to know how I'm going to keep my scope narrowed.

4. What helped or hindered you in addressing that problem?

To help in addressing that problem, I read through my previous annotations and highlighted them and tried to connect some ideas. And I also thought of the literature directly in terms of the methodology that I was just proposing. So that was useful. I guess I still do not feel ready to actually start writing the literature review, but I do not know if I ever feel ready to start writing a paper."

4. What alternatives did you consider?

I think an alternative to my outline. I guess an alternative could be just to list every possible thing I could talk about under the general perspectives of my literature review. And so to list all the possible ideas and then narrow it down to the ones I think would be the most useful. That's an alternative that I'm considering at this moment.

5. What will you do next?

Next? Well I would like to get peer review feedback. But my very next step is to branch out my sources a little bit to any books or resources on directly about public speaking, and see what they have to say about my topic, because I have not included any of that and I think it will be important.

Appendix D. Handout for teaching self-regulation and prompting reflection on process log entries

---

Using self-regulation as a framework to analyze writing strategies

As writers, we have habits for how we write. For instance, some writers might decide they need to think very carefully about their goals before putting down a word. Others might start drafting as a means to figure out what their goals are. These habits can become natural and intuitive.

However, it is possible to develop unproductive habits. Our habits might be inefficient, or they might not work for particular situations. For instance, we might not think to spend a lot of time figuring out our goals for writing if it's just an email. But we might want to change that habit

How do you decide if your habits are productive or not? To reflect on our habits for writing, we can use

_____

Self-regulation offers a set of terms we can use to analyze our writing strategies. When writers self-regulate, they consciously or intuitively control their process for writing a text. We can visualize self-regulation by looking at how writers set goals, carry out practices, and evaluate accomplishments.

- **Goal-setting**: What do you want to accomplish? Why are you motivated?
- **Practices**: What will you do to accomplish your goals and fulfill motives?
- **Self-evaluation**: How are you currently doing? In response, how might you react?

_____

Use the terms of self-regulation to analyze these writers' strategies:

Writer A says: "I don't have all the research completed, so I have gotten down a few paragraphs of a basic idea which I can expand further when other sources are found. I have to look at outside resources, then look up the symptoms from a medical website. Cite that information, probably another 4-6 hours left of research."

Self-evaluation
Goal-setting
Practices

1. **Can you describe what this writer seems to be doing?**
   e.g. Writer A seems to be sorting out what pieces of her project seem to be complete and what pieces still need work. Her self-evaluation helps her establish what she has done, and her goals seem to build on the progress she has evaluated.

2. **Does this writer's self-regulation seem to be productive or disruptive? Or, what advice/encouragement would you offer this writer?**

Homework:

Apply the terms of self-regulation as a starting point to analyze the habits revealed in your writing process log.
- Find at least two log entries that are most interesting to you.
- For each entry describe what you seem to be doing
- In a second paragraph discuss whether this strategy seems productive or disruptive, and/or discuss what advice you would give yourself moving forward.

Appendix E. Handout for teaching strategic use of model texts

<div style="border:1px solid black">

Strategies for using model texts to learn about genres

Models can be helpful if they are used strategically. Writers often examine examples similar to what they are writing in order to learn what they should and should not do. But sometimes model texts can lead writers astray when they are used simply as a formula for writing. To avoid this, try out the following strategies:

1. Be aware of how your model text(s) is similar or different to your own

- **Audience:** Who is most likely to read the model text you're using?
- **Purpose:** For what purposes are readers using the text, and how is it set up to help readers achieve those purposes?
- **Comparison:** How are these features similar to or different from your own situation?

2. Identify fine-grained purposes for using model texts

Move beyond ambiguity

eatures?

3. How will you use what you learn for your own project?

</div>

References

Adler-Kassner, L., Majewski, J., & Koshnick, D. (2012). The Value of Troublesome Knowledge: Transfer and Threshold Concepts in Writing and History. In *Composition Forum* (Vol. 26). ERIC. Retrieved from http://eric.ed.gov/?id=EJ985816

Downs, D., & Wardle, E. (2007). Teaching about writing, righting misconceptions:(Re) envisioning" first-year composition" as" Introduction to Writing Studies". *College Composition and Communication*, 552–584.

Rijlaarsdam, G. C. W., Braaksma, M. A. H., Couzijn, M. J., Janssen, T. M., Raedts, M., Van Steendam, E., … Van den Bergh, H. (2008). Observation of peers in learning to write: Practice and research. *Journal of Writing Research*, *1*, 53–83.

Wolfe, J., Olson, B., & Wilder, L. (2014). Knowing What We Know about Writing in the Disciplines: A New Approach to Teaching for Transfer in FYC. *The WAC Journal*, *25*, 42.

Yancey, K., Robertson, L., & Taczak, K. (2014). *Writing across contexts: Transfer, composition, and sites of writing* (1st ed.). Utah State UP.