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The development of undergraduate students' facility with disciplinary discourses through collaboration between faculty members and librarians

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University of Iowa

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THE DEVELOPMENT OF UNDERGRADUATE STUDENTS' FACILITY WITH
DISCIPLINARY DISCOURSES THROUGH COLLABORATION BETWEEN
FACULTY MEMBERS AND LIBRARIANS

by

Michelle Holschuh Simmons

An Abstract

Of a thesis submitted in partial fulfillment
of the requirements for the Doctor of
Philosophy degree in Teaching and Learning
in the Graduate College of
The University of Iowa

July 2007

Thesis Supervisor: Associate Professor Carolyn Colvin

ABSTRACT

In this study, I examine the ways in which undergraduate students acquire the discourses of their chosen major. In particular, I focus on the complementary contributions of faculty members and academic librarians in students' acquisition of disciplinary discourses. Grounded in genre theory and Gee's (1996) notion of primary and secondary discourses, the study highlights the complex processes that students undergo to acquire and internalize the discourse of an academic discipline.

Using a qualitative case-study approach, I consider the interrelated experiences of five undergraduate students, three faculty members, and two librarians at a small liberal arts college in the Midwest. Data sources include students' written assignments gathered from their major coursework throughout their college careers; interviews with student participants, faculty members, and librarians; observational notes and transcripts of lectures in courses taught by professors from four courses; and course artifacts, including course syllabi and assignment sheets from the four courses.

Data from this study highlight the complex matrix of influences undergraduate students experience as they acquire the specialized language of an academic discipline. My data provide insight into the ways in which some students are positioned to take up disciplinary discourses with ease while other students struggle to develop the same level of acquisition and academic fluency. I bring to light the instructional and institutional practices that facilitate student learning and document those instances where instructional opportunities were missed and where unwarranted assumptions compromised student learning. I conclude this study with series of recommendations, most notably, a greater participation by academic librarians in order to enhance the acquisition of disciplinary

discourses for undergraduate students. Further, my data suggest that collaborative opportunities between and among faculty members and academic librarians are likely to enhance the effective teaching of disciplinary discourses. Because of librarians' role as simultaneous insiders and outsiders to the academic disciplines, they are uniquely well-positioned to assist students in acquiring the disciplinary discourses. This dissertation suggests that by making visible the cultural expectations and practices of academia, faculty members and librarians can collaborate to assist undergraduate students gain entry into the academic discourse community.

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Graduate College
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CERTIFICATE OF APPROVAL

PH.D. THESIS

This is to certify that the Ph.D. thesis of

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To my beloved husband Bob

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CHAPTER ONE: INTRODUCTION

In my years as an academic librarian at a liberal arts college, students often would stop in my office and express their frustration with a particular class. They would explain their dissatisfaction with the class by exclaiming that their professor simply did not like them or the way they wrote papers. When I probed further, I often learned that these were situations in which the student was accustomed to feeling successful in one academic discipline and had just begun a class in a new and unfamiliar academic discipline. This situation perhaps is more acutely experienced by students in liberal arts programs in which they are required to take courses in a broad range of disciplines in addition to the more specialized courses of their chosen discipline; therefore, students are repeatedly in the situation of being expected to perform academically in an unfamiliar academic discipline. These recurring interactions with students drew me to ponder how students learn the ways of being in each disciplinary culture that they encounter as they move through their undergraduate years.

A major feat that students must accomplish in these undergraduate years is to learn the discourse of their chosen discipline or major and to learn the discourse of their other courses well enough to be successful as they move from one class to another. Disciplinary discourse includes the ways that members of that particular discourse community write, read, speak, and research, as well as the assumptions that they make and the epistemologies with which they craft their arguments (Bartholomae, 1985; Elmborg, 2003; Grafstein, 2002). The undergraduate academic experience is one in which students begin to learn both the domain content and the disciplinary discourse or rhetorical processes of their chosen field (Geisler, 1994). Between domain content and

rhetorical processes, most often the domain content receives the bulk of instructional time in the typical undergraduate curriculum in the United States, even though students often may struggle to learn the tacitly communicated rhetorical processes, as evidenced by the numerous students who came to my office in frustration. In a typical undergraduate class, the majority of instructional time is spent on foundational concepts in that particular academic area, while the “how” of the discipline is often left unspoken and expected to be absorbed by the students without direct instruction.

Proponents of genre theory assert that making explicit the conventions of a particular discourse allows for students to learn these conventions and thereby gain entry to that discourse community (Cope & Kalantzis, 1993b; Kress, 1999). This school of thought has its roots in Bakhtin’s work on speech genres (Bakhtin, Voloshinov, & Medvedev, 1994) and in systemic functional linguistics, and more specifically on the work of Michael Halliday, who proposed a “systematic relationship between the social environment . . . and the functional organization of language” (Halliday & Hasan, 1985). It is this social environment surrounding the academic discipline that is often neglected in the teaching of undergraduate students. This social environment would include all of the conventions and practices of a particular discipline’s culture that insiders enact as a demonstration of their insider status. Examining how students learn the social and rhetorical milieux of their disciplines can facilitate our understanding of students’ acculturation and help to assist students who are struggling with the movement from one disciplinary culture to another.

The Role of Faculty Members

The primary conveyers of disciplinary practices and communicative patterns to undergraduate students in a typical college environment today are likely to be their professors. Being members of the discourse community themselves, these faculty members model scholarly habits of the mind and ways of thinking when they communicate with students both inside and outside of class. The ways that these professors frame scholarly questions to be pursued, the methodologies that they employ in pursuit of answers to these questions, the literature they cite to support their assertions when answering these questions, and the styles of expression when presenting their answers to these questions all comprise the disciplinary culture that professors communicate to students.

However, even though faculty members tacitly communicate disciplinary ways to their students, frequently the domain-specific rhetorical processes are seen by the faculty members within the discipline as the “normal” or “natural” or “correct” way of writing, reading, or researching, and they expect their undergraduate students to be able to learn and adopt these ways of communicating without explicit instruction. As scholars progress in a discipline to and beyond the doctoral degree, specialization of knowledge is often the desired objective (Becher & Huber, 1990). Typically, faculty members teaching undergraduates have an undergraduate degree, a master’s degree, and a doctoral degree all in the same discipline. However, when these scholars teach undergraduate students who typically begin college with very limited knowledge of any one discipline, the faculty members’ assumptions about what students should know and be able to do

may be inaccurate. Because faculty members in a discipline are immersed in the discourse of one discipline, it can be difficult for them to see (and explain to students) how this discourse is different from other fields' discourses and how students can negotiate the language practices of their chosen discipline. While clearly faculty members' level of specialization is advantageous for depth of knowledge, this prodigious focused knowledge can hinder the ability to make visible and explain to undergraduate students the rhetorical practices that have become inseparable from that of the faculty members' own identities and ways of communicating.

Currently undergraduate education is largely a solitary endeavor, with the onus of responsibility for teaching largely on the college professor in isolation. This situation might cause one to pose several questions: While undoubtedly professors do influence students in their acquisition of disciplinary language, how might the professors be more deliberate and intentional in their transmission of a scholarly culture? What specific classroom practices do students perceive as the ways that they learn about their chosen discipline? Who or what else in a college student's daily life contributes to their acquisition of disciplinary language?

The Role of Librarians

One academic entity that is taking on a greater instructional role in students' lives on many college campuses is the library. Once seen primarily as storerooms of books, academic libraries have begun to transform in the last thirty years into centers for teaching and learning, most notably since the proliferation of information in myriad ever-changing electronic formats (Grassian & Kaplowitz, 2001). One of the earliest pioneers of the concept of a teaching library was Patricia Knapp with her Monteith Library

College Project at Wayne State University in the early 1960's in which she envisioned the college experience as one of a series of independent research discoveries facilitated by both professors and librarians (Knapp, 1966). Knapp's work inspired Evan Farber, who was the library director at Earlham College from 1963 to 1994, to implement a bibliographic instruction program in a small college environment. Farber created a college library program that became a model for many other small college libraries across the nation, emphasizing the centrality of library research in an undergraduate education and the importance of faculty-librarian collaboration (Hardesty, Hastreiter, & Henderson, 1993). Farber found that small liberal arts colleges, where undergraduate student learning is the sole purpose of the institution (in contrast to research institutions that put considerable resources into faculty research and graduate student education), are fertile sites for innovative and cooperative pedagogical initiatives to develop and thrive.

With the advent of the Information Age, the concept of bibliographic instruction morphed into the concept of information literacy in the late 1980's. In 1989, the American Library Association issued a report officially introducing the concept of information literacy. The report stated, "Ultimately, information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand" (American Library Association, 1989). Information literacy instruction taught by librarians could be an effective resource for students to learn disciplinary discourses, in addition to learning from their discipline-based professors. Further, librarians have the

opportunity to aid students in acquiring disciplinary discourses outside of the formal classroom, in one-on-one research consultations or other informal interactions.

Academic instruction librarians, particularly those who have subject specialties, have great potential to make use of genre theory in helping undergraduate students acquire disciplinary discourses. Librarians are simultaneous insiders and outsiders to the classroom and the academic disciplines in which they specialize (Van Deusen, 1996), placing them in a unique position that allows them to mediate between the non-specialized discourse of entering undergraduates and the highly specialized discourse of disciplinary faculty. Academic librarians, by the nature of their professional preparation, have an interdisciplinary perspective; that is, most academic librarians have an undergraduate degree in a non-library-related discipline (English literature or sociology, for example), then the Master of Library Science degree, and often a second master's degree or doctoral degree in another academic discipline. This interdisciplinarity provides librarians an opportunity to see how discourses differ across disciplines, positioning them uniquely and powerfully to help students become conscious of and make sense of the disciplinary differences.

Librarians are not alone in inhabiting an insider-outsider position to the classroom. Professional writing tutors and instructors also share this in-between space, and therefore can also contribute to students' understanding of disciplinary ways of communicating. The Writing Across the Curriculum movement of the 1980's and 1990's articulated this role for teachers of writing. As David Russell explains in his history of the Writing Across the Curriculum movement, the purpose of Writing Across the Curriculum instruction is to help students to understand the social purposes of academic

communication patterns and to learn to practice the communicative conventions of a chosen discipline (Russell, 2002). Writing instructors in Writing Across the Curriculum programs often have interdisciplinary scholarly backgrounds similar to librarians: often they have a disciplinary specialty in addition to expertise in composition or rhetoric. The Writing Across the Curriculum movement can serve as a model for library instruction programs for teaching disciplinary discourses.

By articulating and making visible the epistemological differences in research and ways of communicating in the disciplines, librarians can facilitate students' understanding and their scholarly work within a particular discipline. Additionally, by learning that there are differences between discourse communities, students should be able to move from one discipline's research practices to another—a skill that an undergraduate student taking a range of classes in different disciplines will undoubtedly need. If undergraduates learn that “knowledge is dialogic—that it is negotiated in the discussions, disputes and disagreements of specialists” (Elmborg, 2003, p. 74), they will be better equipped to enter a particular community of practice. By making explicit the assumptions and practices of a particular discourse community in relation to other discourse communities, librarians, in cooperation with faculty members, can provide students with a view of the landscape of scholarly work.

In order for students to see the practices of a particular discourse community as situated, dialogic, and flexible—and not natural—it is essential that students see the conventions of one discipline in relation to others. Once the students understand the diversity in the scholarly landscape, scholars within the students' chosen fields can initiate the students more deeply into the discipline's conventions. The librarian can

teach the undergraduate student the ecology of disciplinary environment, with the subject scholar delving more deeply into one specific discipline's practices. This cooperative approach, involving the librarian and the disciplinary scholar in the initiation of undergraduate students into a particular discourse community, provides students both a view of the breadth as well as experience with the depth of disciplinary research. Both the breadth and the depth are essential for an application of genre theory, since students must be given the opportunity to see discourse within disciplinary genres not as natural but as constructed for specific communicative and dialogic reasons.

Librarians have the opportunity to see the academic culture as an anthropologist would: as an insider-outsider who observes deliberately and sensitively as a way to notice what might not be visible to others within the culture—faculty members and students. When collaborating in the education of undergraduate students, the specialized scholar and the interdisciplinary instructor (librarians and other academic support professionals such as writing instructors) make an unusually powerful pedagogical partnership. The potential pedagogical value for undergraduate students of a partnership between these instructors and faculty members is tremendous: each contributes differing and complementary expertise with a unified goal of student learning.

Whereas the concept of the writing instructor facilitating students' acquisition of disciplinary ways of writing has been well-established through the Writing Across the Curriculum movement, no similar movement has yet developed in library science. The role of librarian as disciplinary discourse mediator has not yet been recognized within the academic setting, even though this is a role that many academic librarians play in their daily interactions with students—particularly librarians in libraries with fully integrated

information literacy programs. Further, this role for librarians has only been recently articulated in the library literature (Simmons, 2005) and not yet in the higher education literature, and therefore librarians' pedagogical potential in the context of post-secondary education has not been fully tapped. Additionally, articulating this potential role in undergraduates' education for librarians may encourage a consciousness about disciplinary practices among academic librarians, thereby encouraging more attention and deliberate instruction about disciplinary discourses, as genre theorists suggest is pedagogically responsible.

Purpose and Research Questions

The purpose of this study is to make visible the complex set of factors, most notably librarians and faculty members, that contribute to undergraduate students' learning of disciplinary ways of being. My contention is that without the support of librarians, an undergraduate student's learning experience is incomplete. The combination of teaching faculty member and a librarian—and perhaps other academic support professionals, such as those focused on writing, academic reading strategies or technology skills—provide a community of support for student learning that would be lacking without any one component.

This research project is a qualitative study which examines the ways in which undergraduate students learn the discourse of a selected discipline in the larger context of an institution that is well-equipped to enhance students' awareness and understanding of disciplinary discourses. My focus in this dissertation, then, is two-fold: to examine both an institutional context in which students learn disciplinary discourses and to analyze

how this context facilitates or inhibits students' understanding of discourse within a discipline.

My experiences as an academic librarian and my studies of adult literacy and theoretical approaches to literacy have led me to a desire to delve into the ways that disciplinary culture is transmitted within academia to undergraduates. From this overarching interest, I have arrived at the following research questions to focus my qualitative inquiry:

1. How do undergraduate students learn the rhetorical practices of various disciplines; in other words, how do students learn to read, write, think, research, and behave as members of a particular scholarly community?
2. Through what institutional and instructional practices do undergraduate students learn the academic discourse of their chosen major? How might these practices be enhanced to avoid missing opportunities to facilitate students' acquisition of disciplinary discourses?
3. What patterns of tension or instances of contradiction are evident in students' accounts of their experiences as learners of disciplinary discourse?

By probing these questions through a qualitative study, I demonstrate the complex nature of student learning of disciplinary practices. By drawing on the literature about genre theory, basic writing, the Writing Across the Curriculum movement, and the information literacy movement within library science, I incorporate research on theory and practice to gain a textured understanding of how undergraduate students develop their sense of belonging as learners and emerging members of a particular academic culture. The following overview of published theory and research provides the conceptual foundation

for my empirical study in which I investigate how various people in an academic environment contribute to the learning experiences of individual college students.

CHAPTER TWO: REVIEW OF LITERATURE

Given the interdisciplinary nature of this study, I draw from a range of literatures for this review of scholarship. My theoretical approach is grounded in genre theory, which draws from systemic functional linguistics. Therefore, I first survey the theoretical literature of genre theory, then look to how it has been applied in the Writing Across the Curriculum movement and library instruction (also known as information literacy instruction). Then, because my work examines students' acquisition of an unfamiliar discourse, the literature about primary and secondary discourses (based on James Paul Gee's notion presented in (Gee, 1998)) is relevant. The related literature about remedial writing and its relationship to instruction in academic discourse instruction is closely related to my current work, because much of the literature about undergraduate student success (or lack thereof) is rooted in the literature about remedial writing. These areas in the scholarly terrain provide the landscape for my current study.

Historical Foundations: Language as Social Semiotic

The ideas for genre theory stem from work in linguistics of social semiotics from the mid-twentieth century. The work related to the perspective of language as a social semiotic is rooted in M.A.K. Halliday's work in the 1960's and 1970's, culminating in the publication of the influential monograph *Language as a Social Semiotic* in 1978 (Halliday, 1978). For Halliday, "grammar is a resource for meaning organized as systems of choices" (Kress, 2001, p. 34). As the founder of Systemic Functional

Linguistics, Halliday emphasizes the function of language. Specifically, he looks at how communication can be grouped into three broad functions:

- Ideational function, which is representational, referential, or cognitive
- Interpersonal function, which is expressive, social, or evocative
- Textual function, which is related to the structure of the utterance, for example vocabulary use or register (Halliday, 1978, p. 52)

Halliday gives primacy to the social context; specifically, he is interested in how language acts upon, is constrained, and is influenced by this social context. The emphasis in Halliday's work is that of choice. Speakers choose to express themselves in a particular way for a particular reason that they have gleaned from their social situation. Therefore, language use is a result of choices made by the speaker based on his or her assessment of a social situation.

In my study, Halliday's functions are central to the way in which I analyze my data. I am interested in the language choices made by students in their written work that show their emerging understanding of the conventions of a discipline. A student's decision to use a discipline-specific term as opposed to a lay-person's term for a psychological concept suggests that this student is trying out the language of the discipline and beginning to understand the conventions of the discipline. Similarly, Halliday's attention to language choice helped me to analyze faculty members' oral language that they used in class. By using disciplinary language, faculty members show their membership in the discourse community, and this modeling of language usage influences their students.

Halliday proposed that social function is the basis for language, but he did not foreground the conditions that prompted an individual speaker to make certain communicative choices. In other words, Halliday was not interested in social power structures that create social contexts. Many theorists have discussed issues of power, but for the purposes of this dissertation, I am defining power as Foucault uses it: power is ubiquitous and dispersed, and inextricably tied to knowledge and discourse. Power is experienced not just from the top-down, but also from the bottom-up. As Foucault argues, “We must cease once and for all to describe the effects of power in negative terms . . . In fact, power produces; it produces reality; it produces domains of objects and rituals of truth” (Foucault, 1977a, p. 194). And in *Power/Knowledge* Foucault argues that language and knowledge are a most salient source of power (Foucault, 1977b). Therefore, academic disciplines are one site of power in which participants learn local truths and local ways of expressing themselves to gain or retain power.

Scholars who wanted to theorize the relationship between power and ideology were able to take Halliday’s ideas of the social function of language and focus on the power structures that influenced speakers’ communicative choices. This proposition is the basis for scholarly traditions that “reverse engineer” the linguistic choices of speakers; that is, scholars can “track back from the texts which have been produced to uncover the choices that have been made, and why. Laying bare the choices revealed in the structures is to lay bare the structures of the environments in which the choice was made” (Kress, 2001, p. 34). Therefore, scholars interested in promoting social justice through education can critique social structures by examining language use. This critique

of social structures is built upon an examination of power; Kress declares, “[p]ower is at play in all linguistic (inter)action” (Kress, 2001, p. 35).

By focusing closely on language, scholars can recognize patterns, tacit assumptions, and inconsistencies that, when made visible, can help teachers become more inclusive and conscious of the effects of their language. Additionally, by making tacit assumptions visible, we can help students to learn the unspoken “rules” of the classroom, thereby providing more equitable footing for all students in our classrooms. Though often analyses of power involve examinations of social class, gender, or race, this dissertation examines power primarily in relation to insider/outsider status to a disciplinary culture.

The Discourse of Academia

Work about the discourses of academia also informs my work. Tony Becher and Paul Trowler in their book *Academic Tribes and Territories: Intellectual Enquiry and the Cultures of Discipline* examined several academic disciplines in higher education and the cultures of those disciplines. They found that there are “identifiable patterns to be found within the relationship between knowledge forms and their associated knowledge communities” (Becher & Trowler, 2001, p. 23). In their comparative study of disciplines, Becher and Trowler showed how members of different disciplines approach knowledge creation in distinct ways (Becher & Trowler, 2001). Patricia Bizzell’s work also speaks to issues of disciplinarity, but she focuses more specifically on students’ acculturation into disciplinary cultures. She examines pedagogical approaches that could facilitate the acquisition of academic discourses, much in the way I attempt to do in this dissertation (Bizzell, 1992d). She proposes that helping students learn academic discourses is a

means to furthering efforts in social justice. Like Bizzell, Peter Elbow also looks for pedagogical strategies for helping students acquire disciplinary discourses, but his efforts are focused exclusively on students' written expressions (Elbow, 1998). Whereas Elbow examined students' writing, the present study examines student writing in response to professors' guidance and input.

In examining the role of the instructor in an environment in which instruction is a form of acculturation into a discipline, Barbara Walvoord and Lucille McCarthy (1990) assert that the role of the instructor is to be a professional who trains professionals to-be (Walvoord & McCarthy, 1990). Paul Prior complicates this picture by arguing that Walvoord and McCarthy's conception of instructors as pure purveyors of their disciplines is specious. He asserts that their work does not consider "the professors' socializing practices and [does] not consider the possibility that professors' evaluations of students' papers might be unstable or subject to multiple influences" (Prior, 1998, p. 13,). Both perspectives are useful to my work: Walvoord and McCarthy's view of the role of the instructor as the source of disciplinary conventions for students and Prior's complication of this notion inform my analysis of the professors' classroom language in significant ways.

Prior argues that the discourse of an academic discipline is not static and unchanging; instead, it is created by the participation of the members negotiating between the established and dominant norms of the community and the newly introduced and marginal perspectives of newcomers to the discourse community (Prior, 1998). He states,

Disciplinary enculturation then refers not to novices being initiated, but to the continual processes whereby an ambiguous cast

of relative newcomers and relative old-timers (re)produce themselves, their practices, and their communities. These images of participation in disciplinary practices point to doing things rather than having something or being someplace; they suggest a process view of disciplines. . . (Prior, 1998, p. xii)

This view of the fluidity of disciplinary practices underpins my analysis. Throughout this study, as I refer to disciplines and disciplinary conventions, this is the meaning that I intend.

Genre Theory

From this interest in language and power emerged a theoretical approach called genre theory. Traditionally used to refer to a literary form, the term “genre” was adopted and redefined in the 1980’s by scholars in linguistics, communication studies, and education to refer to the textual patterns that originate from “pragmatic, social, political, and cultural regularities within the enveloping contexts of the discourse” (Freedman & Richardson, 1997, p. 139). This use of “genre” is rooted in Bakhtin’s conception of speech genres. He defines speech genres by stating, “Each separate utterance is individual, of course, but each sphere in which language is used develops its own *relatively stable* types of these utterances. These we may call *speech genres*” (Bakhtin et al., 1994, p. 81). Hence, an utterance is an instance of communication in any discursive context—written or oral—that combines with other similar instances to create a genre. Bakhtin sees utterances as dialogic and intertextual, and cumulatively, utterances create genres that are themselves dialogic and intertextual.

For Bakhtin—and for current genre theorists—genres are rhetorical actions that develop in response to recurring situations. He states, “Each utterance is filled with echoes and reverberations of other utterances to which it is related by the communality of

the sphere of speech communication. Every utterance must be regarded primarily as a response to preceding utterances of the given sphere” (Bakhtin et al., 1994, p. 85).

Furthermore, every utterance anticipates forthcoming utterances. Bakhtin states, “the utterance is related not only to preceding, but also to subsequent links in the chain of speech communion” (Bakhtin et al., 1994, p. 87). In this conception, then, a genre is not a stable and “always already” form, but rather is a “flexible, plastic, and creative” form based entirely on communicative function (Bakhtin et al., 1994, p. 83).

The application of genre theory to the venue of education in the 1980’s was both a pedagogical and a political move. In explaining the move of genre theory into the educational arena, Gunther Kress asserts, “If there was a predictability and recognizability of text-forms, then ... these were things that should be made available as explicit knowledge for all learners in school” (Kress, 1999, p 463). The Writing Across the Curriculum movement grew out of this interest in teaching genre to increase student understanding of and ability to adhere to established disciplinary text forms. I will discuss the Writing Across the Curriculum movement more fully in the next section.

Bill Cope and Mary Kalantzis (1993) argue that this educational movement was intended not only to improve the teaching of writing by making the forms explicit, but also to provide equitable education to all learners by making tacit knowledge visible and therefore accessible to all. They assert that teaching about genre fosters in the students an awareness of the social construction of discourses such that the students can use but also challenge these genre distinctions, thereby becoming critical learners. By developing a meta-awareness about genres, students will be able to denaturalize language such that they are able to see that genres are social constructions that have developed in response to

a social need (Cope & Kalantzis, 1993c). By highlighting the social nature of disciplinary discourse and practices, those in the academic community can emphasize to students that disciplinary ways of communicating are not static, but rather are fluid and changing, and very much a site of contested power.

Genre theory has been criticized for “stifl[ing] creativity because it focuses on formalistic conventions and draws artificial boundaries” (Clark, 1999, p. 8); however, recent developments in genre theory assert that the concept of genre is about *function*, not form, and that as such, the study of genres can be generative and productive (Kress, 1999). In this understanding, genres “are conventional structures which have evolved as pragmatic schemes for making certain types of meaning and to achieve distinctive social goals, in specific settings, by particular linguistic means” (Cope & Kalantzis, 1993c, p. 67). Genre pedagogy is dialogic, then, as it “establishes a dialogue between the culture and the discourses of institutionalized schooling, and the cultures and discourses of students” (Cope & Kalantzis, 1993b, p. 17). In this way, the teaching of genre is not about fixed boundaries and conventions, but rather it is about teaching students to see how the genre of discourse is related to the communicative need. In learning about disciplinary discourse, students may begin to see themselves as participants in a disciplinary conversation with the potential to effect change in the conventions instead of simply learning to conform to the established patterns within a particular “community of practice” (Lave & Wenger, 1991) or academic discipline.

Recent proponents for genre approaches to teaching emphasize that with an understanding of why a genre has certain characteristics, students will be able to work within the genre and also to make informed decisions about when to deviate from the

genre, thereby providing an opportunity for creativity (Clark, 1999; Kress, 1999; Swales, 1990). In this way, instruction in genres can provide students with the meta-awareness of various discourse communities which will equip them simultaneously to learn as well as to resist and critique the established genres, in other words, students learn to work within the genres as well as to transgress the boundaries of the defined genres deliberately (Luke, 1996). Indeed, Irene Clark argues that the boundaries are a necessary correlative to creativity; she says, “A work is regarded ‘creative’ when boundaries are transcended in an original and unusual way, so that the work represents a unique union of both constraint and choice” (Clark, 1999, p. 12). Clark asserts that the explicit teaching of genres, then, creates the opportunity for creativity and does not reinforce the reification of the established structures. Instead, the explicit teaching of genres leads to a “dialogue of the dominant ways of knowing . . . and other marginal discourses such that both core and margins are transformed” (Cope & Kalantzis, 1993c, 82).

Genre theory contributes significantly to the way that I approached my research questions and my data in this study. Because I am interested in examining the ways that undergraduate students become acculturated into a disciplinary culture, the concept of genre is central. As students learn the conventions of a particular discipline, they are learning the appropriate genre for communicating in that discipline. By making the conventions of a discipline explicit, individuals in academia are helping students use established conventions in their academic work as well as push the boundaries of disciplinary practices as they construct meaning in their research and writing.

Writing Across the Curriculum and Information Literacy
Instruction

Genre theory has been aptly applied to pedagogical initiatives within academic disciplines. Just as writing and composition instructors developed the Writing Across the Curriculum movement as a way to infuse writing throughout the curriculum, academic librarians developed the information literacy movement to teach students across the curriculum to find, evaluate, and use information effectively. The Writing Across the Curriculum movement predated the information literacy movement by about a decade, with the Writing Across the Curriculum movement beginning in the mid 1970's (Bazerman et al., 2005; Russell, 2002), and the information literacy movement commencing formally with the publication of the American Library Association's Presidential Committee on Information Literacy in 1989 (American Library Association, 1989).

Both of these instructional movements are central to my work. Students in this study expressed their understanding of disciplinary conventions through their written products, and so the theoretical literature of the Writing Across the Curriculum movement informs my understanding of disciplinary writing. Second, my interest in the instructional role of the academic librarian makes the literature about the information literacy movement essential.

Writing Across the Curriculum programs and information literacy programs have much in common, and each can benefit from collaborating and learning from the other (Elmborg, 2003; Norgaard, Arp, & Woodard, 2004). These efforts are complimentary particularly in that both programs can aptly apply genre theory to their teaching

pedagogy. Additionally, while Writing Across the Curriculum advocates are focused on students producing written pieces, those in the information literacy movement are interested in students both consuming the published literature critically and then using this information to construct new knowledge. This interconnectedness between these two movements can be understood when thinking broadly about the production and consumption of knowledge both among learners of a discipline as well as the experts in the field. As James Slevin explains,

When a political scientist, or historian, or philosopher discusses the writing she studies and teaches (e.g., the texts of Locke and Hume), and the scholarly and student writing which intends to say something convincing about those texts, what does she mean by *writing* and how are these various texts related to one another? When we talk about “writing” in philosophy, we mean not only student papers on Locke or on the epistemological issues Locke raises and addresses, but also *Locke’s* writing and the writing of those who study Locke. (Slevin, 1988, p. 12)

The focus on writing in this passage could easily be expanded to include publishing patterns (in books or in journals) or research methodology practices (historical, qualitative, or quantitative) as a way to describe information literacy as well as writing practices.

Because the written word is central to academic discourse, this understanding of the assumptions, the practices, and the conventions of a particular field’s writing is integral to the study of any discipline. As Kenneth Bruffee asserts:

When we write, we play the “language games” of the communities that we . . . belong to. [The language] constitutes, defines, and maintains the knowledge community that fashions it. . . . Our goal in writing . . . is to celebrate our own current acculturation, or else to reacculturate ourselves, reacculturate others, or reacculturate both ourselves and others at the same time. (Bruffee, 1993, p. 54-55)

Bruffee makes clear in this quotation that writing in an academic setting is a matter of learning the accepted ways of expressing oneself in that discourse community. Academic writing is a pronouncement of membership in a particular discourse community.

The initiation of students into particular disciplines cannot stop with the examination and production of written texts within a field. Academia as we know it today is predicated on the dialogic relationship between texts. The “conversation” between scholars over time within a discipline occurs in written texts in which scholars cite foregoing scholarship and anticipate forthcoming scholarship, creating intertextuality within and between each text. Each discipline has its own assumptions about how knowledge is produced; its own definitions of “common knowledge;” its own accepted research methodologies; and its own social conventions, including the vocabulary members use (Elmborg, 2003). More specifically, disciplines have epistemological differences such that research is conducted differently in each subject area. As Ann Grafstein notes,

The ways in which knowledge is organized in different disciplines determine, among other things, the scope of the research questions that can be asked, the rules of evidence that are recognized within the discipline as valid for supporting claims, the kind of criteria that can be used to evaluate claims critically, the sources researchers consult to find information, and the nature of the statements that must be cited. . . . An understanding of the discipline, and not simply abstract critical thinking skills, is what provides students with the tools to evaluate research critically in that discipline. (Grafstein, 2002).

It is this knowledge organization that students learn as they become familiar with the conventions of their chosen discipline.

Instruction librarians often find themselves involved in the enterprise of teaching in an information literacy program that is integrated into the curriculum of a major field

of study. Unlike traditional bibliographic instruction, information literacy instruction is “not restricted to library resources or holdings; it presupposes the acquisition of technical skills needed to access digital information, and, crucially, it extends beyond the ability to locate information simply to include the ability to understand it, evaluate it, and use it appropriately” (Grafstein, 2002). Grafstein argues that in order for undergraduate students to be able to locate, understand, evaluate, and use information, they need to recognize the disciplinary epistemological conventions that shape the knowledge. In this way, Grafstein ties information literacy instruction tightly to instruction in disciplinary discourses, a notion that I take up and extend in the current study.

Also present in the library science literature are studies about the unique instructional opportunities afforded to the librarian. Evan Farber was an early advocate of collaboration between faculty members and librarians. His pioneering work developing the library instruction program at Earlham College from the 1960’s to the 1990’s continues to serve as a model for institutions of higher education. In regard to collaboration between faculty members and librarians, Farber stated, “[W]hile the teaching faculty have the central responsibility for the education enterprise, librarians can help them carry out that responsibility much more effectively and at the same time enhance it. While the two groups . . . can and should work together, neither can do the other’s job” (Farber, 1974, p. 157). Larry Hardesty took up Farber’s interest in faculty-librarian collaboration and examined faculty culture in relation to librarians’ efforts to work with faculty members. Hardesty found that faculty culture is in conflict with collaborative efforts with librarians, and so librarians have a special challenge in integrating information literacy instruction throughout the curriculum (Hardesty, 1995).

However, conspicuously absent in the library science literature are studies about the ways in which college students acquire academic discourse and librarians' roles in this process. Additionally, few studies in library science attend closely to language exchanged between librarians and students, except for a small number of studies about interactions at the reference desk (e.g. (Forrester, Ramsden, & Reason, 1997). An application of genre theory to information literacy instruction that I undertake with this study fills this void in the current research.

Primary and Secondary Discourses

In his article "What Is Literacy" James Paul Gee provides an explanation of the terms "primary discourse" and "secondary discourse," which are vital concepts in a discussion of academic literacies and academic discourse. Gee sees a primary discourse is the discourse that one is born into and acquires without direct instruction. He further defines a primary discourse as "our first social identity" and "our initial taken-for-granted understandings of *who* we are and *who* people 'like us' are" (Gee, 1996, p. 137).

Secondary discourses are any discourses that extend beyond one's primary discourse; these discourses are learned instead of acquired (Gee, 1998). He defines secondary discourses as "those to which people are apprenticed as part of their socializations within various local, state, and national groups and institutions outside of early home and peer-group socialization" (Gee, 1996, p. 137). Though Gee primarily writes of discourses in terms of language, the distinction can move well beyond that of linguistic difference.

For scholars who have been thoroughly ensconced in their discipline, their primary and secondary discourses may have merged such that their disciplinary discourse (which had been their secondary) has largely become their primary discourse that they

use both inside and outside their academic environment. As insiders in a community of practice, scholars in a discipline may find it difficult to see their disciplinary practices as anything but natural—the “way things are,” since this discourse has largely become primary. If the scholar does not expose students to the disciplinary discourse as constructed and dialogic and discipline-specific, the seasoned member of the community risks implying to the student that this is *the* academic discourse instead of *an* academic discourse. With limited knowledge of the diversity in disciplinary discourses, the undergraduate student will likely come to see one discourse as “natural” and established, instead of dialogic and developing. Our task as educators is to teach students the secondary discourse of academia, and more specifically the secondary discourses of their chosen disciplines. In my study, I explore the venues in which students appear to learn the secondary discourses as evidenced by their written products in one discipline over a number of years.

Remedial Instruction or Basic Writing Instruction

Incompatibility between students’ primary and secondary discourses often results in the students being placed in transitional or remediation programs. The area of academic literacy and remediation has a long history of controversy and political unpopularity in colleges and universities, where administrators and faculty often espouse an attitude that students ought to arrive at college fully prepared to do college work, and if they are not, it is not the task of the university to shore up the gap. Though there is a popular perception in academia that remediation is a temporary problem that will pass once the current group of under-prepared students moves on, Mike Rose dubs this perception the “myth of transience” and argues that there will *always* be a significant

percentage of students who do not meet the standard, partially because disenfranchised groups often receive a different level of preparation than mainstream groups, and also because definitions of what it means to be educated change as disciplines change and society's needs change. He asserts in his essay published in *College English* in 1985, "The American higher educational system is constantly under pressure to expand to redefine its boundaries, admitting, in turn, the sons of the middle class, and later the daughters, and then the American poor, the immigrant poor, veterans, the racially segregated, the disenfranchised" (Bartholomae, 1985, p. 26). Facing the reality of students with varying levels of preparation, many universities have implemented transition programs to assist students in learning the academic literacies needed to be successful in college; most often these programs focus on college-level writing. However, in tight budget times, these programs tend to be the first ones to be cut, with administrators offering justifications that it is the role of the high school or the community college to prepare students for college-level work, not the university itself.

Intellectual debates about remediation became very real in the 1960's when Open Enrollment policies went into effect at the University of California system (UC) and in the City University of New York system (CUNY); soon thereafter, scholarly interest burgeoned in what has since become known as "basic writing" (Horner & Lu, 1998, p. 5). Because all students who applied were admitted to the CUNY system (the UC system accepted the students in the lowest twenty percent of their high school classes into the community college system, but not directly into the university system), university officials scrambled to accommodate the students, many of whom were not sufficiently academically prepared to enter the standard college classes. In 1965, CUNY hired Mina

Shaughnessy to oversee SEEK, the pilot program that preceded the open enrollment program.

For the next ten years, Shaughnessy collected examples of student writing to analyze for her landmark book *Errors and Expectations* published in 1977. Shaughnessy approached basic writers as students who were making so-called “mistakes” in their writing because they were learning, not because of inferior intelligence or ability. She argued that basic writing students “write the way they do, not because they are slow or non-verbal, indifferent to or incapable of academic excellence, but because they are beginners and must, like all beginners, learn by making mistakes” (Shaughnessy, 1977, p. 5). Shaughnessy saw errors in student writing as an opportunity for teachers to interpret these clues, then to understand why students were making certain types of mistakes, and then to develop strategies for students to improve their writing; she called for teachers to understand “the intelligence of [students’] mistakes” (Shaughnessy, 1977, p. 11).

As an indefatigable humanist and optimist, Shaughnessy implored remedial writing teachers to “see that the greatest barrier to our work with [students] is our ignorance of them and of the very subject we have contracted to teach” (Shaughnessy, 2000, p. 99). In 1975, Shaughnessy and others founded the *Journal of Basic Writing*, thereby coining the now contested term, “basic writing.” With the conception of the journal and the publication of *Errors and Expectations*, Shaughnessy largely was the catalyst for the basic writing movement that gained considerable momentum throughout the 1980’s and 1990’s.

Shaughnessy was not alone in her efforts to revision approaches to teaching writing to under-prepared undergraduates. Kenneth Bruffee, also teaching in the CUNY

system in the 1970's argued that the composition instructor's job was not to correct errors, but rather to reacculturate students (Bruffee, 1993). Alluding to Paulo Freire's *Pedagogy of the Oppressed*, Bruffee called his perspective of teaching writing *Pedagogy of Reacculturation* (Bruffee, 1993; Freire, 2000). This perspective shared by Shaughnessy and Bruffee of viewing the teaching of writing as a process of helping students become part of acculturation into a disciplinary community laid the foundation for the aforementioned Writing Across the Curriculum movement that emerged in the mid-1970's.

The literature about remedial and basic writing is relevant to the current study even though none of the focal students in my study were a part of any formal remedial program. Nevertheless, the literature about remedial writing examines the gap between what is taught and what is learned, and this gap is one I examine in the analysis of my data as well.

Remedial Instruction as it Relates to Academic Discourse

Instruction

The terms "remedial" instruction or "basic writing" instruction have been problematized in the years since Shaughnessy and others writing in the late 1970's and early 1980's used them. Mike Rose in 1985 proposed that a change in terminology would encourage university administrators to perceive this discipline as something permanent, necessary, and inclusive of the larger academic curriculum. He argued that the terminology propagates the myth of transience:

[T]he myth does not allow [remedial programs] to be thought through in terms of the whole curriculum and does not allow the information they reveal to reciprocally influence the curriculum. . . . The myth allows the final exclusionary

gesture: The problem is not ours in any fundamental way; we can embrace it if we must, but with surgical gloves on our hands. (Rose, 1998, p. 27)

Rose argued that terms like “transitional, initiatory, [or] orienting” (Rose, 1998, p. 28) both would be more accurate and would provide political leverage for programs within universities. While “basic writing” or “remedial classes” were terms that Shaughnessy used with good intentions, terms that emphasize the transitional entry into the academic discourse community are both more accurate and less stigmatizing.

In his call for different nomenclature, Rose alluded to contemporaries David Bartholomae and Patricia Bizzell, who both write about socializing students into the academic discourse community. Also in 1985, Bartholomae published his frequently cited essay “Inventing the University” in which he argues that when students begin college, they need to appropriate the specialized voices of academics in each of the disciplines. He argues that each time a student sits down to write in college, he or she is incited to “invent the university;” that is, “[t]he student has to learn to speak our language, to speak as we do, to try on the peculiar ways of knowing, selecting, evaluating, reporting, concluding, and arguing that define the discourse of our community” (Bartholomae, 1985, p. 134). Students are asked each time they write papers in each of their classes to appropriate a disciplinary voice. Especially for disciplines for which classes are not typically taught in high school (philosophy or anthropology, for example), students’ exposure to a particular discipline’s discourse often is extremely limited when they are asked to write their first academic papers. Additionally, the published periodical literature in virtually any discipline is esoteric and specialized such that it doesn’t effectively serve as an accessible model for students’ own writing. For example, rarely will a literary analysis appear in the published literature of

English, but a literary analysis is a common writing assignment in undergraduate English classes. Furthermore, if a student is enrolled in liberal arts curriculum, he or she will be asked to write in five or six different disciplinary voices in a single semester. It is no wonder that many students struggle to adapt to the language of each academic discipline in their first years of college.

Bartholomae continues his argument by introducing the concept of a “commonplace,” which he defines as “a culturally or institutionally authorized concept or statement that carries with it its own necessary elaboration” (Bartholomae, 1985, p. 137). Novice writers often rely on commonplaces or clichéd conclusions in their writing when they are unsure of their own analytical skills. In these “prearticulated explanations,” students are “trying on” the language of the academy, but they are avoiding contradictions, complexities, and subtleties that would push them into thinking more critically about a topic. Bartholomae sees students’ use of commonplaces as a step in the development of writers in their initiation into academic prose. He argues,

The movement toward a more specialized discourse begins . . . both when a student can define a position of privilege, a position that sets him against a “common” discourse, and when he or she can work self-consciously, critically, against not only the “common” code but his or her own. (Bartholomae, 1985, p. 156)

Bartholomae contends that students who adhere to the tidy, pat discourse of commonplaces but write error-free prose will have a more difficult time making the transition to academic discourse than a student whose prose has more surface errors but displays more ambiguity and subtlety in the argument. This, he argues, is how academic discourse is; ironically, prose in academia often is “muddier and more confusing”

(Bartholomae, 1985, p. 162), so students will find more success in academia if they are able to make this transition in their writing.

Patricia Bizzell joined Bartholomae in promoting a focus on writing in a discourse community as a way to promote a scholarly approach in composition studies that focused on “the elements of the social context that influence writing” (Bizzell, 1992a, p. 17) instead of the dominant cognitive approach from the early 1980’s, as represented by Flower and Hayes’ influential articles (particularly (Flower & Hayes, 1980; Flower & Hayes, 1981). Being among the first scholars to address academic disciplinary discourse, Bizzell did much to define and explain this new socio-cultural approach to writing instruction, particularly in her 1982 article “College Composition: Initiation into the Academic Discourse Community” (Bizzell, 1992b), which was among the first articles to use the term “academic discourse community” (Bizzell, 1992a, p. 17).

Linda Flower responded to Bizzell’s call for a more socially situated study of composition instruction and learning and moved away from her earlier work focusing primarily on cognitive aspects of writing. Indeed, on her own current professional website at Carnegie Mellon University, Flower explains the trajectory of her life’s scholarly work:

My early work concentrated on studying cognitive processes in writing and bringing a strategic, problem-solving approach to writing instruction. Motivated by the need for a more integrated social-cognitive approach to writing, my recent research has focused on how writers construct negotiated meaning in the midst of conflicting internal and social voices. (Flower, 2004)

As part of this transition from cognitive to socially situated, Flower co-authored and edited *Reading-to-Write: Exploring a Cognitive and Social Process* published in 1990 (Flower & et al, 1990). Preceding the monograph’s publication by a year, Flower

published the article “Negotiating Academic Discourse,” which provides a conceptual framework for her understanding of how students learn to write in an academic setting. Combining her cognitive and socially situated approach, Flower describes a strategic process of reading and writing that helps students to make the transition in order to be successful participants in an academic discourse community. Flower’s extends her research to include intersections between reading and writing, a connection that previous researchers on remedial programs rarely made. Flower argues that we need to help students develop strategic knowledge to read texts in order to make meaning and then to write in a way that is appropriate within an academic discipline (Flower, 1989).

In her move toward academic discourse instruction in her basic writing courses, Patricia Bizzell was consciously moving away from writing that promoted an “authentic voice,” an approach advocated by Peter Elbow (Elbow, 1973) in which students write from their own experiences. Bizzell argued that while remedial or basic writing students may find authentic voice classrooms welcoming and rewarding in that their personal stories are valued, these same students often are surprised and disappointed when the type of writing that they produced and was well-received in their composition classes is judged inadequate in their other classes. Bizzell came to the conclusion that “the ‘authentic voice’ writing class was too easy for them precisely because it postponed their confrontation, and mine, with the great inequalities in their preparation for the world of college” (Bizzell, 1992b, p. 110). Bizzell refers to Paulo Freire’s call for education to disrupt the social class system to fortify her staunch advocacy of teaching academic discourse as a way to empower disenfranchised students. She clarifies, however, in “Arguing about Literacy” published in 1988, that the process of teaching and learning

must be dialectical; she states, “Teaching academic literacy becomes a process of constructing academic literacy, creating it anew with each class through the interaction of the professor’s and the students’ cultural resources” (Bizzell, 1992c). In this way, Bizzell resists critics’ arguments that teaching academic discourse is a form of colonization in which we in academia are teaching students to conform to our ways of speaking, writing, and thinking.

Bizzell’s endorsement (along with Rose’s, Bartholomae’s, and Flower’s endorsements) for teaching academic discourse nevertheless elicited criticism among scholars who took issue with its inherent philosophy. In the early 1990’s, a flurry of scholarly activity occurred in the published literature, each article taking a stance about whether explicitly teaching academic discourse was liberating or colonizing. Peter Elbow began the volley with his article “Reflections on Academic Discourse” published in *College English* in 1991. In this article, Elbow argues that as composition instructors, we cannot and should not exclusively teach students to write for the expectations of academic discourse, because as Elbow laconically states, “life is long and college is short” (Elbow, 1998, p. 146). In other words, students need to learn to write for life, not just for their college careers. Also, he argues that composition instructors’ academic backgrounds are typically in English; this means that generally we are woefully under-prepared to teach writing practices and academic discourse of other disciplines. He states, “To write like a historian or biologist involves not just lingo but doing history or biology—which involves knowing history and biology in ways we do not” (Elbow, 1998, p. 149). In addressing students’ thinking and writing quality, Elbow argues that academic discourse often obfuscates students’ expression of their thoughts; therefore, students can

hide behind disciplinary jargon even if they don't fully understand the disciplinary concepts. He suggests that if students can only explain concepts in the academic discourse but not in everyday language, that often means that they don't fully understand them. And finally, Elbow convincingly argues that academic discourse is not unified and monolithic, but rather any one discipline's discourse contains numerous contradictions and inconsistencies; therefore, trying to teach students the conventions of a particular discipline's academic discourse is fruitless.

Vivian Zamel concurs with Elbow's skepticism, but goes further in her indictment of teaching academic discourse, in her article "Questioning Academic Discourse" published in 1993 (Zamel, 1998). Zamel argues that the academic discourse model is predicated on a deficit model of writing and that the teaching of academic discourse is a form of colonization: that teaching it "undervalue[s] one discourse and privilege[s] the other" (Zamel, 1998, p. 191). Like Elbow, she argues that academic discourse is not "unitary" and that the disciplinary cultures are not unvarying, but like all cultures "are subject to continual reshaping as others enter the discourse community and change its terms" (Zamel, 1998, p. 190). Instead of teaching academic discourse, she wants us to involve students in "authentic work by immersing them in reading, writing, and language" (Zamel, 1998, p. 194)

Lisa Delpit, however, compellingly argues in her essay "The Politics of Teaching Literate Discourse" published originally in 1993, that the well-meaning work of many literacy educators to validate disenfranchised students' secondary discourses in the classroom can be more problematic than beneficial for the students. She takes issue with two assertions in James Gee's essay "What is Literacy" in which he discusses primary

and secondary discourses (Gee, 1998): “Gee’s notion that people who have not been born into dominant Discourses will find it exceedingly difficult, if not impossible, to acquire such a Discourse” and that “an individual who is born into one discourse with one set of values may experience major conflicts when attempting to acquire another Discourse with another set of values” (Delpit, 1998, p. 209). Delpit is concerned that a sensitive and well-intentioned teacher might come to the conclusion by reading Gee’s work that teaching a dominant discourse to members of a non-dominant group is paramount to oppressing them further. Of teachers such as this, Delpit says, “Believing themselves to be contributing to their students’ liberation by deemphasizing dominant Discourses, they instead seek to develop literacy *solely* within the language and style of the student’ home Discourse” (Delpit, 1998, p. 214). While in the moment this might seem to affirm students’ cultural identities, in the long-run, it is counter-productive. Learning the dominant discourse is largely the route to economic, social, and political power, and once members of non-dominant groups acquire power, they are able to transform the dominant discourse: “using European philosophical and critical standards to challenge the tenets of European belief systems” (Delpit, 1998, p. 215). Delpit urges teachers to validate students’ home languages and cultures without limiting students’ potential by not also teaching the dominant discourse.

Allan Luke fundamentally changed the terms of the argument about whether teaching academic discourses was liberating or colonizing in his landmark essay “Genres of Power” published in 1994. By employing concepts from Bourdieu relating to power and capital (Bourdieu & Passeron, 1977), Luke argued that learning the power is transient

and not intrinsically tied to any particular knowledge, skill, or ability. Therefore, Luke argues,

the value of embodied cultural capital gained in literacy training depends on the relative distribution, weight and scarcity of that capital on the market, rather than to any intrinsic power of the skill, text, competency or genre acquired. Consequently, the increased success of the educational system in producing particular competences . . . will necessarily lead to the decreasing value of these kinds of capital on a linguistic market. (Luke, 1996, p. 329-330).

Therefore, Luke argues that genre teaching (which would include academic discourse instruction) necessarily reproduces existing power structures because the discourse of power will shift when broad numbers of people achieve this literacy to correspond to a capitalist model. This bleak conclusion to the argument about academic discourse is apt to paralyze any educator hoping for socially just instruction. Luke does not offer much hope in this article, though he does suggest in his final paragraph that “criticism, contestation and difference . . . can be . . . a principal strategy in realizing, converting and contesting economic, cultural and social capital” (Luke, 1996). Thus, the teaching of genre in an academic setting, while complicated, can be empowering to students. This complex scholarly dialogue regarding the role of the instructor in relation to the role of the student in the process of education is relevant to the present study in that it is a study about acculturation. Examining the complicated ways in which instructors pass on the academic culture and the ways that students accept and resist this culture are central to my work.

Conclusion

It is within this framework of literature that I place this study. Drawing from all of these varied strands of literature, I present the current study in which I examine the ways that undergraduate students learn disciplinary discourses, with particular attention to the role of both faculty members and librarians.

CHAPTER THREE: METHODOLOGY

My intention in this research is to examine the matrix of factors that contribute to undergraduate students' development of the habits of the mind and cultural orientation as a member of a particular discipline. The myriad influences that initiate students into a particular academic discourse community are too numerous, fleeting, and indefinable to be captured and described in any complete way; however, I am attempting to examine several major identifiable contributors that students themselves recognize as influences in their development as scholars, that faculty members and librarians acknowledge as their intentions when teaching students, and that I was able to observe during my months of collecting data. Using a metaphor of students joining a conversation in which faculty members are actively engaged in the conversation with each other and in which librarians assist students in their attempts to contribute a comment, I hope to illuminate how the interactions among participants provide or have the potential to provide the students a graceful entry into the conversation of academia.

Research Setting

The research site, pseudonymously called Credence College, is a private independent liberal arts college of just over 1000 undergraduate students in a town of about 4000 residents in the upper Midwest. I selected it as my research site because the students, faculty, and librarians at Credence interact extensively both in and out of the classroom, and undergraduate student learning is the primary mission of the college. Additionally, the library instruction program is especially well-integrated into the academic life of the college. Finally, I was intimately acquainted with the mission and

culture of the college, since I spent four years employed as an academic librarian at the college before embarking on this dissertation research.

With approximately 90% of its student body living in the on-campus residence halls, Credence has the atmosphere of a close-knit residential community. Situated within twenty minutes of two metropolitan areas, one of which is the home to a large research university, Credence students enjoy the peacefulness of a rural campus and the opportunities of the neighboring cities. With the average class size at 15 students and with all course enrollments capped at 25, faculty members interact with students consistently and intimately, and faculty tenure is based primarily on teaching, with research and service holding secondary roles, as evidenced by one professor's declaration on the first day of class, "you and my advisees are my first priority, so I can always meet with you." A majority of students (over 75%) graduate with more than one major area of study.

Credence draws students from across the country and world; just less than one-third of the enrollment hails from its home state, with the rest coming from forty-two other states and thirteen other countries. Other than this geographic diversity, the student population is largely homogenous, with just 13% of the population representing ethnic or racial minorities, with the rest representing Anglo-American backgrounds (National Center for Education Statistics, 2003). However, for a rural Midwest college, even this measure of diversity is seen as an accomplishment by members of the college community. The student body is composed largely of the traditional college student, with

99% of the student body enrolled full-time, and with over 99% of the student body between the ages of 18 and 25 years old¹.

Distinctive about Credence is its instructional calendar, which was implemented in the late 1970's. With this schedule, students take one course for three and one-half weeks with nine consecutive terms or "blocks." This intensive calendar provides professors the opportunity to schedule instructional time as the need arises; the professor can schedule class time anytime between 8:00 a.m. and 3:00 p.m. This flexibility allows for varied learning activities, particularly those enrichment opportunities that involve academic support personnel in addition to the faculty member. For example, on a typical day a class might meet from 9:00 to 11:00 for a lecture and discussion, and then again from 1:00 to 3:00 for a researching session with a librarian or for a writing session with a writing consultant. This sort of collaboration among faculty members, librarians, or other academic support professionals is institutionally encouraged and commonplace.

The strong working relationship between the faculty members and the librarians is due largely to an organizational restructuring that occurred in 2000 when a new director of the library, Jane, began her tenure. As an individual intensely interested in libraries being places of teaching and learning and not just storerooms of books, Jane hired librarians who were similarly committed to teaching as the primary responsibility of a librarian. The three librarians hired were organized by division: the Consulting Librarian for the Arts and Humanities, the Consulting Librarian for the Social Sciences, and the Consulting Librarian for the Sciences. With the divisional emphasis, the new librarians forged strong relationships with faculty and students in their disciplinary divisions. I held

¹ This demographic information for the college is based on the 2004-2005 school year.

the position of Consulting Librarian for the Arts and Humanities for the four academic years between 2000 and 2004.

In the years since the re-visioning of the library's instructional role in relation to the college, the library's instruction program has become robust. In the 2003-2004 school year, the librarians provided direct instruction either in a whole class setting or through one-on-one research consultations with each student in the class (and often a combination of whole class instruction and individual consultations) to 97 classes, for a total of 1730 students. Since all of the instruction is taught at the point-of-need and tailored specifically to the research demands of the particular course's assignments, redundant instruction is less of a concern than in a setting with a program in which the instruction is less tailored to the content. It is important to note that many students will have contact with one of the librarians in an instructional session of some form in several of their classes in each year of their undergraduate experience. Students are accustomed to having a librarian work with their classes; librarians have come to be seen by both students and faculty as an expected pedagogical component of the academic activities of the college.

The librarians at Credence have faculty status, which means that they attend faculty meetings and institutionally hosted social events for faculty, participate in faculty governance, serve on faculty committees, serve as faculty advisors to students, and participate in an analogous tenure process as the teaching faculty. Perhaps due to their presence at faculty functions, many of the teaching faculty members view the librarians as peers and colleagues, though this inclusive attitude tends to be most common among

the younger faculty members and the ones with whom the librarians work extensively in the classroom.

Research Participants

Selection of Participants and Courses

The participants for this study are a small group of undergraduate students at Credence College, coupled with librarians and several of the professors with whom these students have had contact during their psychology courses during their years at Credence. For a list delineating the names and roles of each of the participants in this study, see Appendix A.

I selected junior or senior students who had already taken at least six of the eight psychology courses required to earn a psychology major and had officially declared themselves psychology majors. To solicit participants, in the two upper-division psychology classes that I observed, I introduced myself and the aims of my research, gave students an informational sheet with my email address on it, and invited students to contact me if interested. I followed up my oral introduction with personalized, targeted email messages to students whom I knew to be advanced psychology majors, based on a list of junior and senior psychology majors I had procured from one of the faculty members, and with whom I had some familiarity. Once I received a response from a student, either in person or via email, I explained the research study, the informed consent, the time commitment, etc. From the original fifteen students with whom I made personal contact (either via email or by chatting with them after class), five students both agreed to participate and followed through with all of the parts of the study. Several students indicated in email that they would be interested in participating, but when I

emailed to schedule a time to meet, they did not respond. In those cases, I did not make any additional direct contact, since I took their lack of communication to be an expression of unwillingness to participate fully.

Once I had procured five volunteers, I asked two of the psychology professors to review the names and let me know their impression of the range of success these students had experienced in psychology. Because I did not want only A-students who had easily learned the language of psychology, I wanted to be sure I had included a range of performers. Both professors asserted that I had gotten a surprisingly good range: from strong students to struggling students.

In addition to their diverse academic performance, the student participants also represent well the demographics of Credence. Two of the students grew up in Credence's home state with the other three hailing from other states, roughly mirroring Credence's geographic diversity. Also, three of the five student participants are women, roughly mirroring the 60-40 gender breakdown at Credence. One of the five students is of an ethnic minority, reflecting Credence's racial diversity. And finally, all five students were the typical college age, also reflective of Credence's population.

My selection of professors was primarily as a result of scheduling: I wanted to observe a range of courses, from introductory to advanced, in psychology during the fall of 2005. Because Credence schedules its courses on the block plan and most classes meet during the same hours of the day for one month, I was able to participate in only one class per month. The four courses I settled on were the four psychology courses that were offered during the months of September, October, November, and December that provided me with the range I was seeking. During the fall of 2005, I observed

Fundamentals of Psychological Science, a 100-level introductory course that all students take as a prerequisite for almost all other psychology courses; Learning and Behavior, a 200-level intermediate course that enrolls many students who are considering a psychology major; Research Methods, a 300-level required class for psychology majors; and Senior Seminar, the 400-level capstone seminar required of psychology majors. These four courses were taught by three professors, with both the introductory and the 300-level course taught by the same professor. Before the school year began, I had already sought and obtained permission from each of the professors to attend and audio-record their classes.

The primary librarian whom I interviewed and whose instruction sessions I observed is the librarian assigned to work with the social science students and faculty. Since psychology is within her division, she was my chosen participant. I obtained permission from her before the school year began. In addition to the social sciences librarian, I also interviewed Jane, the director of the library, to glean her vision regarding the role of a librarian in an academic environment.

Description of Participants: Students

My student participants were five undergraduate students at Credence College: Teri, Andrea, Jessica, Mark, and Greg.

Teri is a senior psychology and anthropology double major from a city about an hour from Credence. Poised and confident, Teri seems to have made the transition from college student to young professional. She is finishing her degree at Credence in mid-year, so my interview with her was in her last days as an undergraduate student. She has already been accepted at a graduate school in counseling psychology and has a clearly

defined plan to become a therapist. Teri spent several months after high school working full-time at a daycare, and enrolled in January of the year after high school at a local community college where she spent two years taking classes while continuing to live with her parents. She transferred to Credence College her junior year to complete her undergraduate degree. Teri has been academically successful at Credence, with a 3.76 cumulative grade point average. Teri is the first person in her family to graduate from college, even among her extended family. Her father completed high school and has what Teri called a “labor job,” and her mother took a few college classes while she was raising Teri and her siblings, but she never finished a degree, and she now is employed at an office doing secretarial work.

Jessica hails from the southeastern United States though she spent the first six years of her life in her native country in Asia. Her biological parents died when she was an infant, and her biological grandmother took care of her until she emigrated from the Pacific Rim and began living with her “foster family,” as she called them, in the Southeast. Like Teri and Andrea, Jessica too is a first generation college student, though she believes she has two older cousins whom she doesn’t know very well who likely graduated from college. Jessica’s foster father attended some college, though never graduated, and now works for a large corporation as a computer analyst. Jessica’s foster mother did not attend any college and works in sales for a printing and paper company. Jessica has one older foster brother who is developmentally disabled and graduated from high school, but did not continue with any schooling. Jessica characterized herself as an overachiever in elementary and high school, skipping third grade, taking AP and honors classes, and eschewing classes like psychology and sociology in high school for math and

science college preparatory classes. Jessica's identity as an overachiever changed at the end of high school and in college, where she indicated that she has not done very well academically, with a C+/B- cumulative grade point average. Originally intending to become a pediatrician and return to her native country to set up health clinics, Jessica said she "didn't do too hot" in her introductory biology classes in her first year at Credence and decided to switch to a psychology major. At this point Jessica hopes to become a school psychologist and to diagnose learning disabilities. Jessica intends to go to graduate school, though she admits that the process of searching for a graduate program has been difficult for her, since she depended on her foster father to help her find a suitable undergraduate institution and she now doesn't have him available to "do the research for me."

Mark is a senior psychology and philosophy double major from a rural community in the Northeast. He began his college career at the state university in his home state but withdrew from classes after being seriously injured in a car accident midway through the first semester of his junior year. After recuperating for the rest of the school year, Mark enrolled at Credence College the following fall. Mark's parents were divorced when he was a child, and his father died during Mark's first year in college. His father had an undergraduate degree and had been an art teacher during Mark's early years, but then moved from teaching into retail during Mark's childhood. Mark's mother dropped out of college after completing two years to marry his father and then returned to school to finish her degree in elementary education after she and Mark's father divorced. Mark reported that she was unable to find a full-time teaching position, and so she pursued a master's degree in teaching and technology and works in the public

schools in his home state teaching in a vocational program dedicated to computer technology.

Mark is intellectually curious and well-spoken, with a healthy skepticism for convention. Perhaps most salient in my conversations with Matt was his use of the academic language of cultural critique. Catch phrases like “classism,” “ageism,” and “feminization of poverty” peppered his language, particularly when referring to his own life circumstances and family. I concluded the interview asking Mark if he had any further comments or questions about the issues we were discussing. Consistent with his identity as a self-motivated learner, Mark unexpectedly posed several seemingly prepared questions unrelated to our interview: “What do you know about Luce Irigaray?” and “what about Helene Cixous?” and “what is the linguistic term for language variation by region of the country?” These questions harkened back to our relationship from years earlier when I was a librarian when he frequently approached me with similarly sincere and eclectic questions. At this point in the interview, I switched off the audio recorder, and our identities of researcher and participant returned to those of librarian and student, and we ventured into the reference collection of the library in search of answers to his questions.

Despite Mark’s sincere love of learning, he is not an over-achiever with impeccable grades. His cumulative grade point average is 2.8, though he asserts that he doesn’t feel that his grade point average reflects how much he has learned. He aspires to become a lawyer, though he has not yet taken the LSAT or applied for admission to law schools. Therefore, his plan for the year after graduation is to volunteer for Teach for America and then attend law school the following year.

Greg is an ill-at-ease, hesitant senior psychology major hailing from a small town in the Northwest. The second youngest of six children with divorced parents, Greg has one sister who is nearly finished with her education to become a veterinarian, another sister who graduated from Credence with a biology major and is working as a phlebotomist, and one sister and one brother who began college and dropped out, and one brother who dropped out of high school and earned his GED. Retired now, Greg's father began college and dropped out to join the Army, after which he was a baggage carrier for a national airline. His mother graduated from high school but did not go to college, and worked as a home healthcare nurse before being injured on the job. She now breeds and raises dogs. In reflecting on his high school preparation for college, Greg asserted that he was ill-prepared and that his first college class, Introduction to Geology, "flipped [him] over." When I asked him how he gained his footing after being "flipped," he stated that he struggled in the first three or four blocks of his first year. He recalled, "Basically what I tried to do was I thought I had to know absolutely everything until I adjusted to realizing what teachers expected and so I was reading every little detail and in as much detail as I possibly could. I bet I spent 8-10 hours per night on homework. I eventually gauged to know what teachers expected. And now I am the average student now, and I can live with that."

Greg's difficult transition from high school to college is a common experience among first-year college students, as David Conley found in his study of high school and college students (Conley, 2003). Through his extensive research of students in high schools and colleges, Conley found that the expectations in high schools are not aligned with those in college, leading many students who have been admitted to college to

flounder once they begin classes (Conley, 2007). As will be evident in the portrait I draw of Greg in Chapter Four, his willingness to accept a challenge and his openness to constructive criticism from his professors who were committed to student learning helped him to find his footing in his college classes after his initial stumbles. The account of Greg's difficult transition between high school and college might be instructive when looking at issues of retention in a college setting. Perhaps one of the contributing factors to high drop-out rates in colleges and universities is the difficulty these students have in acquiring the academic language required for success in academia. Greg's story can illuminate the difficulties some students experience when beginning their college coursework.

Greg began college as an engineering major, but after getting a D in calculus, he declared a major in English, then history, and finally settled on psychology after taking social psychology. He chose psychology because he found it fascinating to "observe [people] and just figure out how people work and why they do the things they do." Regarding his plans for post-graduation, Greg indicated that he was tired of school and intends to return to his "normal roots" and work in construction or a similar job. Greg maintained a B average in college.

Andrea is a psychology major and women's studies minor. Halfway through her junior year, she has taken six of the ten psychology classes required for the degree in psychology. Like Teri, Andrea is from the same city about an hour from Credence. Like the other participants, Andrea also is a first-generation college student, with her father not having graduated from high school and her mother with a two-year associate's degree. Andrea's father works in maintenance at a government-run home for the elderly, and her

mother is disabled, after having been, in Andrea's words, an "accountant" with a two-year degree from a community college. Andrea has four older step-brothers, none of whom attended "a real *college* college," as she characterized it, with one as a police officer, another as an auto body shop owner, another as a manager of a grocery store, and the last as an employee at a golf course. Andrea has been successful academically at Credence, with a 3.6 cumulative grade point average. She wants to be a child psychologist and therefore intends to go to graduate school, but she doesn't have clearly defined plans for graduate school at this point. In class Andrea is reserved and serious, rarely participating in the whole group discussions, but in our interview she was animated, relaxed, and amiable.

Description of Participants: Professors and Librarians

The three professors I observed and interviewed, Anne, Sharon, and Karen, are all tenured members of the psychology department. During the year this study was conducted, the psychology department at Credence had just four full-time permanent faculty members: these three women and one man.

Anne arrived at Credence in the late 1990's and was granted tenure in the year previous to the data collection. Anne's area of expertise is adolescent decision-making, and she tends to teach classes in developmental psychology, such as child and adolescent psychology. During my time of data collection, Anne taught both the Fundamentals of Psychological Science and the Research Methods courses. Like most professors at Credence, Anne is earnest in her teaching, encouraging students to visit her in her office outside of class.

Sharon is a senior member of the department, having begun at Credence in the early 1980's. A leader on campus, Sharon is known for her wisdom and kind-heartedness and is often looked to for leadership when controversies arise on campus. Students perceive Sharon to be a "tough grader," though she has a very loyal following among serious psychology students. Sharon's area of expertise is animal behavior and learning, and she teaches courses in animal cognition. I observed her class in Learning and Behavior, designed as an intermediate-level course. As a full professor and widely known for her excellent teaching, Sharon continues to strive to improve her teaching consistently engaging in conversations about teaching with her colleagues.

Karen is also a full professor and is seen as a quiet but strong leader in the department and on campus. At Credence since the late 1980's, Karen is well-known on campus for her ethical and inclusive approaches to scholarly questions. Karen's scholarly work focuses on feminist therapeutic approaches in mental health treatment. A practicing therapist herself, Karen teaches courses in personality theories and therapeutic approaches in mental health care. Karen is well-loved among students, and she is indefatigable in her dedication to their learning.

The primary librarian participant is Amber, the Consulting Librarian for the Social Sciences. The time of data collection was during her second year at Credence. In addition to the Master's Degree in Library Science, she also recently earned the Ph.D. in Sociology. Amber worked extensively with all of the social science departments, but most often with politics, psychology, and sociology classes, particularly with certain professors in each of these disciplines. She was approachable and well-liked among the students, and she was well-respected by the faculty. Because Amber and I were

colleagues in my last year and her first year at Credence, she knew my area of research. Her knowledge of my research interests might cause some to question her objectivity in my study and thus to call into question the validity of the study. However, since this is a qualitative study, I was not attempting to strive for objectivity and to isolate variables in the way I would if I were conducting a quantitative study. In fact, Amber's knowledge of my interest in disciplinary discourses enhanced the study in that she was likely more conscious about disciplinary ways of being when she is interacting with students; thus, my exploration of students' experiences in learning the cultures of various disciplines was enhanced with Amber's prior knowledge of my research interests.

Data Sources

Data sources include audio-recordings of the four psychology courses, audio recorded interviews with each student and faculty participant, written data from participants, as well as a variety of printed literature published by Credence College (e.g. course catalog, descriptions of majors, etc.). The following list summarizes my main data sources:

- 1) Audio recorded interviews with each student to elicit demographic data and experiences regarding the learning of disciplinary discourses (approximately 45-60 minutes) (see Appendix B for interview questions).
- 2) Audio recorded interviews with each instructor (librarians and faculty members) to elicit demographic data and experiences regarding the teaching of disciplinary discourses (approximately 45-60 minutes) (see Appendix C for interview questions).

- 3) Observation (with audio recording and field notes) of approximately three two-hour class periods per week for each of four courses (6 hours per week for each 3 week course).
- 4) Observation (with audio recording and field notes) of any full-class library in the four focal classes.
- 5) Examination and analysis of written artifacts: students' written work from all of the psychology classes they had take at Credence up to the point of data collection; syllabi, assignment sheets, readings, and other handouts from professors and librarians.
- 6) Reflective journal entries that I composed after class sessions or interviews.

In my one-on-one interviews with the students, faculty members, and librarians, I first gathered socio-demographic data and then moved to more open-ended questions, some of which are prompted by the interviewee's previous comments. Therefore my interviews were largely semi-structured (Merriam, 2001, p. 74-75). All interviews with students took place in a quiet and semi-private area of a public space, for example, a group study room in the college library. The interviews with faculty members and librarians all took place in the individual's office or in another space that was convenient, for example, an on-campus coffee shop. Interviews with the professors occurred once the course they taught that I observed concluded. Because of this timing, I was able to draw questions and provide examples from the interviewee's class itself.

The data collection portion of this study spanned from August to February, with the bulk of the data being collected in the months of September, October, November, and

December of 2005. I scheduled the interviews and the collection of written artifacts at the convenience of my participants, hence, the extension of time past the primary data collection phase.

I met with each of the professors before the course began to explain the informed consent document, to explain my study, and to encourage them to alert me to anything about my presence in their classroom that they were finding distracting. Therefore, I met with Anne in August in preparation for her class in September and in October, Sharon at the end of October in preparation for her class in November, and Karen at the end of November for her class in December. Additionally I frequently visited with the professor after class for a few minutes about the class that had just taken place. These conversations tended to be about the content; often I had recently read an article or a book or heard a piece on National Public Radio that related to the subject matter of the class. On other occasions the conversations were about my research, with the professors frequently commenting that they were more aware of their disciplinary language since I was in the room. Still on other occasions, the professors and I discussed a particular student whose participation in class was noteworthy in some way. In short, my conversations with the professors after class were collegial, informal, and amiable. Though I did not use these conversations directly as data sources, I did maintain a reflective journal in which I often recorded relevant themes of these conversations.

During my time in the four classes as well as in the instruction sessions with the librarian, I audio-recorded and simultaneously transcribed on my laptop computer the spoken words of the instructors and students. For the interviews with the professors, the librarians, and the students, I audio-recorded and transcribed in the subsequent days.

Because I was not attempting a linguistic study in which I was interested in misspoken words or interrupted sentences, my method of transcription could be described as Bucholtz suggested: “naturalized transcriptions in which the text conforms to written discourse conventions” ((Bucholtz, 2000)p. 1439). Therefore, if, for example, during a lecture a professor stumbled over her words or began a sentence several times, I took the liberty to record the sentence in a grammatically appropriate manner. Admittedly, this type of transcription (as with any transcription) is one of interpretation and subjectivity; I know that I cannot claim neutrality in my transcriptions, and that my own positionality influences what I heard and what I recorded. However, my intention in my transcriptions of the classes was to capture the language typically used in the psychology classrooms at Credence, not to draw attention to the linguistic foibles of individual speakers. And my intention in my transcriptions of the interviews was to record the perceptions and experiences of students and instructors regarding disciplinary discourse, not to analyze the peculiarities in their use of spoken language.

Before I interviewed each of the students, they each gave me a collection of their written artifacts from the psychology classes they had taken thus far at Credence. Ideally, I hoped to get papers in both electronic and printed format: electronic so that I could easily manipulate the text during data analysis, and printed so that I would have access to the professors’ handwritten feedback on each of the papers. As might be expected, a few of the students did not have the hard-copies of their papers with their professors’ comments; for those students, I analyzed the electronic versions sans written feedback.

The following table (Table 3.1) delineates the numbers of classes, the numbers of papers, and the total numbers of pages of text that I had from each student. From these numbers, it is obvious that some students gave me only their final papers for their classes and other

Table 3.1. Details of each student's written artifacts

Student	Number of classes	Number of papers	Number of pages
Greg	7	15	196
Mark	5	10	110
Jessica	11	20	169
Andrea	6	7	70
Teri	7	16	134

students gave me every written document for their classes. I was able to categorize the all of the papers the students gave me into one of the following categories: 1) formal research papers with section breaks (introduction, methods, data, results, discussion), 2) article summaries or analyses, 3) case analyses, and 4) miscellaneous, including take-home tests, analyses of counseling sessions, papers about a leader in the field of psychology, etc.

Researcher's Role

My role throughout this study varied depending on the method of data collection I was using at any one point. When I was conducting one-on-one interviews, I was an active participant in the conversations. When I was visiting the classes, I collected data from the standpoint of an observer as participant (Merriam, 2001). Since I know the faculty members and librarians whose classes I observed and since I was familiar with many of the students in these classes, I likely had a more active role than I would have if

I would have been entering an unfamiliar setting. On many occasions, students engaged me in conversation, either about my research or about other topics, during their break or before or after class. Additionally, since I was known among both the instructors and students as a librarian, it occasionally occurred that I was drawn into the class discussion regarding relevant resources or a librarian's perspective on the topic of discussion. However, my central purpose in being in the classroom was as a researcher, not as a librarian or as a discussion participant. As Merriam states, "participation in the group is definitely secondary to the role of information gatherer" (Merriam, 2001, p. 101). Even if I had no formal interaction with the students or instructor during a class observation, I realized that my mere presence in the classroom affected the behavior of both the students and the instructor; as a qualitative researcher, my goal is not objectivity, but instead I expect and embrace my own subjectivities. My task, then, was to be sensitive to the effects I might have on the situation and to account for and document those effects as I analyze my data.

Because I was employed as a librarian at Credence College for the four academic years prior to conducting this research study, my familiarity with the institution and with many of my participants may be seen as a detriment to my study since I was not able to view my research setting with the fresh perspective of an outsider. However, this familiarity also gave me the distinct advantage of knowing the setting intimately even before I begin data collection. In this situation, I was a simultaneous insider and outsider to the community just as I am proposing the librarians are to the classroom. I understand the culture of the college and the relationships among students, librarians, faculty members, and the administration. Admittedly, however, I realize that my position as a

former colleague of the professors and librarians complicates my ability to be critical of their work. I genuinely like all of these people, and I believe they are all dedicated, talented teachers. My goal, then, is not to find fault with the current instructional practices at Credence College, but rather to point out both successes and missed opportunities in the education of undergraduate students.

Data Analysis

In order to be able to examine the issues involved in my research questions, I repeatedly combed through my interview transcripts, my transcripts of classroom talk, and the written artifacts that I collected from my participants. I then analyzed my data by recursively and continuously reading, identifying, comparing, and categorizing issues, patterns, and themes. As I did so, I refined my coding categories, collapsing similar categories together and separating large categories into two or more with more specific categories. Because I employed a constant comparative method (Glaser & Strauss, 1967), my analyses began as soon as I began data collection: the two cannot be separated into two discrete steps (Merriam, 2001).

My process of data analysis was to employ a hybrid of methods. Because I am involved in the study of academic culture, I used ethnographic analysis that “focuse[d] on the culture and social regularities of everyday life” in academia (Merriam, 2001, p. 156). In order to make use of ethnographic analysis, I conducted “thick description” of the peculiarities of disciplinary ways of being (Geertz, 1973). Being fully immersed in academic culture myself, I needed to make a particular effort to notice and document occurrences that have become naturalized due to my consistent and long-standing exposure. Though I did not endeavor to conduct a comparative study of disciplines (as

Becher and Trowler do in (Becher & Trowler, 2001)), I did intend to point out distinguishing characteristics of the discipline of psychology as I study students' acculturation into this disciplines. In order to facilitate my own ability to see the disciplinary characteristics, I selected psychology because it is an academic area that is not my own.

In addition to ethnographic methods, I also used grounded theory in which my theory is embedded in my data, and through constant comparison the patterns will emerge (Glaser & Strauss, 1967; Strauss & Corbin, 1998). That is, I did not approach my study with a hypothesis to test, but rather I approached my study with questions about student learning and disciplinary cultures, then allowed my understanding of my research situation to emerge from the patterns I detected in my data. As my theory developed from my data, I continuously looked for instances that disproved my emerging understanding. Additionally, grounded theory and qualitative methods more generally presuppose that I self-consciously analyze my data always in relation to my own subjectivities. Therefore, I have foregrounded my role as subjective researcher as I collected and analyzed my data. And finally, this methodology requires an epistemology that is not founded on positivism and objective truth, but rather one that is built on a nuanced understanding of data collection situated in a time and a place fully reflective of the context. One of my goals in my analysis was to show this socio-cultural context in relation to the data.

I also employed methods of Discourse Analysis, because I am interested in the ways that people use language to perform their cultural identities and their social perspectives. Within the context of my study, I am interested in the ways that faculty

members enact their identities as members of a particular discipline and the ways that students are learning these ways of being in particular disciplines. Because I am interested in membership within discourse communities, I am interested in issues of power: how expressions of language can be used as gate-keepers for inclusion or exclusion in the culture. To help me formulate my theoretical and methodological approach to language, I turned primarily to James Paul Gee (Gee, 1999), but I also used the methods and theories of Norman Fairclough (Fairclough, 1989) and Gunther Kress (Kress, 2003). I employed methods of Critical Discourse Analysis as appropriate to discern issues of power vis-à-vis insider/outsider status in an academic discipline and to analyze how language is a vehicle for ideology. For purposes of my study, I define power consistent with Foucault's notion of power: that it is inseparable from knowledge, that it is present in all relationships, and that it is both positive and negative. Finally, I used Bakhtin's theories of polyvocality to analyze the students' discourse as they learn the language of their discipline (Bakhtin, 1986).

Implications and Significance

This research is important because success in college is largely tied to the successful adoption of the discourse of one's chosen discipline. Being able to write, read, speak, and research as a member of the academic community makes a student an insider to that community. My study provides illuminating moments where students felt as though they were outsiders because of their frustration with not understanding the unstated rules of their discipline. Because the "rules" of a discipline's academic discourse are invisible and often unacknowledged by those immersed within the field,

students who could otherwise be successful can miss cues that may cause them not to be successful.

Preview of Subsequent Chapters

In this study, I intend to illuminate the complex combination of factors that contribute to undergraduate students' learning of the discourse of their chosen discipline. Chapter Four will examine the written work of the five students, focusing particularly on each student's developing facility with the language and conventions of psychology. This chapter might be seen as an examination of the output, the explanation of the concrete results of four years of learning about particular disciplinary ways of coming to know. Then chapters five and six will each examine the role of a different player in the students' learning of this culture. Chapter Five will focus on professors' role in students' acquisition of disciplinary language; Chapter Six will focus on librarians' role. These two chapters might be seen as an examination of the inputs. In Chapter Seven I will reflect on the overarching themes, successes, and missed opportunities that I discovered in the education of these five undergraduate students, and discuss implications of the study and recommendations for action.

CHAPTER FOUR: ANALYSIS OF STUDENTS' WRITTEN ARTIFACTS

Introduction

While written work is only one of many manifestations of an individual's acquisition of a disciplinary language and culture, it is probably the most concrete and the most straightforwardly observable. Additionally, in the academy, written work is the primary means of evaluating student learning; therefore, it is through the analysis of students' written work that I have appraised students' learning of disciplinary discourse. In this study, I am analyzing individual students' writing from courses spanning several years. This is quite distinct from the typical practice in higher education today in which student learning is evaluated episodically and in isolation in each individual course, distinct and separate from all other evaluations in other courses. Rarely do college and university instructors have the opportunity to look systematically at student learning over time and across courses to ascertain what and how students are learning through the course of their college careers. In this chapter, I analyze the written artifacts of each of the five student participants that they had written in psychology classes over the course of several years. Additionally, my student written data is augmented by transcripts from one-on-one interviews I conducted with each of the students. Therefore, by using both the written data and the interview transcripts, I was able to triangulate my data to confirm and augment my analyses.

This sort of longitudinal analysis of student learning may increasingly become part of the national discussion of undergraduate education, especially in light of the recent recommendations by the Commission on Higher Education on the Future of

Higher Education, commissioned by the U.S. Secretary of Education Margaret Spellings (U.S. Department of Education, 2006). The commission's findings and recommendations regarding learning and accountability speak directly to more systematic and deliberate assessment of student learning in institutions of higher learning. The report states, "parents and students have no solid evidence . . . of how much students learn in colleges" (U.S. Department of Education, 2006, p. 23). Since students' ability to document their membership in a discourse community through writing within their chosen major could be a valuable method of assessing student learning in college, this study may prove to be the sort of examination of student learning that is on the horizon. Such assessments may prove beneficial to faculty as a tool that allows them to confirm over time the degree to which students understand and are able to use disciplinary discourse.

Methodology

Each set of student's papers was quite substantial in length; therefore, to create the portraits of each student, I selected the most salient and distinct themes that emerged from having coded this sizeable corpus of data. Table 4.1 delineates for each student the

Table 4.1. Details of the written artifacts for each student

Student	Span of time	Number of courses	Number of papers	Total number of pages
Teri	4 semesters	7 courses	15 papers	134 pages
Jessica	7 semesters	11 courses	19 papers	169 pages
Mark	5 semesters	6 courses	10 papers	110 pages
Greg	6 semesters	7 courses	16 papers	198 pages
Andrea	5 semesters	6 courses	7 papers	73 pages
Averages	5.4 semesters	7.4 courses	13.4 papers	136.8 pages

number of artifacts and the period of time over which these artifacts were written. I coded the papers for each student in the order in which they took the courses; due to Credence's block schedule, students took all of their courses consecutively, instead of taking multiple classes simultaneously. Therefore, attempting to see progress from one class to the next was probably more straightforward in this situation than it would have been had my research site been an institution with a more traditional academic calendar.

Generally, the students tended to take the 100-level Fundamentals of Psychological Science as their first psychology class since it is the prerequisite for many other psychology classes; however, a couple of the students in this study began with a 200-level psychology course since there are several 200-level courses offered at Credence that have no prerequisites. According to the website describing the psychology curriculum at Credence, the 200-level courses "examine fundamental principles of behavior and serve as preparation for the 300-level courses."

Other than the fact that the Fundamentals of Psychological Science is a prerequisite for the other courses, there isn't a substantial difference in the level of difficulty between this 100-level course and the 200-level courses.

Most students took 200-level courses earlier in their career and 300-level courses later in their career, capped by the 400-level Senior Seminar course. All psychology majors are required to take the introductory 100-level course, three 200-level courses, three 300-level courses including Research Methods, the 400-level senior seminar, and a statistics course (offered by the Math and Statistics Department). While the psychology curriculum at Credence is articulated with prerequisites and a recommended order for progressing through the major, some latitude in the order of coursework is permitted.

Therefore, the students in this study did not necessarily take the 300-level courses only after having completed all of the required 200-level courses.

The complications and difficulties in obtaining and analyzing a group of students' papers from the course of several years were considerable. When I sought students' papers, I asked them to give me everything they had from all of their psychology courses in either paper or electronic format. If they had documents in both formats, I asked to have both (the paper versions included professors' comments, and the electronic versions facilitated my data analysis procedures). Some students gave me papers with comments handwritten in the margins by their professors, and some had only saved electronic versions of their papers, and some provided both formats. Some students gave me all of their written work (including short response papers as well as substantial culminating papers), some students gave me only their final papers in each class, and some students had only saved papers from select classes (and it is possible that they saved the papers about which they felt most pride). Additionally, the corpus differs with each student. Depending on the courses each student took, the assignments differed, and therefore there is not a direct correlation between one student's papers and another's. However, because Credence's psychology curriculum is well-articulated and because the faculty members have intentionally coordinated their courses into the curriculum, the philosophy behind each of the assignments is largely consistent. Additionally since Credence is a small college, the course selection within any major is relatively small, and the students in the study took a number of courses in common. The table below (Table 4.2) delineates the range of courses the students in this study took as well as the number of professors who taught each of the courses that these students took.

Table 4.2. Courses taken by students and number of professors who taught these courses

Course name	Number of students in this study who took this course	Number of professors who taught this course to students in this study
Research Methods	5 students	3 professors
Senior Seminar	4 students	1 professor
Adolescence	3 students	1 professor
Counseling and Psychotherapy	3 students	1 professor
Personality Theories	3 students	1 professor
Fundamentals of Psychological Science	2 students	2 professors
Abnormal psychology	2 students	2 professors
Child Development	2 students	1 professor
Psychology of Women	2 students	1 professor
Cognitive Psychology	2 students	2 professors
Learning and Behavior	1 student	1 professor
Social Psychology	1 student	1 professor
Multicultural Psychology	1 student	1 professor
Biopsychology	1 student	1 professor
Intimate Relationships	1 student	1 professor

As is evident from Table 4.2, students in this study had a fair number of courses in common. In ten of the fifteen courses that the students took, between two and five of the students had that course in common (with small variation regarding who was teaching the course), leaving just five courses in which the students in this study took a course experienced by none of the other participants in this study. Additionally, three-quarters of the classes (15 of the 20 classes) that the students took were taught by one of the three professors included in this study. The students in this study, then, had substantial common experiences, having taken many of the same classes and having had many of the same professors. By first analyzing each student's written work and then pointing out commonalities in patterns among the students' papers, I have been able to make visible the learning processes of the students' education; in subsequent chapters I will suggest

the influences that likely brought them to this point. The written data coupled with the interview data are exceedingly rich with evidence of each student's development as a budding scholar.

My intention in examining these five students' written work was to highlight the process of acculturation into the disciplinary community that these five students underwent through the course of their undergraduate years. By examining, coding, describing, and analyzing these data of the students' written work taken from three or four years of their college careers, I was able to shed light on the process by which these students take up a disciplinary language, setting the stage for the later chapters in which I will suggest possible influences that contributed to this process. Additionally, particularly with certain students, I examined the roadblocks to their acquisition of disciplinary discourse and their difficulties in joining the discourse community.

Methods of Coding

My method for coding these written student data was to comb through the students' papers repeatedly, first in an effort to develop coding categories, and in subsequent times to code the data. My two broad categories were "Appropriate language of psychology" and "Not appropriate language of psychology." With this lens, I was able to gain insight into how students were showing membership in the discourse community of psychology. I drew my knowledge about what specifics characterized writing in psychology by consulting the *Publication Manual of the American Psychological Association*, because it is widely recognized as the text that prescribes and describes the specifics of quality writing in the field of psychology ((American Psychological Association, 2001)). Additionally, Madigan, Johnson, and Linton (1995) discuss the

epistemology of the APA style, providing more elaboration on the reasoning behind the stated requirements of the APA manual ((Madigan, Johnson, & Linton, 1995)). I also found valuable an overview about the characteristics of the published literature in the field of psychology by Zabel and White (Zabel & White, 2002, p. 347-349). Finally, I used handouts provided to the students by their professors and oral reminders that the professors offered in the classes that I attended and transcribed (both of which I will discuss in Chapter Five) to add to my understanding of the conventions of the discipline of psychology.

Within these two broad categories of using and not using the language of psychology, several sub-categories emerged as I read the papers with the lens of membership in this particular discourse community in mind. Under the category “Appropriate language of psychology,” I coded for the following categories:

- Appropriate paper organization
 - Section breaks (particularly those designated by the APA manual as appropriate for papers in psychology, for example, “method,” “discussion,” etc.)
 - Topic sentences in paragraphs (contributing to the cohesiveness of a text)
 - Transitions (contributing to the logical progression of a text)
 - Summative statements often at the beginnings or ends of paragraphs or sections summarizing or synthesizing previous paragraphs or sections (contributing to the understandability of a text)
- Use of sophisticated language of the field

- Appropriate use of psychology-specific terminology (for example, the appropriate use of the term “significant” in reference to statistical significance or the appropriate and skillful incorporation and explanation of statistical equations into the prose portion of the text)
- Appropriate choice of titles for papers (the APA manual instructs writers to have a descriptive and straightforward title and to avoid clever or cute titles)
- Use of external sources
 - Use of published literature of field (including appropriate documentation and the use of studies published in the peer-reviewed literature; also, the avoidance of citing popular web pages as sources in a scholarly paper)
 - Use of established theories (for example, drawing on the work of foundational theorists in psychology and integrating and applying the theories to the current problem in the paper)
- Appropriate use of APA format (including correctly documented citations, paper format, and general writing guidelines)

Under “Not appropriate language of psychology,” I coded according to the following categories:

- Citation and APA issues (including problems with paper format, incorrect or incomplete citation information, or not following the APA manual’s general guidelines on writing)

- Tone or language problems that do not show a fundamental misunderstanding of the field of psychology (including writing problems that are not specific to the field of psychology, such as trouble with clarity. This group also includes inappropriately informal language for a particular assignment)
- Tone or language problems that do show a fundamental misunderstanding of the field of psychology (for example, the use of a form of the word “prove” when referring to the results of a research study can indicate a lack of understanding of the speculative nature of psychological research)
- Inappropriate or insufficient use of external literature (for example, instances in which findings of a study are cited or statistics are cited with no way for the reader to know where the writer found this information)
- Lacking in explanation (for example, instances in which a student makes a claim and hastily moves on to another point without elaboration or explanation)
- Lacking in the tone of scholarship (for example, if a student writes an assignment such that it is a “bound” text for which the audience seems only to be the professor of the class, instead of writing in a manner in which the paper could be read and understood by someone outside of the class.)
- Academic language (for example, instances when students made connections between other classes or other disciplines and the present text. This category included students’ integration of knowledge across course and disciplinary boundaries.)

These codes allowed me to examine students' growing sophistication in their use of the conventions of psychology to help me to understand the process by which undergraduate students acquire disciplinary discourses.

To illustrate how I coded my data, perhaps an example will be helpful. In examining how the students demonstrated their understanding of the concept of statistical significance (which they would have learned about in their required statistics class, the required research methods class, and many of their other courses), I searched across all of the papers of each student for instances of the word "significance" (and linguistic variations on the form of this word) using the "file search" feature in Microsoft Word. When all of the instances of this word usage by one student had appeared, I looked systematically at each usage to see how the word was used. If the word was used in a manner that did not refer to statistical significance (for example, if the student referred to a "significant experience"), I eliminated this instance from my pool. Once I had only instances of "significance" used to refer to statistics, I looked at the word or words preceding the word "significance" to see if the student had modified it with an adjective, for example, "slightly significant" or "very significant." Since statistical significance is either significant or not, any use of a modifier suggested an insufficient understanding of the concept of statistical significance. I then looked at the instances to see how students used this term in their papers over time; typically students grew in their sophistication in using this term, which suggested a developing understanding of an elemental concept in psychology.

The majority of my coding was not as unambiguous as this example is. Most of the coding categories required subjective judgment, but I took measures to ensure

consistent treatment in applying the codes to my data. My process was as follows: first, I read over one student's entire corpus of work, making informal notes about the salient features of this particular student's writing. Next, I applied my coding categories to that student's papers in the order in which the student wrote the papers and took the courses. As I coded the data, I kept a separate document open into which I pasted particularly illustrative or poignant portions of data coupled with my coding as a preliminary way to develop my rendering of the student. After coding all of the student's written work, I reviewed my notes and developed the central themes that I wanted to include in my portrait of that student. Because of the sizeable amount of data and coding, I strove to select the most illustrative and illuminating portions of the data to include in my portraits for each student. Finally, I triangulated my own perceptions of the student's work and development as a student of psychology by looking for connections between the written data and the interview data from that particular student. Figure 4.1 shows a sample paragraph taken from Teri's work to illustrate my coding techniques. From this brief

Figure 4.1. Example of coding of students' written work

Arnett (2004) defines self-esteem as “a person’s overall sense of worth and well-being” (p. 167). Research shows that self-esteem tends to decline during preadolescence because people at this age are more aware of what their peers may be thinking or saying about them and their appearance. Native Americans are more likely to have lower self-esteem than Whites, as well. Also, Susan Harter has found that physical appearance is most strongly related to an adolescent’s overall self-esteem, followed by social acceptance from peers. Jean had little social acceptance from her peers during this time, but the only physical characteristic that she was concerned about was her clothing. She was teased because they were poor: she didn’t mention ever feeling critical about the way that she looked. This is a strong diversion from popular research on girls at this age.

- Comment [A17]: Good use of literature for definition
- Comment [A18]: Specific citations to research?
- Comment [A19]: Not a scholarly tone to use
- Comment [A20]: Need to cite research here
- Comment [A21]: APA format error. Date?
- Comment [A22]: Good use of external source
- Comment [A23]: Psychology language
- Comment [A24]: Inappropriate word choice

example, one can see a typical example of the density of coding, most of which will not be discussed in the portraits because of the sheer number of pages of student writing that I coded. Instead, I distilled my coding of the data into portraits that represented the whole of the data in a relatively succinct manner.

Because each of the students' written work displayed different characteristics, the coding categories illuminated particular aspects of the students' strengths and weaknesses. I used the coding categories as a lens through which I examined the written data, and in the process of coding, I discovered certain coding categories helped me to see a particular student's work more clearly. For example, because clarity and organization were major struggles for Greg in his writing, I assigned the code "tone/language that does not show a misunderstanding of the field" to his work more than I had for other students who exhibited more facility with these writing issues. Similarly, Mark showed unusual facility with making connections across courses and disciplines, and so his papers more than the other students' papers included coding for "academic language." I found that all of my established coding categories were useful for all of the students at some point, but some were more useful than others when I was coding any particular student's work.

Additionally, though all the codes provided insight into students' acquisition of disciplinary discourse, some revealed more about the acquisition of academic language than others. For example, Greg struggled with clarity in writing generally, not just with psychology, so often my coding of his text included codes for tone or language that is inappropriate but does not necessarily show a misunderstanding of the field of psychology. Alternatively, when students used causal language such as "prove" when

studies in psychology cannot definitively prove findings but rather suggest an explanation, I applied the code for “tone or language that does show a misunderstanding of a fundamental tenet of the field.” This second code revealed more about students’ grasp of the language and concepts of psychology than did the first, which suggested something about their writing skills more generally. For this reason, when I gleaned the salient themes from my coding of each student’s corpus of work, I tended to pay closer attention to the categories that provided a clearer insight into students’ acquisition of disciplinary discourse.

Through the process of coding, portraits of individual students emerged. I suggest that these portraits illustrate the ways in which individual students take up academic discourse and internalize it. Once they have internalized the academic discourse, students are then able to represent their understanding in the written documents that they compose for their courses.

Researcher’s Subjectivity

I approached the students’ written artifacts with my own lens from having been a high school English teacher, a college composition instructor, and an academic librarian at Credence College (in the years before embarking on this research study). In my life as a teacher in these different contexts, I have read and evaluated thousands of student papers, many of them similar to those that I analyzed for this study, even though I was not teaching psychology. Therefore, I approached this task fully aware of my own subjectivities and my own biases regarding student writing. The issues I noticed and the coding categories that emerged from the student papers were shaped by these

experiences. And because I have taught writing and commented on many student papers myself, I have a familiarity with undergraduate student writing that allowed me to see these student papers clearly as in some ways similar to and in some ways divergent from undergraduate student writing in other disciplines. Finally, my years as an academic librarian at Credence College overlapped with these students' early years as undergraduates. Therefore, I was familiar with all of the students before they became participants in my study, mostly from my assisting them in their research in their arts and humanities classes. Because of these experiences, I acknowledge my subjectivities, but as a researcher, I am able to look beyond them and not be controlled by them.

Portraits of Five Students

Student writing provides a lens to see the degree to which students have successfully taken up scholarly discourse. The following portraits, distillations from hundreds of pages of students' written work and from one-on-one interviews with the students, describe the features of these students' written artifacts that show their membership or their lack of membership described along a disciplinary continuum in the disciplinary discourse of psychology. I begin with Teri, in many ways an exemplar for the steady acquisition of disciplinary discourse, who began her undergraduate studies as an enthusiastic but naïve overachiever and became a mature and professional individual headed for graduate school in counseling psychology. The next three portraits might initially seem to be about similar students: Jessica, Mark, and Greg all maintain a B grade point average. However, these three students could hardly be more different. Jessica is a socialite who has the potential and the background to be an excellent psychology student at Credence; however, her hasty completion of assignments and her social distractions

have hindered her academic achievement, and though she does show progress in her four years, the progress is modest. Unlike Jessica, Mark is an engaged, passionate student who is committed to learning and to his education. However, he simply is uninterested in his grades, and he prefers to augment his coursework with independent reading of philosophical texts. Though he does moderately well in his courses, Mark is not interested in putting in the extra effort needed to maintain an A average when he would rather spend his time independently pursuing intellectual topics that interest him more. And Greg is unlike either Jessica or Mark, in that he is earnestly dedicated to his studies in psychology, but his difficulties with writing have made his B average a considerable accomplishment. Though Greg has no intention of continuing his education after graduation, he does not shy away from taking on extra challenges such as independent studies, simply because he is fascinated by the subject of psychology. Finally, Andrea's portrait might be seen as a bookend to match Teri's. Like Teri, she is an overachiever who strives to excel in all of her classes, though she does so in a quieter, more reserved way than Teri does, especially evident at the conclusion of Teri's undergraduate career. The following pages, then, are portraits of five students' work drawn from my deep coding and analysis of extensive written and interview data.

Teri

Teri epitomizes the type of student who works hard to learn the disciplinary discourse of her major and eagerly accepts feedback as a way to help her transform her ways of communicating. Having already spent two years and having already taken four psychology courses at a community college before transferring to Credence, Teri showed sophistication in her writing even from her first paper in the first term at Credence, which

was in her junior year. Teri had been exceedingly successful academically at the community college—she was accustomed to earning grades of A+ in her classes—and she felt overwhelmed during her first class at Credence, a 300-level biopsychology class. This contrast between her experience at her community college and her experience at a four-year college mirrors the commonly held view (though perhaps unjustly) that community colleges have lower standards than four-year institutions. In recalling her experiences in the biopsychology course during our interview, Teri called that first course a “rough introduction,” a “rude awakening,” and recalled that her “head was spinning” throughout the class. Teri reported that she worked harder in that class than she ever had before and was pleased with the B+ that she earned. The first two papers she gave me were from this biopsychology class, the first an outline (written in prose) with citations for a research proposal and the second the research proposal itself.

The titles for these two papers from Teri’s first class, “The Effects of Total Sleep Deprivation in the Rat” and “The Effects of Total Sleep Deprivation in the Rat Using White Noise” are illustrative of her firm grasp of the convention of simple, straightforward language in the field of psychology. The use of language that does not bring attention to itself for its clever phrasing or use of metaphors is characteristic of the field of psychology, as asserted by Madigan, Johnson, and Linton (1995) (Madigan et al., 1995). The *Publication Manual of the American Psychological Association* directs writers bluntly: “eliminate[e] redundancy, wordiness, jargon, evasiveness, overuse of the passive voice, circumlocution ... clumsy prose ... gratuitous embellishments, elaborations of the obvious, and irrelevant observations or asides” (American Psychological Association, 2001, p. 34-35). Teri exhibited a firm handle on this style,

particularly evident in her titles for papers, from her first class at Credence. Though all of her papers show ability in the use of this style, Teri's handle of this writing style increased in sophistication through the course of her psychology classes. For example, in her outline and her research proposal for the biopsychology class, Teri effectively used phrases such as the following: "constant auditory stimulation" and "inability to maintain body temperature and cessation of grooming," "appetite reinforcement activity to keep rats from achieving REM sleep," "the experimental animal's startle reflex," and "stimulus-response cycle." All of these examples show her attempting to use language as transparently as possible to convey her meaning and also a grasp of the "scientific" tone and jargon of psychology literature.

However, Teri also used language that indicated her naiveté and inexperience with the language of psychology. For example, in her research proposal, Teri refers to REM sleep as "this intriguing sleep stage." Her use of a value-laden adjective to describe REM sleep indicates a naïve tone that is not consistent with APA's recommendations for straightforward language. Also in her introduction Teri states, "Unfortunately, researchers have not gathered as much meaningful information as they anticipated from these experiments." This statement is an attempt to justify the field's need for her own research proposal, which demonstrates an understanding of the way that scholarship progresses. However, her statement about the researchers' intentions, particularly without citing anything from the literature, is presumptuous and shows her inexperience with writing in a scholarly domain. In her conclusion, she makes a grandiose statement characteristic of passionate but immature writers: "More research on the effects of sleep deprivation can lead to further information on the purpose of sleep and answer questions

that many have been wondering for centuries.” Teri’s professor did not offer handwritten marginal corrections or suggestions in any of these cases of naïve phrasing. One incident in which Teri’s professor did suggest different language was when she stated, “these same aspects need to be tested as well” and her professor crossed out “aspects” and replaced it with “measures” and replaced “tested” with “monitored.” Small interventions such as the substitution of these two words perhaps helped Teri write with more sophistication as she progressed through her classes. These instances of her professors’ comments are examples the many small ways that professors model discourse that is appropriate to the discipline. As evidenced by her written artifacts, as Teri took more classes and wrote more papers, the frequency of these sorts of language missteps decreased steadily.

In Teri’s succeeding psychology class, a 200-level Cognitive Psychology during the second semester of her junior year, Teri exhibited many of the same tendencies with her writing. Prefixing several of her sentences with “The following research conducted by” moved her professor to cross out the phrase and add the marginal comment, “watch out for unnecessary phrases.” Teri also frequently lapsed into vague language that is not characteristic of prose in psychology. For example, her first sentence for this paper, which was a review of literature, Teri states, “The research examined for this paper begins on the basis that cultures are different.” At the end of the paper, Teri states, “I think that the research reviewed here was semi-well-done, because I notice a lot of flaws in the research and believe that there are a lot of changes that should be made for future studies.” In response to this statement, her professor circled the phrase “semi-well-done” and marked, “too informal,” and to the full statement, she responded, “a summary of

these issues would be helpful here.” While these issues are consistent with Teri’s performance in her first psychology class at Credence, increasing sophistication was evident in her handle of APA style, such as her adoption of a running head and a header with her page numbers.

The use of adjectives such as “slightly,” “very,” or “almost” to modify the adjective “significant” signifies a misunderstanding of statistical significance as used in psychology (Kazdin, 2003). Teri seemed to struggle with this concept nearly throughout all of her classes at Credence. She showed her strongest handle on this concept about half way through her time at Credence. Teri had her third psychology class at Credence, the 300-level Research Methods course in the first semester of her senior year. The three papers from this class are all formal research reports from experiments that the class designed and conducted as a whole. Perhaps because of the class’ emphasis on statistical methods, Teri’s language about statistical significance is quite sophisticated. For example, in her first paper, she includes the following phrases, “statistical significance of 0.74” and “[a]ll subscales had significant correlations.” In her second paper, Teri included the following: “our t-test results ... showed no statistically significant difference” and “[t]he t-test on the data of the subject favorability rating on the numerical scale found $t(60)=1.90, p=.06$, which is marginally non-significant.” Finally, in her third paper, she refers to “Significant main effects.” The use of variations of the term “significant” in these instances reflect Teri’s understanding of both the language of psychology and the fundamental meaning of statistical significance.

However, when Teri was in later classes, those that did not emphasize statistics to the extent that Research Methods did, she lapsed into a lay or non-scientific use of the

word “significant.” For example, in the class just following Research Methods also in her first semester of her senior year, Teri took Psychology of Women. In an article critique for this class, Teri wrote, “The researchers also admit that their statistical findings of the differences of men and women were not very significant, and explain the similarities between the sexes, as well as the differences among the age groups.” In her marginal comments, her professor marked “practical significance?” near this sentence, presumably attempting to push Teri toward a more deliberate and precise use of this term. Unfortunately, Teri seemed not to understand or internalize her professor’s comment, because in her subsequent class in the next term also in the first semester of her senior year, Teri repeated her miscue in an article summary in an Adolescence class. Teri wrote that a “slightly significant difference also existed in the parental rejection portion of the study.” Teri does show at least one instance of understanding the use of this term in her last psychology class, Senior Seminar, which she took as her last class in her second semester as a senior. In her article summary for this class she stated that “‘achievement failure’ was significantly related to suicidality.” This single instance does not show necessarily that Teri had come to understand the way that statistical significance was appropriately expressed in psychology papers, but perhaps it suggests some growth from her earlier expressions. Additionally, this example suggests that repeated rehearsal by the student and repeated affirmation or correction by the professor may be necessary for a student to learn academic discourse, especially when the concept is particularly troublesome or difficult for the student to grasp.

Teri seemed to demonstrate her most fluid and polished prose in a 300-level Counseling and Psychotherapy class at the end of her first semester of her senior year.

Since Teri aspired to become a therapist, had completed an internship working in a therapy environment, and was to graduate only a semester later, it is not surprising that she would seem most comfortable and proficient with therapy-oriented language. Her paper, succinctly titled “A Review of Cognitive Behavioral Therapy and Interpersonal Therapy as Applied to a Case Study of a Depressed Adolescent,” demonstrated considerable sophistication in the written conventions of psychology, even those with which she had previously struggled. For example, in Teri’s introductory paragraphs, she repeatedly refers to the published literature in her explanation of the background of the issue she is investigating. For example, she states, “According to a 2005 research study, over 28 percent of adolescents experiencing major depressive symptoms in the last year,” and then she provides the appropriate parenthetical citation. Teri exhibits several skills of note here. She avoids depending on a direct quotation, but rather distills the study into its essence and paraphrases concisely. Secondly, she avoids drawing from “folk wisdom” as one of her professors frequently chided students about using, and instead supports all of her background information with appropriate citations to the literature. Also, Teri is demonstrating an understanding about the interdependent nature of scholarly literature; she builds the foundation for her own paper by drawing from previously published articles. And finally, Teri’s facility with the disciplinary language in this paper suggests that students’ desire to learn the subject matter may enhance their ability to take up the discourse.

In addition to using published literature dexterously, Teri’s own language throughout this paper shows a notable sophistication in style that her previous papers did not as clearly possess. Numerous instances occur in the paper, such as the following

examples: “both interpersonal and cognitive behavioral therapies have proven to be effective therapeutic approaches,” and “A [cognitive behavioral therapist] would collaborate with the client to both work toward her goals and evaluate her progress during therapy, which helps to establish the therapeutic alliance,” and “The [interpersonal therapist] then leads the process of client-directed goal setting.” All of these instances, among numerous others not cited here, show a fluidity and a confidence in her prose that only sporadically characterized her prose earlier in her college career. This more confident voice emerged at the intersection of Teri’s own advanced studies and her having taken a course in which she had intense interest: Counseling Psychology. As a capstone to her college career, Teri fortuitously took a course in which she was especially engaged as a learner and had the intellectual tools to showcase her years of learning in this final paper.

Jessica

Unlike Teri, Jessica represents a type of student whose lackluster performance and half-hearted commitment to learning suggests that she is resisting acculturation into the disciplinary culture. As an overachiever who took advanced and AP classes throughout high school, who began piano lessons when she was in first grade, who skipped third grade, and who entered college with the intention of being a pediatrician and returning to her native country to practice medicine, Jessica would appear to be the type of student destined to excel at Credence. However, it would seem that the lure of college socializing was stronger than her ambition to excel, and so Jessica tended to be a lackluster student with more ability than she frequently exhibited. In a case study written for her Adolescence class, Jessica reflected on her own history with alcohol and

socializing. She stated, “I told myself in high school that I would never drink. ... The friends [I] hung around in high school did not party or drink. However, when [I] entered college, [I] met new friends and they happened to be drinkers and partiers Hanging around them soon led [me] to do the same things as they did.” However, in explaining her own less than outstanding performance in college in an interview, Jessica focused on her abilities and work habits, without explaining how it was that she had been successful before entering college even with these same qualities. She stated:

I don't think I've been very successful. I have a bad habit of procrastinating. Part of it is procrastination, and the second part is actually trying to focus. Because it takes me a long time to focus. It will take me like two hours to read just 10 pages. And I don't test very well. ... I'll take how ever long the professor will let me. I just can't focus. I'm horrible at testing, but I can write papers.

These words have the tone of someone who struggles in an academic environment, not someone with Jessica's background and credentials. In retrospect, I wish I had followed up this response with a question about how these qualities manifested themselves before she began college, but in the moment of the interview, I moved on to another topic.

Jessica's corpus of writing did not show the dramatic improvement in language usage and sophistication in writing that Teri's and some of the other students' papers did. However, her writing did demonstrate steady growth, particularly with her use of psychology-specific terminology. In our interview, Jessica reflected on her growth over the four years by commenting, “I think I definitely know more about the field. Like I know the terminology better. I know the format of how to write it rather than just writing how I used to write back in high school. I kind of know what the professors are looking for in a paper now.” Her last sentence in this quotation seems to encapsulate how Jessica perceives her goal in writing papers: to figure out what the professor wants.

While this is a common sentiment among undergraduate students, it suggests an immature view of scholarly endeavors, one in which the professor is the sole authority and the student is writing merely to complete an assignment and to earn a grade. This immature approach to intellectual activity may work against the effective acquisition of disciplinary discourses, as it seemed to for Jessica. A more intellectually mature student might instead speak of engaging in a quest for knowledge and attempting to become a participant in the ongoing scholarly conversation of the field. William Perry (1970) theorized about the stages of development in undergraduate students in his historic study of Harvard college students (primarily male) in the 1950's and 1960's (Perry, 1970). While admittedly this study consisted of a select and homogenous population, several subsequent studies have extrapolated from his foundational work to make it more inclusive of other populations and have validated Perry's basic scheme (see, for example, (Baxter Magolda, M. B., 1992; Belenky, Clinchy, Goldberger, & Tarule, 1989; King & Kitchener, 1994). In his longitudinal study, Perry theorized that students typically begin college thinking in dualistic terms (white/black, good/bad) with a strong deference for authority figures who know the "truth." Students at some point typically move to a mindset of multiplicity, in which they begin to recognize uncertainty, but still believe truth is knowable. Students might progress to a relativist frame of mind, in which the self is an active maker of meaning, and they have a recognition that knowledge is contextual and relative. Finally, Perry's last stage, commitment within relativism, focuses on responsibility and engagement with the production of knowledge. Perry and later researchers found that this final stage was not typically found among undergraduate

students, and that graduating seniors usually reach either the level of multiplicity or relativism (King & Kitchener, 1994; Perry, 1970).

The tone of Jessica's papers, even the final ones from her senior year, suggests a mindset of multiplicity. Her papers without exception seem to be assignments that she is completing for a grade instead of as a means to self-expression and discovery. For example, in her culminating paper for Senior Seminar, Jessica still frames the paper as an assignment, not a text that could stand on its own as a scholarly piece. Senior Seminar is a course intended to be a culmination of the students' academic preparation in psychology and to launch the students into graduate-level work, and the final paper is a comprehensive literature review on a very focused topic. The students are to present a cohesive and synthesized review of literature followed by an evaluation of the literature and a proposal of directions for future research. In her senior seminar paper, Jessica wrote the following as the first sentence in her abstract: "Research studies that were gathered for this paper focused on themes concerning perceptions of facial attractiveness." While this statement is descriptive of the content of the ensuing paper, it frames the text as an assignment ("gathered for this paper") instead of framing it as a contribution to the field of psychology. The *Publication Manual of the American Psychological Association* directs writers of a review article (which this assignment essentially was) to begin with a statement of the topic, followed by the "purpose, thesis, or organizing construct," followed by the sources used and the conclusions (American Psychological Association, 2001, p. 14). Jessica does follow her first sentence with several sentences explaining the central themes of the literature she has included, and she closes the abstract with the following two sentences: "Studies reveal that there is a

common perception of physical features found to be attractive cross-culturally. These physical features indicate characteristics of youth, such as large eyes, small nose, small chin, and full lips.” While these statements do explain the conclusions of a subset of the studies, other conclusions were reached by the other studies in her literature review. This abstract seems to reveal an insufficient understanding of the standard organization and purpose of an abstract, as well as a view of writing assignments being for the sole purpose of completing course requirements.

Another way in which Jessica demonstrated a rather provincial approach to paper writing was in her lack of full citation information for assignments in which she was to analyze a published piece of research. Evidently, Jessica assumed that the professor knew the bibliographic information for the article, and thus she did not need to include it. This is another glaring example of Jessica’s view of her written work as being useful only within her own specific classroom environment, not for any purpose outside the particular classroom context. Unfortunately, this pattern of omitting critical bibliographic information persisted from Jessica’s first papers all the way to her final papers before she graduated with her psychology degree.

Jessica did show increasing sophistication in her ability to manage and present quantitative data in her papers. In her first psychology class, the 100-level Fundamentals of Psychological Science that she took in the second semester of her first year, Jessica concluded her results paragraph in a paper reporting on an experiment that the class conducted with the following sentence, “Mathematically speaking, the results can be calculated as such: $[t(43) = .56, p = .58]$.” While this expression of quantitative data shows an understanding of the conventions for articulating numerical results as evidenced

by her use of “ t ” to refer to the computed value of a t test and her use of “ p ” to refer to the probability, she doesn’t yet show that she can incorporate in a graceful way the numerical data into her verbal text. She constructs the sentence as an artificial holder for the statistical data. This sentence can be starkly contrasted with any number of sentences in her papers from her Research Methods class, a 300-level class she took during the first semester of her senior year in which she incorporated the statistical data into her prose seamlessly. For example, in the results section of a paper describing an experiment that the class conducted, Jessica states, “Analysis of variance reveals no significant difference for gender: $f(1, 100) = .563, p = 0.455$. The mean for females was 21.60, with a standard deviation of 1.23. The mean for males was 20.27, with a standard deviation of 1.” Jessica is better equipped to manipulate and express sophisticated statistical data by her senior year than she was in her first year of college.

In our interview when I asked Jessica about whether she had had any critical moments of insight or “a-ha” moments when she felt like she was learning how to be a psychology student, she cited this Research Methods class. She recalled,

I didn’t have a clue what was going on with the research methods. Like the experiments that [the professor] would give us that we would do and then we would read articles and then analyze them and incorporate all of them together. I didn’t know what I was talking about in my papers. I just started writing, and I would get the papers back and she would have comments on them and I would read them and I was like oh, so that was the point of that experiment. So that happened a lot in research methods because we had those huge experimental papers due.

In Jessica’s case, it would seem that receiving written feedback from her professor on her Research Methods papers pushed her understanding of psychology conventions in ways that other educational experiences had not. Interestingly, earlier in the interview when I asked Jessica about how she dealt with the written comments on her papers, she

responded, “I read through them, and that’s about it.” Though the papers I collected from Jessica did not include written comments from her professors, I could surmise from repeated errors (for example, usage errors, like interchanging “affect” and “effect,” or APA errors, like neglecting to include the year after the first mention of a research article) that Jessica did not consistently internalize professors’ written comments and apply them to subsequent papers.

By Jessica’s junior year, she demonstrated growth in her tendency to define specifically the variables in an experiment about which she was writing. For example, in the second semester of her junior year, Jessica wrote a paper about long-distance relationships for her Intimate Relationships class. As she reviewed each of the published studies that she included in the paper, she carefully defined what the authors meant by “long-distance relationship.” For example, for one study, she explained, “long-distance relationship had to be distanced by at least two hundred miles and the partners be in the relationship for at least three months,” and for another study, she explained, “the term ‘long-distance’ was left for the participants to define themselves.” This level of specificity in definition was absent in previous papers that she wrote, and it appeared quite consistently in the papers that she wrote after she took this class. This newly acquired inclusion of operationalized definitions for variables seems to signify a significant leap in her understanding of the importance of replicability of research studies in psychology.

Jessica’s increasing facility with incorporating statistical data into her prose and with expressing definitions of variables precisely both signify important development in her thinking like a novice psychologist. Some problems persisted throughout her writing,

but these two advances seem to be more significant than many of her writing's inadequacies because these two signify a growth in understanding fundamental concepts in psychology. Many of the smaller problems could likely be easily rectified without a significant mental effort for Jessica. For example, throughout her papers, Jessica titled her papers with gimmicky titles, such as putting a twist on a well-known adage. For example, sample titles include, "Long Distance Relationships: 'Out of sight ... makes the heart grow fonder'" and "'Beauty is in the Eye of the ... ' People.'" While this practice might be praised in an introductory composition class, it is no longer appropriate for upper-division psychology papers, for which both of the cited papers were written. Since it seems that Jessica did not acquire an understanding of appropriate titles in psychology from the instruction of her professors and from reading numerous published articles, perhaps Jessica needed a more direct intervention. However, in learning this convention, Jessica would not need to relearn a fundamental concept of psychology, but rather adjust her semantic understanding of an appropriate title in psychology.

Mark

Mark represents the type of student who is intellectual curious but resistant to adhering to convention, even disciplinary conventions that his professors are trying to help him acquire. Having transferred to Credence in his junior year from a large public university on the East coast, Mark began his time at Credence having already declared psychology as a major and having already taken several psychology courses, but having done little writing in psychology since the assessments at his former university were primarily in the form of objective tests. At Credence he began taking both psychology and philosophy courses, after reading philosophy independently in the half-year that he

was not in school between his attendance at his former university and his time at Crendice; he later declared a double major in psychology and philosophy, though by the end of his college career, he was more interested in philosophy than psychology, as he reported to me in our interview. Mark's writing, especially his last papers, is characterized by an integration of his philosophical pursuits and psychology. More than any of the other students in this study, Mark tended to ponder the significance of the topics of his papers in a larger philosophical context, particularly in relation to power relations between the privileged and underprivileged in our society. While this type of speculation might not be welcome in an article submission to a current scholarly psychological journal, for an undergraduate paper, it shows an understanding of the relevance of academic labor to the societal problems and an ability to integrate learning from multiple disciplines. Additionally, Mark's melding of philosophy and psychology harkens back to the early days of the field of psychology, when the two fields were one.

Closely related to his interest in philosophy and perhaps most notable about Mark's papers is his attention to social iniquities and underprivileged groups. This interest culminated in his senior seminar paper on the topic of the unreliability of eyewitness accounts. In this paper Mark began with a narrative of two young African-American men, one who robs several convenience stores, and the other who is convicted for the crime. While this literature review could have been written simply as an account of the research that has been done in this area, Mark chose to include larger questions about power in relation to ethnocentrism, race relations, and socio-economic class. Instead of suggesting areas for further research in psychology, Mark suggested an idealistic overhaul of the legal system and an augmentation of education and social

programs to reduce the incidence of crime. While his proposals are outside the purview of the purpose for the assignment, they suggest that Mark viewed academic problems in a societal context, indicating his intellectual inquisitiveness and sense of humanistic responsibility.

This eagerness to ponder the philosophical ramifications of psychological problems seemed to manifest itself in his earlier papers in language that was broad and sweeping, with vast generalizations that are not consistent with APA style. For example, in a paper from early in his junior year at Credece in which he was discussing two existential psychologists, Mark stated, “Another existential psychologist (who I am sure was influenced by Frankl) is Mihalyi Csikszentmihalyi.” Mark’s tendency to be expansive with his language resulted occasionally in statements such as this one, for which he did not offer a citation. While it is possible that this psychologist was influenced by the other psychologist, Mark’s overconfident assertion of influence is inconsistent with APA’s straightforward and formal style. In another similar situation, Mark contrasted experiences of an Asian-American woman with those of a “normal American woman” in a paper applying Jung’s theory of animus and anima to this case study. These two examples seem to exhibit Mark’s young enthusiasm for his subject; he seems to be without the filters that would help him to refine his language to assertions he could actually support.

Ironically, Mark often objected in his papers to stereotyping and generalizations of the underprivileged, but he made similar presumptuous claims of certainty about different groups of people. For example, in his Personality Theories class that he took in his first semester of his junior year, Mark argued that a flaw with the study he was

analyzing was that the researchers had used only psychology majors for their participants. He objected, stating that the results would have been different had they used “students with different majors (for example, a person studying Physical Education).” While he is attempting to give an illustrative example of his objection to the study, his parenthetical example belies his own biases, of which he seems not to be self-conscious. It seems that his choice of physical education to compare to psychology was set up to be a binary. We might guess that Mark thought of psychology majors (himself being one) as being smart, serious, and scholarly, while physical education majors he thought of as the opposite of those attributes. Notable in this example is that Mark seems to examine issues of power when his analysis puts himself in the victim role or when he is sympathetic with the victim. However, he is less critical of his own position of power when he chooses to be (as in the example of the physical education students as compared to the psychology students). His tendency to be selectively critical of power imbalances and to lack the introspection required to see his own biases suggests an intellectual immaturity. However, since all three of these instances of generalizations or stereotypes were from papers that he wrote in the first semester of his junior year, my data suggest that he tempered overconfidence and perhaps became more self-critical in subsequent classes, since these sorts of overstatements virtually disappeared by the time he wrote his senior seminar paper.

Another characteristic of Mark’s early writing was the use of somewhat sophisticated vocabulary (not specific to psychology), though often the language seemed to be used more for effect than for meaning. For example, in an early paper, he concluded with the following sentence: “Concerning all the mysteries presented in this

discussion, I have not been able to discern any reasons for them from my knowledge and data from extensive research.” In another paper from this same semester, Mark wrote, “Through our discussions in class, we were able to extrapolate of few specific aspects that pertain to this.” The use of a subordinate clause in the first example and beginning his sentence with a prepositional phrase in the second example indicate an attention to sentence variety and a development past the exclusive use of simple sentences. Syntactical choices such as “discern,” “extrapolate,” “aspects,” and “pertain” indicate an attention to vocabulary that implies that he is attempting to sound scholarly. These examples are just two of many similar items that appeared throughout his early papers in which Mark seems to be attempting to sound scholarly through his performative use of vocabulary and sentence structure, even though neither of these sentences is economical in terms of the minimal meaning expressed in quite a few words.

Mark’s clumsy use of language forms and structures might be seen as a form of Bakhtinian ventriloquism (Bakhtin et al., 1994). Mark is in the process of acquiring a scholarly language, and part of this process is “trying out” the language of scholars whose words he has heard and read. Before particular language structures and forms become an inherent part of his lexicon, Mark needs to experiment with the language, perhaps ineffectively at first. Should the language become his own, he will presumably be able to use it more meaningfully than he was able to do in the previous examples. Mark is an example of a student who learns language through hearing it repeatedly and by trying it out numerous times before it becomes a fluid part of his lexicon.

Mark demonstrated in his senior seminar paper that he was able to marry the language and the meaning, such that his use of sophisticated vocabulary and sentence

structure did not draw attention to itself and instead seemed an appropriate expression of his developing scholarly voice. He tempered his use of inflated vocabulary considerably, and at this point wrote in a fluid and articulate manner. For example, in his senior seminar paper, he stated, “Social influence, in the aforementioned study, has shown the ability to increase false identification.” While this sentence does not contain particularly sophisticated language, the language is transparent and straightforward, as the APA manual directs, and it is economical in its proportion of meaning to words. Later in the same paper, Mark states, “Because of eyewitness confidence malleability, things began to look even worse for [the falsely accused individual described in the opening narrative], as Wells (1999) discusses; juries are heavily persuaded by confident eyewitness testimony.” With the exception of the misplaced semicolon, this sentence is a sophisticated expression: it is full of meaning while also including strong, specific vocabulary and an appropriate sentence structure for the context.

Another area in which Mark showed significant development in the acquisition of the scholarly conventions of psychology was in his use of direct quotations in his papers. In his first paper, Mark loaded each paragraph of his literature review with direct quotations from research articles. In this four-page section containing 858 words in total, a staggering 401 of the words were direct quotations. Mark’s vast overuse of quotations in this literature review suggests his inexperience in writing reviews of literature, and it also suggests his lack of understanding of the content of the research articles, hence, his inability to paraphrase the main points of the articles. APA style does allow for use of direct quotation, though they are to be used sparingly when a paraphrase would not sufficiently convey the meaning (Madigan et al., 1995). In disciplines in which meaning

is seen as inseparable from the language that expresses it and in which language is not seen as merely a transparent conveyer of meaning, such as many disciplines in the humanities, the use of direct quotation is much more common and accepted. Since composition instructors typically hail from English departments, overuse of quotation is a common mishap among novice students in psychology courses. Of course, in this particular paper, even the most liberal standards would still likely deem Mark's use of quotations overdone. However, by Mark's final class, Senior Seminar, he had refined his ability to paraphrase, and though he did sporadically include a direct quotation, the majority of his literature review included appropriately cited paraphrases of previously done research.

Perhaps more than any other student in this study, Mark seemed closer to Perry's final stage of intellectual development, a commitment to relativism. Even though Mark's grades were only little better than mediocre (he maintained a 2.8 GPA), he approached learning with passion and independence, with more regard for his learning than for his grades. In my interview with him, Mark indicated that he felt like his GPA did not reflect how much he had learned. He objected to the practice of grading in general, saying, "I really like how Hampshire and Evergreen [Colleges] do the whole grading thing. They avoid grades altogether and have the written evaluation. I think that maybe if we could—this maybe would be too radical for most schools—but if we could have a short summary of each student because I feel, once the work got harder once I got to college, I realized I'm still learning a lot, but my grades are going down." For Mark, being in college is about learning and becoming a more thoughtful person, not just doing the work to get high grades and a diploma. In fact, he expressed disdain for fellow students who come to

class unprepared for class discussions. In response to my request for him to describe a successful student of psychology, he stated, “[someone who] always [does] the reading for class. There are these people who come to class and they think that no one knows that they didn’t read. And they are just so obvious it’s embarrassing. I’d like to throw a chair at them or something. And I think there’s a lot of merit in saying to people like that, ‘Do the stinking reading, and if you don’t, don’t pretend you did.’” Mark takes his learning seriously and wants his classmates to do the same.

Later in the interview, I asked Mark to describe any critical moments when he felt that he had made an intellectual leap. He described his realization of the fallibility of authority figures. He stated, “I started realizing hey just because my teacher told me that, it could be complete bullshit. Later I took a logic class, and there’s a term for it: ‘fallacy of authority.’ This happened when I started doing my own independent reading in philosophy, and I really started delving into political theories that aren’t read in mainstream academia. ... Maybe there is no right or wrong.” This attitude of relativism coupled with Mark’s strong commitment to social justice would likely cause Perry to characterize Mark as having an intellectual maturity that is somewhat rare among undergraduates. Mark intends to go to law school after his undergraduate studies, but whether he does pursue further schooling or not, he seems likely to continue his self-education in a committed and consistent manner. His enthusiastic use of libraries and his frequent engagement with librarians to facilitate his independent learning on topics of interest mark him as an autodidact who will continue to learn and grow intellectually after graduation.

Greg

Greg is the type of student who struggles to learn the ways of communicating in a disciplinary manner, but despite his substantial efforts, remains bamboozled by much of the assistance that his professors offer. Tentative and socially ill at ease, Greg struggled throughout college with his communication skills, both orally and in writing. In my interview with him, he reported that he generally performed much better on tests than on papers because, as he recounted, “my English skills are not the best, so I mess up a lot of grammar and miss[...] key points that [professors] wanted me to stress more than I did. Well, that I thought I did but I didn’t.” When I pressed him further to explain his difficulties with writing, he simply stated that the problem is “clarity.” In looking at his psychology papers throughout his years at Credence, I concur with his self-assessment. In his earnest attempts to sound scholarly and to write college-level papers, his language became convoluted, and the meaning was frequently obfuscated. This problem persisted from his first paper in psychology through his senior seminar paper near the end of his senior year, though he successfully learned strategies for reducing the incidence of troublesome parts of his papers as the years passed.

Examples of Greg’s difficulties writing abound in his papers. For instance, in the final paper for his first psychology class, Social Psychology, at the end of his sophomore year, Greg wrote, “Upon realization, the flawed nature of this idea, we adopted a simple over all analysis of all persuasive tactics and their effectiveness.” It seems from this sentence that Greg is trying to sound scholarly by using phrases like “upon realization,” “flawed nature,” and “persuasive tactics,” but unfortunately, the meaning of his sentence is clouded by his language usage and sentence structure. Similarly, he included the

following sentence in a paper in his Personality Theories class during his junior year:

““Lastly, the sample size is much too small to produce populace generality inferences.”

Interesting about this sentence is his use of forms of words that are inappropriate for this context, but whose root word or cognate could be appropriate in the sentence. For example, he might have written that the sample size was too small to “generalize” to the larger “population,” or he might have used the verb “to infer” when writing about the ability to generalize, but his use of the terms “populace,” “generality,” and “inferences” each has a related but unsuitable meaning for this sentence in its current structure.

Even though Greg continued to struggle with language usage through his final papers of his senior year, he nevertheless had developed several strategies for coping with his deficiency. In my interview with him, Greg cited three different sources for assistance with his writing: the Writing Studio on campus, a friend who worked for the Writing Studio who helped him with his papers outside of her work time, and roommates and other friends who would “at least read over the paper” before he submitted it. Additionally, he relied heavily on professors’ comments on his rough drafts so that he could revise for his final drafts.

For example, in his senior seminar paper, his professor wrote “unclear” next to two sentences in his abstract that read: “There are several intermediate methods to approaching treatment efficacy, such as involving the parents in treatment or conducting research at schools. With any hope, the efficacy results of these psychotherapies are an indication that the prevalence rates which are predicted as high as 13% can be reduced.” Again in these sentences, Greg has packed them with scholarly sounding language, even though the meaning is not clear. His use of “efficacy” is a particularly notable term,

since this word is used frequently in the published psychology literature and by professors in class. In this senior seminar paper, he seems to be trying it out, hoping to sound like an insider in the psychology community. In his final draft of the same paper, he was able to use “efficacy” appropriately with the following revision to the two sentences: “There are several additional treatment methods that have been shown to have efficacy, such as involving the parents in treatment or conducting research at schools. The results of these psychotherapies are an indication that the prevalence rates for child SAD, which are predicted as high as 13%, can be reduced.” Presumably, Greg sought assistance from his friend who helped him rework these sentences so that the meaning was clearer than in the original.

In addition to the progress Greg made regarding his ability to revise his prose to achieve greater clarity, Greg also demonstrated progress regarding the organization of his papers, particularly evident in his opening paragraphs. For example, Greg opened his final paper in his first psychology class with the following paragraph, “Analyzing under what conditions persuasion is most effective and when children develop methods of persuasion that are more effective are dependant themes of our topic. The primary condition is the familiarity with the person to be persuaded. The research by Diane Carlson Jones (1985) looked into friendship expectations versus self-need in persuasive tactics.” Greg knew that he needed to include the topic of the paper, the dependent variable, the independent variable, and reference to published literature early in the paper. Unfortunately, though, in this paragraph, he briefly refers to each of these components without explanation or logical transitions. This inadequate introductory paragraph can be

contrasted with a much more sophisticated introduction in his Abnormal Psychology class from his senior year. He wrote:

Obsessive-Compulsive Disorder (OCD) is a debilitating anxiety disorder that affects one to two people out of every hundred. The Diagnostic and Statistical Manual IV (DSM IV) (1994) describes the disorder as “recurrent obsessions or compulsions” that take a lot of time or “cause marked distress or significant impairment” (DSM IV, 417). Obsessions are long term thoughts and ideas such as thoughts of being contaminated, hurting someone, or having things arranged in a particular order. The resulting behaviors referred to as compulsions are utilized to neutralize the obsessions such as repeatedly washing/cleaning, checking around, or organizing things around them.

After this introductory paragraph, Greg next included a paragraph explaining the types of OCD and the common ways for diagnosing and treating the disorder, followed by a literature review. This introductory paragraph demonstrates the degree to which Greg was able to craft a paper using the conventions of psychology.

While Greg did make progress regarding his clarity and his paper organization, he did persist in some missteps in his journey into the language of the discipline, despite his professors’ repeated reminders. For example, repeatedly his professors wrote on his papers and reminded the students orally in class and on written handouts that in psychology it was inappropriate to use the term “prove” and to use more tentative terms like “suggest” instead when referring to research study results. Nevertheless, Greg included a form of the word “prove” when writing about the results of research in four different papers, starting with his first psychology paper and continuing even into his senior year. This persistent oversight might indicate that Greg did not fully understand the fundamental tenet of psychology: that researchers cannot ever prove that their results are “true” or “correct.” However, considering Greg’s intense interest in research coupled

with his difficulty with language expression, I might suggest that he did understand the concept but his struggles with language inhibited him from selecting a more appropriate term when he was writing. Of course, since learning in academia is largely assessed based on one's written expression, one might argue that his using the language inappropriately reveals his lack of understanding.

Even though Greg struggled with clarity in his writing, he persevered in a writing-intensive major because, as he recounted in our interview, he “fell in love” with psychology after taking his first psychology course, Social Psychology during his sophomore year. Greg also did not avoid situations in which he was required to write extensively; in fact, he sought out opportunities in addition to his required courses for his major that allowed him to pursue his intellectual interest in psychology, even though these opportunities increased his writing requirements. For example, he took an independent study with one of the psychology professors during the summer before his senior year in which his only assessments were his written research reports. In my interview with him, Greg indicated that he had taken the independent study because of his sincere interest in primary research in psychology. His preference in his psychology classes was studying the published research and conducting research projects himself; in our interview he called himself the “oddball” in all of his psychology classes because, unlike most of his classmates, he was not interested in therapy and in understanding emotions, but instead was interested in research.

Greg displayed an earnestness in his studies that one might not expect of someone who disliked writing, who had average grades, and who had the intention of becoming a construction worker after college. For example, his senior seminar paper was thirty-

seven pages long, when several of his classmates whose senior seminar papers I also have were closer to twenty or twenty-five pages. Repeatedly in our interview, Greg revealed his humility and honest self-assessment. For example, when I asked him to describe a successful student in psychology, he stated, “[someone who] can discuss things clearly and in an understandable manner, which I know I definitely am not able to do.” When I asked him about how he dealt with professors’ comments on his papers (which tended to be corrections instead of praise and were often prodigious), he stated, “if [the professors] just want me to change words or add sentences, I just drop in the teacher’s suggestions without giving it a second thought. I know that’s probably not the best way but... And then if they don’t like something, most of the times it’s they don’t like what I’ve said or the way I’ve said it, so I just delete it and start from scratch and reword it.” When I asked Greg if it frustrates him to receive criticism about his writing, he stated, “I just understand that I have my weaknesses, so I just change it without even thinking.” Greg is the sort of student whose self-deprecation and humility are both surprising and endearing. He also represents the kind of student who is well-intentioned but fails to take advantage of the scaffolding provided to him by his professors. Though we do not know why he fails to take advantage of his learning opportunities, we might speculate perhaps that he doesn’t understand the importance of his professors comments and suggestions, that he isn’t sufficiently reflective about the ways he could improve his performance, or that his timeframe for learning the disciplinary conventions is much longer than his classmates’ timeframes. Whatever the reason, he is a student for whom his professors’ suggestions seem not to have the intended impact.

Andrea

Andrea, like Teri, is the type of student who is eager to learn the disciplinary conventions of her major. But unlike Teri, Andrea seems not yet to have a mature understanding of the disciplinary conventions. For her, more time and repeated affirmations and guidance from her professors may lead her in time to an understanding of psychology like that of Teri's. An earnest and serious student throughout college, Andrea showed adeptness with writing already in her first psychology class, Fundamentals of Psychological Science, during the second semester of her first year. Evident already in this paper were examples of a refined writing style punctuated by the expected demonstrations of naïveté and inexperience. Though she seemed to be a strong writer when she entered college, Andrea no doubt benefited by being the student employee for the psychology department for her sophomore and junior years, and so she was surrounded by the language and culture of psychology on a daily basis outside of class. In this position, Andrea wrote the psychology department's newsletter that is published a few times each academic year. In writing the newsletter, she honed her writing style with tutelage from the department chair who oversaw the newsletter's publication. Additionally, Andrea worked in the research lab of another of the professors, where she assisted with upkeep of the research pigeons and with the experiments themselves. For this same professor, Andrea transcribed the bibliographic information and the abstracts for selected papers from conference programs into a database that this professor used in her research. These enrichment experiences—getting consistent one-on-one assistance with her writing, assisting in a research laboratory, and regularly typing bibliographic information and abstracts for psychology research

papers—undoubtedly had a formative effect on Andrea as she became acculturated into the culture of psychology in an academic environment. Additionally, her close contact with her professors in her student employment position likely provided her with many opportunities to discuss course material with her professors in an informal setting, further assisting in her ability to take up the language of the discipline.

In her first psychology paper, Andrea began with a sentence that carries the tone of the opening of a paper from an English class about a poem or a novel. After an opening question, her next sentence reads, “That is the question psychologist P.J. Lattimore decided to answer in an article entitled, *Stress-induced eating: an alternative method for inducing ego-threatening stress*, published in *Appetite*, in 2001.” Though this sentence is grammatically solid, her professor intervened by crossing out almost the entire sentence and inserted a date and one word, leaving the following, “That is the question Lattimore (2001) addressed.” This reduction in the number of words from thirty to seven with the addition of a bibliographic reference to the end of the paper, typifies the type of feedback Andrea tended to receive in her early papers, especially in this first one. This first example seems to signify a transfer of writing styles from another discipline to psychology. Students like Andrea may appear to be less capable than they are in a course because they don’t yet understand the disciplinary conventions. Thus, writing ability in one discipline does not necessarily transfer to another.

It is likely that Andrea received the bulk of her writing instruction in high school, and perhaps even thus far in college, from language arts and English classes; Andrea was reasonably applying what she learned in her English classes about how to introduce a primary text in a paper to this new situation. It is probable that a former English teacher

instructed her, as I did with my own high school English students whom I taught, to introduce the literary text early in a paper with author, title, and historical context. Andrea attempted to transfer this writing skill to this new genre of writing, and in this context, this information was unnecessary and superfluous (or at least needed to be substantially abbreviated).

Later in this same paper, Andrea again composed grammatically sound (though admittedly not concise) sentences that her professor marked as wordy and verbose. Andrea wrote, “To test these predictions, the author decided to perform an experiment to test his hypothesis. By using an experiment as a method of research he could manipulate the variables.” Her professor responded by crossing out both sentences and replacing them with the following: “The study employed an experimental design.” In our interview, Andrea acknowledged that this professor tends to cross out and reword sentences in her papers more than other professors. She states, “With [this professor], ... she will just change your words everywhere. I don’t know. Like here. ‘Difference’ to ‘main effect.’” As Andrea said this last statement, she was pointing to instances in her Research Methods paper, which was taught by the same professor as for her Fundamentals in Psychological Science class. Having sat in on the bulk of the Research Methods class in which Andrea was enrolled, I know that the professor had emphasized in class why the term “main effect” was a specific and appropriate term to describe difference between two experimental results. Andrea, however, still seemed confounded by the professor’s suggested change in terminology, several months after the class had ended. This confusion suggests that students like Andrea may need time and repeated

instruction about disciplinary discourses before they have internalized the discourse and are able to use it skillfully themselves.

While some writing instruction experts might take issue with this professor's practice of crossing out Andrea's words and replacing them with other words, in this situation, the effect was quite dramatic and was perhaps more effective than a vague comment in the margin about needing to be more concise or less wordy. While Andrea did not consciously understand what her professor was suggesting, she did seem to learn to be more concise in her subsequent papers. For example, in her final paper in Research Methods which she took during her first semester of her junior year with the same professor, Andrea began the paper with a series of questions about the topic, and then stated, "Ford, Ferguson, Brooks, and Hagadone (2004) conducted two studies investigating the relationship between humor and anxiety." She then followed this sentence with a statement that clarified what exactly the researchers investigated, and then she stated their hypothesis. Each of these sentences was succinct, direct, and packed with information.

Andrea did not seem to be particularly insightful or reflective about her own application of professors' comments on her papers; in fact, during the interview she contradicted herself regarding whether and how she used professors' written feedback. In our interview, when I asked Andrea how she processed the professors' notes on her papers such as those noted above, she responded, "That probably scares me the most. Because remembering this now, I was like, 'Oh, my gosh, because this is right, but she's crossing out sentences and just like writing one word,' and I was just like, how am I ever going to learn to do that?" When I pressed her to reflect on how she might have learned

to write in a more disciplinary-specific way for psychology, she stated, “[Some professors] give their classes handouts on how to write in APA style. So that helps, and I think reading a number of different articles, you kind of pick up on the language. And just from [the professors’] corrections, and maybe word choice in class maybe?” Here she admits that she does use professors’ comments. However, later in the interview when I asked her how she processed the comments that professors wrote on her papers, she denied being affected much. She stated, “No. I just kind of read the comments and I put it away. ... The individual comments don’t really mean much.” And so even though Andrea seemed not to have been conscious of her use of professors’ written comments and other ways she learned the language of the discipline, when pressed, she was able to suggest four distinct sources for learning the communicative styles of psychology.

Particularly notable about Andrea’s corpus of writing was her sophisticated use of psychology-specific language, especially when she was writing about her primary interest, children and language acquisition. When she was able to choose her own topic for her papers, she often tended toward some variation of this theme. For example, in describing and analyzing children’s language that she had witnessed during an observation at a day care center for her Child Psychology class in her second semester of her first year, Andrea used the following words fluidly and appropriately all within a few paragraphs: “holophrases,” “nominals,” “pragmatics,” and “overextension.” Later in the paper, she used “telegraphic speech,” “morphemes,” and “protoimperative communication.” Undoubtedly, these were likely linguistic terms that she had learned in class and was applying them to the situation she had observed, but she did so with a level

of comfort and sophistication that shows a distinct facility with language and a clear understanding of the concepts.

Also notable about Andrea's work is the distinct development in her use of cohesion devices in her papers. In her early papers, paragraphs often began abruptly without a transition from the previous paragraph, and she seldom used words like "however" or "therefore" to show the relationship between her ideas. Additionally, she tended not to have topic sentences or summative statements that provided her reader a clear way of following her logic. Several of her professors noted on her early papers that she lacked transitions in her papers. In her last papers that she gave me, however, Andrea had begun to use summative statements, logical connectors, and transitions with fluidity and confidence.

Her growth in this regard was particularly evident in a paper for her Personality Theories class that she took in the spring semester of her junior year. In this paper, the students were to do a personality assessment about themselves by taking six different personality tests of the many that they had studied in class. The students then wrote about the results of each of the six tests, drawing conclusions about the usefulness of each of the tests. A less skilled student might simply have written about one test after another without drawing connections among the tests and synthesizing the commonalities and differences among personality theories on which the tests are based. However, Andrea adeptly commented on the similarities and differences between the tests, explaining specifics of both the tests themselves and the theories to differentiate them from each other. For example, in her section about the Snyder Self-Monitoring Test, she refers back to her previous section about the Jung Typology Test by stating, "Like the Jung

typologies, the self-monitoring trait is associated with a number of descriptive characteristics and behaviors.” She continued to work across the theories, making connections and providing context for her self-assessment.

Related to her development in her use of cohesion devices, Andrea also began to draw from external theories as she wrote her papers. This ability to construct meaning from specific knowledge gained from that particular class, from other classes, even from classes in other disciplines, shows an integration of learning that some other students in my study did not necessarily exhibit. When students write their own texts in which they integrate the language signifying specific knowledge gained from their college experience, they are demonstrating that they have internalized the knowledge and have constructed meaning for themselves. For example, in her Adolescence class in which she wrote an analysis of her observations of children at a day care center, Andrea explained how a particular child whom she observed exhibited “theory of mind,” and explained that the children knew since the age of three or four that “others have different perspectives than they do.” This application of a psychological theory to a situation that she observed demonstrated that she had learned the concept well.

Overall, Andrea’s written artifacts show a student who began college as a strong writer, but who did not yet understand the conventions of psychology. Andrea was able through the course of her psychology classes to take her already developed writing skills and hone them so that her final papers show both a sophistication in language use and an integration of knowledge. Andrea’s papers indicate that she will be well-prepared for her intended graduate studies in child psychology.

Connections and Remaining Questions

All of these portraits indicate growth in the students' mastery of the discourse of their chosen discipline. However, students began at different places, developed at different rates, and ended at different places. Teri and Andrea might be held up as model students who took up the language of psychology enthusiastically and dexterously, though Andrea had not yet reached the point that Teri had. Mark, too, demonstrated significant sophistication in his writing by the end of his undergraduate career, but he did so more for his own interest and based on his own standards than Teri and Andrea, who fit conventional definitions of academic success (high grades). Jessica and Greg each did not fit conventional definitions of success, with mediocre grades and a more modest display of development in their acquisition of disciplinary language. However, the reasons for their lackluster performance are starkly different: Jessica seemed to have an abundance of ability but chose to put her academic achievement as a lower priority than other parts of her life like her social life, while Greg struggled with his writing in a writing-intensive major while working assiduously.

Having examined these students' written data, I remain with several lingering questions. How has each student's sense of identity affected how readily he or she has taken up the academic discourse? What factors interfere with students' ability or willingness to show their membership in an academic discourse community? What experiences are particularly influential in students' acquisition of a disciplinary discourse? Where are the missed opportunities in the academic environment that could facilitate students' learning of academic discourse?

Several themes emerged in common from my analysis of my focal students' written work and interviews.

- The students' ability to write effectively in one discipline did not necessarily transfer seamlessly to another. Students in the study spoke of their frustrations with writing when they moved from discipline to discipline in their undergraduate studies.
- To varying degrees, the students needed repeated rehearsals of the language of the disciplines, along with consistent guidance and affirmation from their professors in order to acquire the disciplinary discourses. Some students took more time with this process, and others acquired the language more quickly. This finding suggests that looking at students' performance over time, as I did with this study, perhaps is necessary to assess students' learning of disciplinary discourses.
- Students in the study varied in their responses to professors' comments and suggestions, and the tenor of students' responses seemed to correspond to how effectively these students acquired the discourse. In other words, students who perceived professors' suggestions on their written work to be negative and critical tended to be defensive and not internalize the professors' assistance. On the other hand, students who perceived professors' suggestions to be assistance in learning to write more effectively in the discipline tended to be more receptive to the comments and to endeavor to learn from the suggestions. This finding echoes Shaughnessy's and Bruffee's assertion that professors should think

of their task in assessing writing as a way to acculturate students into the discipline, not to point out errors in the students' writing.

- Students' interest in course material and their desire to learn accelerated their acquisition of disciplinary discourses. Conversely, students who are uninterested and who lack motivation tended to resist the acculturation into disciplinary ways of communicating.
- Students who perceived course assignments as exercises completed only to fulfill course requirements and not as a means to engage in the scholarly conversation tended to resist the acquisition of disciplinary discourses.

All of these themes drawn from my data suggest that students take up disciplinary discourses in different ways, even though these students experience similar educational interactions in their classes. Hence, looking not only at what instructors are teaching but also at what students are learning is integral in understanding the process of learning disciplinary discourses.

In Chapter Five I will be examining the influence of the faculty members on students' development, and in Chapter Six I will be examining the influence of the librarian, as well as suggesting areas in which either the librarian or the faculty member missed opportunities to help students learn the language of the field.

CHAPTER FIVE: ANALYSIS OF PROFESSORS' ORAL AND WRITTEN ACADEMIC DISCOURSE

Introduction

In Chapter Four, I provided portraits of students to show how they each had developed in their use of written disciplinary language over the course of several years. Though, admittedly, the factors that influenced their development are myriad, one significant contributor to the students' development was their professors' modeling of the use of disciplinary-specific language. In my interviews, each of the students referred to their professors' use of disciplinary language as a factor in their acquisition of the jargon. In this chapter, I highlight the language that the students typically hear in their classes, specifically from their professors. I am interested in the ways the students take up this language and use it to deepen their understanding of the content and to represent their knowledge of the subject matter. Using transcripts from the four psychology courses that I attended in the fall of 2005, I coded the professors' language for patterns of usage that can be associated with the development of language in the students. In this way, I documented the possible ways that students take up the language of a particular academic discipline.

The students' attribution of their learning of disciplinary language to their professors is consistent with established educational theories regarding the apprenticeship model of learning. Vygotsky argued that learning occurred in a social context and that apprenticeship played a major role in learners' development (Vygotskii & Cole, 1978). Lave and Wenger proposed a model of situated learning within a community of practice in which learning is not so much an acquisition of knowledge as it is a gradual process of

social acculturation. In this model, the learners slowly move from the periphery of a community toward the center, acquiring the community's language by hearing it and by practicing it themselves. They argue, "the purpose is not to learn *from* talk as a substitute for legitimate peripheral participation; it is to learn *to* talk as a key to legitimate peripheral participation" (Lave & Wenger, 1991, p. 108-109). Finally, Collins, Brown, and Newman compliment Vygotsky's notion of apprenticeship and Lave and Wenger's notion of situated learning by introducing the concept of cognitive apprenticeship (Collins, Brown, & Newman, 1989). They argue that in order for apprenticeship to be an effective teaching method, the person in the role of the teacher must make explicit the implicit processes involved in carrying out complex skills. As will be evident from the data presented in this chapter, the professors in the study did explain the ways of knowing and the ways of being a scholar in psychology, but perhaps a more intentional and deliberate effort in this direction could have facilitated students' learning even more.

Background Information Regarding the Courses Observed

The four courses that I attended and included in this study were Fundamentals of Psychological Science, a 100-level prerequisite for virtually all other courses offered in the psychology department and thus offered many times per year; Learning and Behavior, a 200-level elective typically offered once per year; Research Methods, a 300-level course required of all psychology majors and thus taught multiple times per year; and Senior Seminar, a 400-level course also required of all psychology majors as a capstone course and offered several times per year. The Fundamentals course and the Research Methods course were taught by Anne, the Learning and Behavior course was taught by Sharon, and the Senior Seminar course was taught by Karen. These four courses are

representative of typical courses that any psychology major at Credence would likely take over the course of several years. All five students in this study had taken the three required courses (Fundamentals, Research Methods, and Senior Seminar) over the past several years, and one of the students had elected to take the Learning and Behavior course (this student took the course in an earlier offering by the same professor). Two of the five students were in the Research Methods course that I attended, and four of the five students were in the Senior Seminar course that I attended. None of the students in this study was in the Fundamentals course that I attended (since the students were all advanced psychology majors, and the Fundamentals course is frequently the first psychology course students take). However, one of the five students had taken Fundamentals from the same professor in a previous year. The curriculum of the Fundamentals course is one that is especially well-articulated at Credence, and though it is taught by several different professors, the content delivered in this course is quite similar, no matter which professor is teaching it.

Because of Credence's flexible instructional calendar, the courses that I observed met anywhere from two to five hours per day, Monday through Friday over the course of one month. Most often the morning instruction time spanned from 9:00 AM to 11:00 AM, and then on some days the class reconvened in the afternoon for another session from 1:00 PM to 3:00 PM or later. The morning sessions typically consisted of the formal lecture and discussion mode of instruction, and the afternoon sessions tended toward enrichment activities: experiments in the psychology lab; workshops designed to assist the students in writing or research (often scheduled with the social sciences librarian or another academic support person on campus); individual appointments for all

of the students with the professor, librarian, or writing consultant; or the viewing of a course-relevant documentary film. I attended, audio recorded, and transcribed an average of 16.25 instructional hours per course, with 21 hours for the Fundamentals course, 14 hours for the Research Methods course and for the Senior Seminar course, and 16 hours for the Learning and Behavior course. Each of these figures represents roughly 50% of the instructional hours for each class. The reason for the variation in the number of hours was due to the class schedule, the frequency of exams (or other class periods when there would be minimal oral data to gather), or the professor's preference as to which class periods I attended. Based on conversations with the professors and my own knowledge of the course activities, I am confident that the language I recorded in the hours that I observed in each class was representative of the language used in the whole courses.

Because I did not follow these five students through all of the psychology courses that they took over the course of their college careers but rather selected four courses that are typical of the courses that they would have taken, I am not claiming that the language patterns that the professors used in these four specific classes had a direct influence over these five students' language usage. However, I propose that these class experiences are characteristic of the class experiences that any psychology major at Credence would have been exposed to, and thus examining the language used in these classrooms is instructive in understanding how undergraduate students more generally acquire disciplinary discourses.

Coding Methods

I began the coding process by listening to the audio recordings and transcribing each session. Because in this study I am not interested in the minutiae of oral language

usage, such as the use of “um” and “ah” or the frequency of false starts, but rather I am interested in the language patterns of disciplinary specialists, I elected to make my transcriptions conform to written language conventions, as Bucholtz (2000) suggests is appropriate in a study such as this one. Once I had completed all of the transcriptions, I reviewed my researcher’s journal that I had kept while I was doing the data collection. In this researchers’ journal, I had recorded notes about possible coding categories that I was noticing even while I attended the classes and heard the language of the professors for the first time. Then I repeatedly read the transcripts, noting the recurring themes that I eventually distilled into the coding categories explained below. As I did with the data that I used in Chapter Four, I developed a separate document in which I pasted particularly illustrative instances of each coding category, which later became the framework for my ensuing written analysis. Finally, I reviewed the interview transcripts with each of the professors and noted relevant portions with which I could triangulate my findings from the classroom data.

Because the classroom data were of a different nature from the students’ written data, I created a new set of coding categories that emerged from repeatedly reviewing the transcriptions of the four courses. As with the coding of students’ written data that I described in Chapter Four, my process of coding these oral data was recursive and inductive in nature (Merriam, 2001).

The coding categories that I developed for the students’ data and these coding categories for the professors’ data are different because they emerged from different data; however, they are compatible and complementary. For example, in Chapter Four, I coded for students’ use of external sources, and here in Chapter Five I coded for instances

when the professors referred to the literature in the field. Also, in Chapter Four, I coded for students' use of sophisticated language of the field, and in Chapter Five I coded for psychology or scholarly language. These two examples show different perspectives (the student's perspective and the professor's perspective) of the same concept. The other codes do not fit together as mirror-images like these two do, but they are instead complementary. The coding categories that I developed from the data are as follows:

1. **Direct instruction regarding learning how to learn.** This category includes suggestions for how to read a scholarly article in the field of psychology, how to write a research report or a literature review, or how to design and conduct an experiment in psychology.
2. **Psychology or scholarly language.** This category includes instances when professors provide direct definitions of psychology-specific terms, instances when professors use psychology-specific language in the context of lectures without providing direct definitions, or instances when professors use an elevated level of speech that is characteristic of scholarly or professional language of the field.
3. **Explanation of accepted practices of the field of psychology.** This category would include comments such as those about the inability to attribute causation from a psychological study or comments about characteristics of the literature published in the field of psychology.
4. **Referring to the literature of the field.** This category includes times in which the professor mentions prominent scholars in the field or conflicting schools of thought within the field of psychology.

5. **Modeling the way of thinking in the field.** This category includes instances in which the professor walks the students through the logical steps to reach a conclusion in the field of psychology or instances when the professor helps students move from a research question to the construction of a research study designed to address this question. This coding category also included instances of asking the types of questions that can be addressed through psychological research instead of the research methodology of another discipline..
6. **Explanation of psychology as a field.** This category is similar to the last one, but more general. This category would include comments that the professor makes about the field of psychology in a macro view. This would include comparisons between the ways research is done in psychology and the ways it is done in another academic field, comments about what professional psychologists do in contrast to what psychiatrists do, or references to enduring themes in the field of psychology.

These coding categories are intentionally ordered according to a hierarchy of complexity, moving from the most practical or specific to the most complex and global. In the subsequent sections, I use this hierarchy to analyze and speculate about the complexity of language that professors tended to use with the lower division courses or with the upper division courses.

An example of a portion of one professor's classroom discourse might illustrate my methods and the density of coding. The following excerpt is taken from the second day of the Learning and Behavior class during a dialogic lecture in which the professor is

primarily lecturing, though she is punctuating her points by asking for student participation. Because I could not hear the students' responses to her questions and because I was primarily interested in the professor's language, I did not include the students' responses to the questions. As with the portion of written data in Chapter Four, the following excerpt of oral classroom discourse (in Figure 5.1) provides a glimpse of the density of coding and a preview for the forthcoming analysis. In the subsequent analysis, as in the analysis in Chapter Four, I distilled the data and only included the most illustrative and salient portions that related to each coding category, since the volume of data would make it unwieldy to include all or even the majority of the coded data.

Figure 5.1. Example of coding of professors' oral discourse in class

Let's talk about cognitive behaviorism. This is the approach that I take in my professional life. [Tolman is associated with this a lot. What makes this approach behaviorism? [Student response.] Why don't we just call it cognitive? [Student response.] Are they focusing completely on internal events? [Student response.] What else? [Student response.] On the environment and observable behaviors and responses. This is still the primary focus. It is scientific because it is observable. The stimuli and responses are the primary object of study. What else is there? Is there some conversation about unseen internal events? [Student response.] Yes. Under what circumstances do cognitives talk about unseen events? What are these unseen internal events tied to? [Student response.] It's tied to an observable behavior at one end, and at the other end is an observable stimuli. And in between is the unseen event, but it is anchored at both ends by observable stimuli and observable behaviors. [It has to be really reliable. If not, we don't really have a science. We may infer unseen psychological processes if and only if they are linked to observable events. Even so, people who write about these events are really careful about making their inferences. If we don't know for sure, we have to be tentative. What's the thing that comes between observable stimuli and observable responses? [Student response.] Intervening. These are intervening variables. Sometimes it is helpful to talk about intervening variable.]

Comment [A1]: How field works—each person has his or her own approach to research

Comment [A2]: Reference to scholar

Comment [A3]: Modeling way of thinking

Comment [A4]: Psychology-specific language

Comment [A5]: Description of psychology as a field—a science

Comment [A6]: Psych practices—needing to be tentative, how research works

Comment [A7]: Psychology language

Key for colored highlighting:
 Explanation of psychology as a field
 Explanation of accepted practices of the field of psychology
 Psychology or scholarly language
 Modeling way of thinking
 Referring to literature in the field

I approached these data of professors' classroom language from the position of having taught in various settings for more than a decade. With this background, I cannot help but find myself allied with these teacher-figures, since my identity as teacher has become even stronger than my identity as student. In addition to my own subjectivities as a researcher and a teacher, I also acknowledge that I genuinely admire and respect these three professors. In my years working at Credence College, I knew these professors casually, but through the months of data collection I grew to know and admire them even more. Therefore, I do not purport to be an objective observer in these classrooms, and undoubtedly my transcription and my analysis are affected by my positionality. However, because of my deliberate efforts to be consistent in the application of my codes to the data and because I have triangulated my analyses of the classroom data with the students' interview comments and the professors' interview comments, I trust that my analysis is sound.

In the following sections, I address each of the coding categories as I applied them to the classroom data and provide illuminating examples to illustrate each.

Coding Category 1: Direct Instruction Regarding Learning

How to Learn

The direct instruction regarding learning how to learn occurred on several occasions mostly in the lower division classes: the 100-level Fundamentals course and the 200-level Learning and Behavior course. Occasional comments occurred in the upper-division courses, but by far the most extensive, explicit, and elemental instruction occurred in the Fundamentals course, with a two-hour afternoon workshop session dedicated to helping students read a research article in psychology, followed by another

class period several days later when about 45 minutes was dedicated to giving guidance to students regarding how to write a paper in psychology. Important to note is that not all the lessons regarding disciplinary discourses came from the professor alone. At Credence, the team approach to instruction is valued, with cooperation among the professor, librarian, writing consultant, and quantitative reasoning consultant. See Chapter Six for a full discussion about the team approach.

In the workshop dedicated to how to read a research article in the Fundamentals course, the instructor began by telling the students that she suspected that the published articles in psychology will be difficult for them to understand because as undergraduates, they are not the intended audience. The intended audience for the articles is other practitioners and researchers, like the instructor herself. She admitted that even though she is the intended audience, these articles are difficult for her to understand. She next explained the typical components of a research article in psychology: the abstract, the introduction (including the literature review), the methods section, results, discussion, and references. In her explanation of the literature review, the professor gestured toward a statement about the field as a whole by stating, “science is a cumulative process always built on other studies.” Notable here is her use of the term “science” instead of “psychology.” Frequently throughout this professor’s explanation of the field of psychology, she emphasized that psychology is a science, suggesting to students her desire for her field to be affiliated with the sciences, perhaps as a way to legitimize the discipline.

The professor also periodically gave direct reading strategies to assist students in understanding the genre of research article. During this one article workshop, the

professor provided several strategies. For example, she stated, “So most typically, when you are trying to find the purpose or goals of the study, the best place to do this is at the end of the introduction. Not always, but usually. It is also common for the introduction to end with the hypotheses, the specific predictions.” Another direct reading strategy she offered was in regard to filling in gaps in background knowledge. She stated, “The introduction is going to assume certain knowledge that you don’t have. For example, an introduction might say, ‘classic attribution theory.’ That assumes that you know what attribution theory is and you may very well not know what that is. So sometimes, this is a good point then to go to one of those encyclopedias of psychology and look up and get a little synopsis of the theory itself. Sometimes you can get it from reading the article itself, you can glean an understanding of the theoretical perspective.” On the second day of this class, the students in this class had already experienced a library research instruction session with the librarian for the social sciences, and in this session, she introduced the students to a variety of specialized encyclopedias of psychology. Since this article workshop occurred during the second week of this course (one week after the library introductory session), it is somewhat probable that the students did not understand that the professor’s antecedent for “one of those encyclopedias” referred to those that the librarian had shown to the class. While this hint certainly provides students with a way to fill in gaps in their content knowledge and thereby facilitate their comprehension and meaning-making, the suggestion of “using one of those encyclopedias of psychology” might have been lost on the students who perhaps did not remember their brief exposure to encyclopedias of psychology the week before, or if they did recall being introduced to the subject encyclopedias, they might have benefited from a reminder as to where to find

such resources. And while her suggestion to learn about the unfamiliar theory through the context is certainly a reading strategy that is commonly used, this strategy would likely result in misunderstandings of important concepts if applied to published psychology articles.

The professor next explained the methods section of the typical research article in psychology using the following language: “the introduction is probably going to introduce the conceptual measures, but this is going to be where you’ll find the operational definitions of those.” In this class period the instructor did not explain the meaning of “operational definitions,” though it is possible that she had explained this concept during one of the previous class periods during which I was not present. However, this concept of an operational definition probably was unfamiliar to these first-year students, and the concept is important enough to seem to warrant a brief explanation before moving on to the next concept.

The professor then proceeded to provide the students with a brief introduction to descriptive and inferential statistics in an effort to help them understand to some extent the results sections of research articles. These students will be exposed to a more in-depth analysis of statistics primarily in their statistics course and in their research methods course, but this introduction at least provided a basic introduction for them to facilitate their understanding as they read research articles. Perhaps most useful was the professor’s suggestion to watch for summative statements, usually placed at the ends of the results section. She stated, “The other thing to look for in a results section is usually there should be some kind of summary statement or sentence. Something saying, ‘thus, this indicates that . . .’ or ‘this pattern reflects...’ So look for that kind of summary

statement to help you figure out what's going on." Providing examples of wording of these summative statements will help students identify these statements as they are reading as well as serve as a model of this type of language for when they begin to write their own research-oriented papers in upper-level classes.

Finally, the professor offered a final suggestion about reading research articles based on her own experiences. She stated, "It's helpful for me to think about parsing a research article. Pick it all apart. I pick out the stuff I need to get, and then I'll put it all back together again. So I think about parsing a research article. And when I do this, what I do is I literally go through and make notes of things. So I never just go through and highlight. I always make notes of things." If students implement it, this suggestion of active reading will contribute to students' comprehension, not only in this course and not only in other psychology courses, but throughout their college careers (Alvermann, 2001; Pearson & Gallagher, 1983)

This extended example of the professor's direct instruction regarding how to read a psychology article likely helped these introductory psychology students progress from this Fundamentals course into the intermediate and upper division courses, since reading the research articles is significantly difficult for even the students who have shown themselves to be academically successful. Students' comments in my interviews with them confirm this suggestion. For example, in her interview, Andrea stated, "in the beginning it was hard because it was hard to read the research papers and articles, but now it's a lot easier to do and I know what I'm looking for and it goes a lot faster." Andrea even mentioned this particular professor by name, saying, "In the beginning [this professor] would teach me how to read [the research articles], and what to look for and

since I had her for my first professor, she showed me how to read them and actually explained them to me when I had difficulty.” Thus, even though devoting an entire class session to teaching the students how to read a research article requires a significant dedication class time, it seems that this time is well-spent, particularly in the eyes of students.

The task of reading research articles published in the field of psychology is integral to success as a psychology major and sufficiently difficult for a student to master to warrant repeated lessons on the topic. In the 200-level Learning and Behavior course, the professor supplemented her own teaching by inviting the Quantitative Reasoning Consultant to class for a lesson about reading research articles, particularly interpreting the statistics that typically appear in the results section of the articles.² By inviting her to speak to the class, the professor is making known to the students an additional resource that they can turn to as they develop their skills in reading research articles.

The Quantitative Reasoning Consultant’s lesson about strategies for reading research articles echoed much of what the Fundamentals professor taught. For example, in this lesson, the Quantitative Reasoning Consultant spoke briefly about the concept of statistical significance, an important and difficult concept for many students. She stated, “what to look for is [whether something is] significant or not significant. You can look for the significant numbers. They’ll have an f-value or a t-value and a p-value.” Though brief and somewhat technical, this explanation could serve as a reminder to students

² The Quantitative Reasoning Consultant at Credence is a position created in 2005 that is analogous to the position of the librarians in relation to the faculty and students; that is, she works in consultation and collaboration with the faculty to provide specific and specialized instructional services. In fact, at Credence, the Quantitative Reasoning Consultant is administratively part of the library staff, and her office space is in the library as well.

about the importance of statistical significance in research articles and an invitation for them to seek additional help from either the professor or from the Quantitative Reasoning Consultant. As documented in Chapter Four, the notion of statistical significance is an important and basic concept in the field of psychology, so this is an element of disciplinary discourse that is critical for students to use effectively.

The Quantitative Reasoning Consultant and the Fundamentals professor both affirmed the practice of active reading. She stated, “It is important to underline and make notes so that when you go back, you won’t have to reread [all of the articles]; you can just reread the parts you have underlined. Otherwise write little summaries on the back sides of your article.” Here again, students are encouraged to use active reading strategies so that they make meaning of the articles as they are reading them. This sort of reminder in the lower-division courses is likely to affect students throughout their college careers if they implement the strategy and make it a habit when they are reading their course materials. By implementing strategies recommended in the discipline, students are likely to enhance their abilities to effectively take up disciplinary discourse.

An additional instance in which the Learning and Behavior professor provided a strategy for learning how to learn was when she was explaining the annotated bibliography assignment. She stated, “I’ll ask you to turn in an annotated bibliography. This is where you briefly describe each of your sources, and then you will explain how these sources fit together. You’ll be meeting with me and with [the Quantitative Reasoning Consultant] to discuss how to do this. This process is important no matter what field you are in. It’s a process you might want to go through even if you aren’t assigned the process because it leads to really high quality work.” Suggesting to students

that they use the process of creating an annotated bibliography in courses in which they are not assigned this task is another example of this professor's efforts to provide students with strategies that they will use in other courses to become more sophisticated readers and learners.

Finally, this same professor provided students with several strategies to be successful in her course one week into the course, after the students had taken their first exam the previous class day. All of her strategies are ones that the students could apply to other learning situations as well. She stated, "How to prepare for this class. It's important to have read the assignment and have studied it. I take that as a given that you have read the material. I focus on the material that is more difficult or I'll elaborate on what's in the text. In general, the guideline is to spend a couple of hours outside of class for every hour in class. At a minimum, you should spend 3 hours outside of class for regular work, but more time for assignments. When you read the material, put the concepts into your words. It will increase the time that you spend each day, but you'll get it much more, and you won't need to spend as much time studying before the test. Highlighters are fine, but putting things in your own words is one of the best ways to learn and put things into long-term memory." This final suggestion of summarizing the main points of the course readings echoes the suggestions from the Fundamentals professor and the Quantitative Reasoning Consultant when they each made the same suggestion about reading research articles. Through repetition of these learning strategies early in the students' college careers, these instructors are providing students with explicit avenues for success in their classrooms.

Coding Category 2: Modeling Psychology Language

In addition to teaching the introductory students strategies for learning how to learn, all of the professors also provided students with copious modeling of psychology language. Very often this modeling was couched in the context of helping students write assigned papers for each course in which the professor explicitly modeled the language using phrases such as, “You might say something like this:” or “You could begin your paper by writing” Other times the modeling of psychology language was much more subtle and less deliberate, such as when the professors used psychology-specific language in their lectures or in their everyday conversations with students about the content of the courses. The first sort of modeling tended to occur more frequently in the lower-level courses (the 100-level Fundamentals course and the 200-level Learning and Behavior course), and the second type of modeling occurred throughout the courses, with increasingly sophisticated language (with fewer explicit explanations of terms) in the more advanced classes.

In the 100-level Fundamentals course, the professor devoted approximately 45 minutes of a class session that occurred mid-way through the course detailing how to write in psychology in preparation for a large final paper the students were writing. Particularly effective about this session was the professor’s modeling of the kind of language the students would be using in their papers. For example, she stated, “Let’s talk about how we might write this. How to put this in sentence form. . . . For example, I might say, ‘Ratings of humor indicated that both groups found the exercise and video about equally funny.’ Now you want to give the means. Something like ‘on average, people rated the laugh exercise 2.78 on a 5 point scale, and people rated the video 3.5 on

a five point scale.’ Now you would say usually in parentheses ‘not significantly significant.’” The language that the professor is modeling for the students is full of psychology-specific syntax and sentence structure. For example, the use of the various forms of the word “rate” are characteristic of research in psychology when the measurements are rating scales. Secondly, her introduction of the phrase “not statistically significant” is important for students’ emerging understanding of this very important concept of statistical significance. As I examined in Chapter Four, students grew in their sophistication in their use of the word “significant” by often first prefacing the word with a qualifying adjective such as “very” or “somewhat” and eventually moving toward a more accurate and precise use of “significance” with no qualifying adjective preceding it. This early introduction and modeling of this phrasing seems a first step in the eventual acquisition of this sophisticated concept made visible by precise language usage.

This same professor similarly modeled language for her Research Methods students as they were preparing to write reports of an empirical study that they as a class conducted. This task was difficult for the students, as several of them reported in my interviews with them. Unlike in previous classes, in this course they were required to do a literature review, gather their own data, interpret them, and write a paper based on this empirical research. Because this was a daunting task, this professor returned to some of the language and techniques that she used with her Fundamentals class in explaining how to compose the paper. She stated, “When you are describing the interaction, . . . you might say something like, ‘Males tend to have very high estimates at 7, 9, and 11th grades. Their estimates drop by the time they reached college. Females, on the other hand, had lower estimates of their success at both 7th and 9th grade, but their estimates

dropped dramatically at 11th grade and increased dramatically at their first year of college.” In this way, the students can mime the professor’s language as a way to “try out” the specialized language of the field. However, unlike in the Fundamentals class, the professor freely used sophisticated language without clarifying or defining, likely because this was an upper-division course and she could assume that the students would understand her language. For example, just before stating the above comment, she stated, “If the p value is significant, that means there’s an interaction and that it’s significant. Now we need to describe them when we know we have main effects. You need to look at an f table and be able to state the findings in words.” Taken out of context, this language is likely not comprehensible to a non-specialist, though the students were able to manage to make meaning of it (perhaps with difficulty) since they all had taken numerous psychology courses before taking this course.

On another day of this course, the professor provided another example of ways to phrase a portion of the students’ papers when she explained how to describe a research study that was to be included in the students’ literature review. She stated,

This [article] is a review of the different ways to manipulate mood. . . . They talk about the Velton procedure in there. [First,] you could summarize that article. Then you could say, “We were particularly interested in what is effective in producing humorous responses.” . . . This is going to fairly short. You will talk about how extroversion was related to these specific types of humor, and conscientiousness and how this is related to types of humor. And then you can say how different types of personalities are related to different types of humor.

In this excerpt from class, the professor provided not just the language that the students could use, but also the organizational structure regarding how to connect an article in a literature review to the present research study. This is a difficult task for students, and the professor’s modeling of both language and organizational structure of the argument

likely contributed to the students' acquisition of disciplinary language and ways of thinking.

In addition to these examples of explicit modeling of how to phrase ideas when writing about psychology, my data included innumerable examples of professors using psychology language with varying degrees of explicit explanation. For example, in the 200-level Learning and Behavior course, the professor stated on the first day of the class, "One thing I often do is I ask to provide evidence. By this I mean research evidence. What I'm talking about is real empirical evidence. What have psychologists said? A hypothetical example is not evidence. It's not substantive evidence but just saying what might work." In this example, the professor is explaining a term that is likely used frequently by all of the students' professors, but professors in each academic area likely mean something slightly different in using the same term. For example, in their English classes, the students are likely to hear their professors saying that they need to support their ideas with evidence from the text. By "text" these English teachers are likely referring to the primary text: the poem, novel, short story, etc. that is the object of study and analysis. In other academic areas, "evidence" assumes different shades of meaning. In psychology, the students are to use empirical studies that have been published in the literature to support their claims. Though subtle, this distinction is significant.

When I asked this professor in our interview about her use of "evidence" in the context of the classroom, she explained her stance further. She stated,

I didn't even think that anybody would think differently about it until I saw it in student work. And then when I see it over and over in student work I say, well maybe it's not so obvious what it means when I say support your argument and provide evidence. [Students] come in with a completely different framework from other disciplines, and I think that one of the main things I want students to get from their psychology major is how do you

determine whether something is true or not. What kind of information do you use? You might have your gut feeling about it, and that's a good thing, or you might have personal experience that relates to it, and that's a good thing, but in terms of making public policy decisions, you want to make sure there's more than just personal experience or your ideas of how it should work. You want to make sure that this therapy technique is really documented to work, and that this is the most unbiased evidence that you could have. . . . So that's one reason that there's so much emphasis on the published literature, because it's shared; it's self-correcting or self-criticizing.

This professor's explanation of her use of the term "evidence" suggests that she acknowledges other disciplines' uses of the same term and thus recognizes the need to explain explicitly the term to her students, even though it may not immediately seem to students to be an unfamiliar term.

This example of the specialized use of the term "evidence" is particularly illustrative of how commonly used words in the English language can take on local, specific meanings in a certain academic context, and it is to the students' benefit if the professor recognizes this specialized meaning and explains it overtly in a classroom setting. However, this awareness of ambiguous language takes effort and it requires a sensitivity both to the nuances of language and to students' misperceptions of language. Just as Mina Shaughnessy strategized ways to help students improve their writing by tracking the patterns of errors that they made in their writing ((Shaughnessy, 1977), professors like this professor at Credence could help students learn the discourse of their particular academic discipline by raising their awareness of common language misunderstandings and addressing these ambiguous terms systematically in the course of instruction.

Numerous other instances of the professors assisting their students in the acquisition of psychology-specific language occur throughout the transcripts, but these

tend to be very brief uses of a psychology term, either defined in an appositive (or some comparable grammatical form) in the lower-division classes or not defined but used in context in the upper-division classes. For example, in the Fundamentals course, the professor asked the students what the psychology term for “peer pressure” was, and they responded “social conformity.” This illustration of the concept that commonly used terms in the English vernacular might have synonyms that are used specifically in the field of psychology through an example such as this one helps students to understand how a specialized language has terms that might be different from ones with which they are familiar.

In the 200-level Learning and Behavior class, the professor also provided appositive-type definitions of psychology terms in the course of her lecture. For example, in explaining classical conditioning, she stated, “After each presentation of the stimulus, the dog will salivate a little more. We refer to this as acquisition.” After this initial definition, she then used the term “acquisition” without explanation. This progression from providing an explicit definition to using the term in context without explanation is illustrated in the sentences that follow her explanation of acquisition in classical conditioning. She states, “Eventually, the increases in behavior level off. It reaches a term called asymptote. The level of the asymptote depends on the level of the US, and it also depends on the intensity of the CS.” The professor’s use of “asymptote” twice in this excerpt clearly illustrates one way of first defining a term and next using it in context without an explanation. Additionally, the “US” and the “CS” are abbreviations of “unconditioned stimulus” and “conditioned stimulus,” which she had defined in previous class periods. This transition from defining a term in the course of a lecture to

using the term in the context of a lecture without explanation is characteristic of instruction that fosters the learning of disciplinary discourses in students. By using the term in context without explanation, the professor is showing the tacit expectation that the students should be incorporating these terms into their own repertoire of specialized syntax, and after hearing the terms used in context, the students should eventually be able to use the terms in their own writing and speaking.

In the upper division classes, the professors rarely qualified or defined the terms they used in their lectures, and more and more they relied on students' previous learning experiences to help them understand the specialized language. Virtually all of the professors' language in the upper division classes (the 300-level Research Methods and the 400-level Senior Seminar) could be coded for the specialized psychology language, since the professors habitually used elevated language without explicit explanations or definitions of the terms they were using. For example, in the Research Methods course, the professor stated, "ANOVA is the analysis of variance for factorials. Between groups, what are the sources of variation? Between groups variation, within groups variation, and then total. If it is within subjects, it has the additional source of variation of subjects. With a factorial, you get additional sources of variation. You get multiple f tests. You get an f value for each main effect. For our simplest design, 2x2, you'll get an f value for each main effect for both independent variables, and an f-value for the interaction. Then we'll have one for within subjects. This one is non-systematic, where as the other ones, both main effects and interaction, are systematic." This excerpt is packed with psychology-specific and statistical language, and only in the first sentence does the professor provide an appositive-type definition for the term "ANOVA." Even then,

however, her definition shows an expectation of substantial previous knowledge of statistics, since “analysis of variance for factorials” isn’t a definition that any person not studying psychology or statistics would necessarily understand. The rest of the excerpt is packed with psychology language that the professor expects the students to comprehend based on their previous exposure to this language. Similar examples of the professor speaking with the students at an elevated level of discourse are prevalent throughout the transcripts in the two 300- and 400-level courses.

Though the vast majority of examples of professors modeling the language of the field seem appropriate to the level of the students, occasionally I observed misunderstandings of terms by students due to assumptions that the professors seemed to make about students’ knowledge. For example, on the first day of the 100-level Fundamentals class, the professor explained the course assignments, one of which was to find an empirical article and to write a summary of it. After the professor explained this course assignment, a student tentatively raised her hand and asked, “What is an empirical article?” to which the professor responded, “Empirical is basically the notion of understanding things through our senses. It’s in contrast to introspection.” The professor then moved onto her next topic. To someone who already understands the definition of “empirical,” this definition makes perfect sense; however, I suspect that the student’s confusion (likely shared by the majority of her classmates) was not allayed by this explanation. Words like “notion” and “introspection” tend to be academic-ese, and the brevity of the explanation, coupled with the unfamiliar language might have failed to clarify for the student what exactly “empirical” was. The professor likely clarified and re-explained this concept in the ensuing days of class, but in this isolated situation, her

explanation might have been lost on the students due to the language that she chose to use in her explanation.

Coding Category 3: Accepted Practices of the Field

In addition to the specialized language that characterizes the language of psychology scholars, the professors also communicated to students conventions that are accepted in the field of psychology. These instances occurred largely in the lower-division courses, which is logical since these students were unfamiliar with the conventions of the field and therefore needed direct instruction in class. By the time they were in the 300- or 400-level courses, the students presumably understood most of the accepted practices in the field and did not need the explicit instruction, though occasionally the professors provided reminders of the conventions. Additionally, professors occasionally described to the upper division students conventions that were more subtle than the ones explained in the lower-division courses.

For example, on the first day of the 100-level Fundamentals course, the professor gave a directive to students about the use of the word “prove.” She stated, “You should never use the word ‘prove’ in psychology—by its very nature you cannot prove. Make it more tentative—use words like ‘suggest.’” In the 300-level Research Methods course, this same professor offered a reminder to the students in her instructions for the paper they were writing. She stated, “Don’t use proved. Use ‘suggested’ or ‘indicated’ or ‘seemed to.’ We don’t prove anything in science.” Statements such as these were prevalent enough in the course of the psychology major that in my interview with Mark, in response to a question about what he had learned about the field of psychology, he stated, “And I learned you can never say prove or disprove.” Clearly, the professors’

reminders of this convention to students had a lasting impact at least on Mark, and presumably on his classmates as well.

Other examples of the professors reminding students of conventions proliferated, especially in the 100- and 200-level classes. On the first day of the 200-level Learning and Behavior class, the professor provided students explicit instruction regarding conventions of the field of psychology in regard to the use of direct quotations. She stated, “Psychologists do not use quotes. In the published work I’ve done, I’ve quoted maybe four times, and that was if I thought that the author’s words were really important. You need to put everything in your own words. Now of course technical language you can use, because everyone will use this same language.” About two weeks later in the same course, the professor reiterated this reminder by stating, “psychologists very rarely use quotations. We paraphrase things and summarize. . . . I don’t want to see any more than one quotation in any paper.” This professor’s direct instruction about the mores of writing in the field of psychology, and especially her use of her own publishing experience as an illustration, helps students to see the invisible “rules” of the discipline and thereby learn to recognize and follow these standards in their own academic work. This lesson is particularly useful for students whose primary writing instruction likely has come from departments of English, both in high school and in college, since judicious quoting from sources is encouraged to support a point in an argument. Therefore, students moving into a psychology class would reasonably believe that they ought to include quotations in their papers, and so this professor’s explicit instruction about the sparing use of quotations in psychology will help the students recognize and adjust to the differing expectations from discipline to discipline.

In this same course, the professor offered students a few other tips about conventions for writing papers in psychology. In an explanation about an upcoming assignment, she stated "...in general, psychologists do not use the generic masculine pronoun. We try to avoid 'he.'" She then explained strategies for avoiding the use of the masculine pronoun. Later in the same class, she stated, "In citations, . . . don't use [authors'] first names. It seems rude, but you don't use their first names." This example is particularly illustrative because the professor is acknowledging that the convention in psychology not to use first names runs counter to the largely accepted social convention in this country at this time not to refer to people simply by their last names. In this example, the professor is helping students to understand that the social rules in this community of practice (psychology) differ from the social rules in the larger community.

The professors' statements regarding conventions in psychology in the 100- and 200- level classes are not dissimilar to those raised in the 300-level course. The professor in the Research Methods class offered the following advice to the students who were writing research reports, "By convention in psychology, we use past tense for studies in the past." Later, she stated, "In psychology, we want to use simple and clear language because the ideas are complex." And finally, she stated, "It is convention that we use 'participants' instead of 'subjects.'" All three of these examples provide students with explicit instruction about the rules for writing in psychology.

In addition to these rather simple suggestions that the professors provided the students, they also made statements about the structure of the published literature. For example, in the 100-level Fundamentals course, the professor stated, "One of the things that is pretty standard for any research article is that you will have an abstract, which is

the overall summary of the article, an introduction, sometimes, but usually not labeled as introduction, methods, and there are frequently subsections within a methods section, results, discussion, and references. So these are sort of the typical things that you will find in a research article.” For a group of first-year students taking their first psychology class, this early explanation of how a research article is structured was likely an important contribution in their understanding of how to read and to write in the field of psychology.

Similar explanations of the conventions of the published literature appear in the other classes as well. In the 200-level Learning and Behavior course, the professor stated, “So draw some conclusions and make some evaluations. I would like your conclusions to end with a next step. This is a common way to end a research report. What is the next question to be answered?” Here the professor is cuing the students on how to write their own papers but also helping them to recognize the ways that writing is done in psychology so that they can recognize it as they read articles. Similarly, in the 300-level Research Methods course, the professor stated, “You know that the purpose of the introduction in an APA paper is to review the literature that has come before and to summarize that as a lead-in to the study that you are going to do. You are entering into a scholarly discussion.” Here the professor acknowledges the students’ advanced standing as juniors or seniors by stating “You know that . . .,” but then she is offering a reminder of the purpose of the literature review.

The frequency of these types of utterances reduced in number in the more advanced courses, with the aforementioned comment about the purpose of the literature review the only one offered in the 300-level course. In the 400-level senior seminar, the only mention of the conventions of psychology was in reference to common practice at

the professional conferences. The professor stated, “In psychology professional conferences, there are often presentations, then other people who summarize key themes. Discussants prepare ahead of time at professional conferences...” Whereas in the earlier classes the instruction about the conventions of psychology was in reference to students’ writing for the class assignments, this instance is providing students a glimpse into a setting that is specialized and limited to individuals who are insiders or at least who are individuals who are nearing insider status.

These examples of explicit instruction regarding the conventions of the field are one way of professors assisting students in becoming insiders in the field of psychology.

Coding Category 4: Citing the Literature in the Field

Perhaps one characteristic that most obviously marks the discourse in any discipline in higher education is the frequent sprinkling of scholars’ names and published research or articles into the conversation about the content of the field. Unlike in the primary and secondary school environments in which the sources for disciplinary knowledge tend to be veiled and rarely referred to, the content delivered in the college and university environment is much more explicitly drawn from the published literature in each field. Each of the professors in this study referred to scholars in the field and published research studies, often multiple times per class period.

Frequently the mention of these scholars seemed to be an aside that the professors made without any further explanation. It often seemed that as the professors were explaining a concept, the association of the concept to a particular scholar was so strong in their minds that part of the explanation of the concept was to utter the well-known

names associated with this concept. For example, in the first week of the 100-level Fundamentals course, the professor was explaining the concept of memory. She stated, “When we retrieve things, we do not retrieve it like a video. We retrieve the essential pieces. We have a lot of evidence to show that we can distort people’s memories and create memories that people didn’t have. Elizabeth Loftus is the preeminent researcher on memory. Memory is fallible. . . .” At this point, the professor continues to explain about the fallibility of memory, without making any further reference to Loftus’ work in this area. Though students might not remember the name “Elizabeth Loftus” after hearing it mentioned so casually and briefly in this professor’s presentation, they will probably begin to internalize the concept that a psychological concept is likely to have a preeminent researcher. Additionally, the students may over time begin to understand that virtually everything they are learning in their classes is rooted somehow in the published literature in psychology.

Other examples of professors referring to well-known studies or well-respected researchers pepper virtually every transcript. For example, also in the 100-level Fundamentals class, the professor explained a famous study, the Milgrim Study. She prefaced her explanation by saying “In the Milgram study on obedience—one of the most famous studies of all times . . .” and then went on to explain the experiment. Later in the same class period, she stated, “The famous experiment for conformity is Asch; if everybody around says one answer, the next person will say the same answer.” Comments such as this one suggest to the students that experiments can become famous and individual researchers can gain fame through their work in their laboratories.

On the following day in the Fundamentals class, the professor raised the issue of the dialogic nature of the published literature when explaining contrasting theories about hypnosis. She stated,

[Hypnosis is a] big debate in psychology. . . . [There are] two big theories. One is called role playing theory or social influence theory. It's not that people are consciously faking it, but it's the idea that they should act a particular way because they are hypnotized, so they do. The other theory is called dissociation. Dissociation theory is the idea that you can somewhat split consciousness and relegate one to the background.

On a subsequent day in class this same professor described another disagreement in the field of psychology. She stated,

Is it possible just to feel something or does something external have to make you feel in a certain way? This is something that is a huge debate in the field. There are two viewpoints on this question. The first of that is Robert Zajonc's. He says feelings can just occur. "Preferences need no inferences" is one of his sayings. By contrast, Lazarus says feelings always result from cognitive appraisal. Maybe we just can't figure out what caused the feelings. If you cry for no reason, Lazarus would say that there is something outside of your conscious awareness going on to make you cry.

These two quotations are examples of the type of discourse about the dialogic nature of scholarly controversy that expose students very early in their psychology career to the concept that knowledge is not static and uncontroversial, but rather that knowledge is contested and changing, and that the site of argument about ideas is the published literature.

References to the literature in the field also occurred consistently in the upper division classes. For example, in the senior seminar course, the professor spoke of a career assessment, and then stated, "This assessment is based on the work of John Holland. He is very well known in the field. In fact, even at APA, the most coveted award is called the John Holland Award." Here the professor refers to the researcher in

the context of the American Psychological Association conference, but she abbreviates the name of the conference simply to “APA,” acknowledging the students’ substantial “insider” knowledge about the field of psychology, since they were taking their final class in their psychology major.

Coding Category 5: Modeling a Way of Thinking in the Field

One of the distinguishing characteristics of scholars in any disciplinary area is the manner in which members of the field typically construct an argument or reach a logical conclusion through a series of steps. This characteristic is one that is particularly imperceptible to members of the field because over the course of their education and professional lives, they have gradually come to think in this manner and cannot go back to a time when they did not think in this manner. Thus, explicitly teaching this disciplinary characteristic is particularly challenging for disciplinary faculty because this way of thinking likely just seems logical to them. As an outsider, however, I observed instances in class when the professors modeled the logical steps they would take in formulating an argument. Over time, the undergraduate students begin to learn to formulate similar logical arguments by observing their professors doing so and by reading arguments formulated in articles in the published literature.

Examples of the professors modeling the ways of formulating an argument in psychology occurred in each course, from introductory to advanced, but not surprisingly, the instances when the professors walked the students through the steps of an argument occurred primarily in the lower division classes. For example, in the 100-level Fundamentals class, the professor conducted a dialogic lecture, asking questions while

lecturing about language development. She stated, “Why would it have made sense for us to develop language through natural selection? We develop strong social bonds, and that facilitates survival. Protection, finding a mate, and language probably evolved together with intelligence and consciousness, which facilitated the construction of mental imagery. We think of these things as a package—language, intelligence, and consciousness. Being able to figure out problems probably facilitates survival.” In this example, the professor is challenging the students to think critically about the connection between language and the survival of the species. After posing the question, she leads the students step by step through the logical progression of how survival and language development were linked in the development of the human species. This evolutionary view of language development is one that shows students how to think about biological and psychological phenomena in a critical and analytical manner.

In this same course but two class days later, this professor explained how psychologists come to accept certain concepts as “true.” In explaining memory and brain function, she stated, “New memories are laid down in the hippocampus, then sent on to the thalamus, then they go to areas in the cortex. But the hippocampus is also the stopover in that pathway. How do we know this? From case-studies where people’s hippocampus is destroyed. Where they have anterograde amnesia. Information is coming in, gets routed through the hippocampus, but it isn’t stored here. Storage seems to be in the cortex.” In this quotation, the professor is showing students how psychological phenomena like memory can be explained through a change in biological conditions. Additionally, it is the anomalous biological condition that can be most illustrative of psychological phenomena, such as this example of the anterograde

amnesia. She is modeling a method of inference that is used in psychology, the type of inference that the students will need to make on their own as they begin to conduct psychological experiments themselves in their upper division classes or in graduate school.

Yet another example of the professors modeling the logic practiced by scholars in psychology occurred in the 200-level Learning and Behavior course. The professor was lecturing about the process of learning, and she stated,

Let's imagine that we have a baby. We measure how much it babbles at 2 months, and we measure how much it babbles at 4 months, and it doesn't babble very much. We bring it back at 10 months, and it's babbling like crazy. There's a change of behavior and there's experience. Is this learning? So there might be a range of experiences that the baby is exposed to. Would it make a difference to tell you that deaf babies babble at the same age as hearing babies? Also, the first babblings that babies do are those from all languages. Babies make all those sounds, and then over time, they gradually make only those sounds in their own language. So does that tell you about whether babbling is learned or something else? The first initial babbling because it is all linguistic sounds and it is all babies at the same age, it is an instinctive thing.

Like the professor in the previous example, this professor too uses a biological exception (babies of deaf parents) as part of the evidence to infer that babbling is instinctive.

Additionally, she also uses a biological commonality shared among all healthy babies (babies make phonemic sounds from all languages and then eventually make only sounds from their native tongue) as another part of the evidence to infer that babies' babbling is instinctive. In this example, the professor is modeling for students that inferences about psychological phenomena can be drawn from observable occurrences in nature.

Several days later in the same course, this professor again explained how inferences are made in psychology about unseen internal events, particularly by cognitive psychologists. She stated,

Under what circumstances do cognitives talk about unseen events? What are these unseen internal events tied to? They are tied to observable behavior at one end, and at the other end is an observable stimulus. And in between is the unseen event, but it is anchored at both ends by observable stimuli and observable behaviors. It has to be really reliable. If not, we don't really have a science. We may infer unseen psychological processes if and only if they are linked to observable events. Even so, people who write about these events are really careful about making their inferences. If we don't know for sure, we have to be tentative. What's the thing that comes between observable stimuli and observable responses? These are intervening variables.

This explanation about how logical inferences are made in psychology helps students to understand how psychologists do research and what constitutes legitimate evidence to reach a psychological conclusion.

In all of these examples, the professors used observable behaviors to draw inferences about unseen or internal phenomena. In the field of psychology, this is the essence of research. Emphasizing this link between observable behaviors and internal phenomena is important for professors to address early in undergraduate students' study of psychology so that the students begin to see the pattern of logic in the research that they read and study. Eventually, students then will internalize this pattern such that they themselves will be able to perform research studies that employ this logic in their upper division psychology classes or in graduate school.

Coding Category 6: Explanation of Psychology as a Field

Professors in all four of the courses commented about psychology as a field in their class lectures, but the classes with the most frequent references to the characteristics

of the field and the larger goals, trends, and mores of the field were the 100-level Fundamentals course and the 400-level senior seminar course (there were eleven instances in the 100-level course, six instances in the 200-level course, three instances in the 300-level course, and eleven instances in the 400-level senior seminar course). However, the nature of the instances in the 100-level course and the 400-level course were considerably different. In the Fundamentals course, the comments tended to be comparative to other disciplines, as a way to show the boundaries and characteristics of the field of psychology to students who had little exposure to the field before this course. In contrast, in the senior seminar course, the professor initiated discussion about ethics in the field of psychology, particularly in a clinical or counseling context, and about the role of psychologists in public policy and social justice. These comments by the professor assumed that the students had considerable knowledge about the field, and looked forward to the students' life after college in relation to their background in psychology. Instances of all of these topics I grouped in the coding category "explanation of psychology as a field."

The frequency of instances of this coding category occurring in the Fundamentals course is to be expected, since this course is an introduction to the field and has no prerequisites. Students taking this course may or may not have had a high school course in psychology, and so this course is the first exposure many students would have had to the academic study of psychology. This context, then, is appropriate for broad explanations of the field.

The instances of this coding category from the lower-division classes tended to be about how psychology is similar to and different from other academic fields. Since the

students in the lower-division courses were likely still trying to ascertain what exactly the field of psychology was and the students in the senior seminar course likely had a comparatively clear idea of what the field of psychology was, it seems logical that the professors of the lower-division classes would include more comparative comments to other fields than the professor of the senior seminar course did. Likely without any conscious intention, the professors adapted their comments according to their perception of the students' level of acculturation to the field of psychology.

For example, in the 100-level Fundamentals class, the professor began the class on the first day with an explanation of what people in psychology actually *do*. She stated, “What is it that we actually do in psychology? Most of the time when people say that they do psychology people think it’s counseling. What we do is research.” She then went on to describe the main class project that involved a small-scale research study on which the class would be embarking. Later in class she reiterated this point, adding that research is what she does, instead of counseling or clinical psychology. In these two examples, the professor was attempting to clarify for students a common misperception about the field of psychology. However, in doing so, she referred to a discipline-specific concept—research—that students likely misunderstood. “Research” to a high school student likely means library or online research in which they find articles or books that support an idea or argument. While this definition of research persists in college, in some fields, the term “research” refers to data-collection and analysis, not to library research. Of course, in the context of the above quotation, the professor is referring to primary research, but it is possible or even likely that these students, who were in their first days of college, misunderstood her explanation. In this situation, her own disciplinary

knowledge might have interfered with her assumptions about what students did and did not know, and this affected the efficacy of her explanation that she intended as a way to help these new students begin to enter the field of psychology.

In this same class, the professor explained the field of psychology in contrast to other academic disciplines, particularly those with which students likely had familiarity from their high school coursework. She stated,

Now in psychology along with the natural sciences, our purpose is to teach you how to think analytically. In humanities, the emphasis is more on interpretation. When you read a novel, and one person has this opinion about the novel and another person has this opinion about the novel, who's right? Different interpretations, ok? And that's important. It's important to learn to think that way. Analysis is different. How many of you had chemistry in high school? Ok. In chemistry, there's a right answer. One right answer. In psychology, we rely on data (the same way that chemistry does and biology, etc.) but it is not typical that there is a right answer. There is, however, usually a better answer. A best judgment. So one of the things we often talk about is: How is our interpretation and analysis consistent with the data?

This explanation of psychology as a field posits psychology in contrast to the humanities, particularly the study of literature, and generally puts it in alliance with the natural sciences, with the exception of chemistry and its preference for the “right” answer. In this example the professor is appropriately assuming that the students have little knowledge of the field of psychology. She explains the field in terms of how it is different from fields with which the students are likely familiar from their high school coursework: English, biology, and chemistry. In this way, she is showing students what psychology *is* by showing what it *isn't*. Unlike the professor of the senior seminar course, this professor of this first-year student course is assuming the students have very little knowledge of the field of psychology.

One theme that occurred several times in the 100-level Fundamentals class was that psychology was a science. The professor raised this point repeatedly, perhaps out of defensiveness about common misperceptions of their field. On the first day of the Fundamentals class, the professor was explaining the definition of psychology as having two parts. She stated,

The first [part] is that psychology is a science. We use a particular set of tools to investigate the data. We are not the only field that looks at behavior. Have any of you ever read a novel that really moved you? [student's response] What did you learn about behavior? [student's answer] Okay. You can learn a lot about behavior from reading novels. But it's not a science. It's not psychology. Psychology is based on using scientific tools with regard and understanding of behavior. So science is the first aspect of the definition. Psychology is a science.

In this excerpt, the professor again posits psychology in contrast to the study of literature, and emphasizes several times that psychology is a science. She again reiterates this point later in the lecture, again emphasizing that psychology is a science. For introductory-level students, this sort of broad clarification is appropriate, since they are just learning about the field, and the popular perception of psychology may not categorize psychology with the sciences as much as psychologists seem to want it to be.

Instances of the professors talking about psychology as a field occurred less in the 200-level and 300-level courses, likely because these were content courses, not a course introducing the field (like the 100-level course) or a course sending the students into the world with their psychology major (like the 400-level course). The 400-level senior seminar course contained numerous examples of comments about the field, but they were not comparative in nature, but rather they tended to be about how the students could use their background in psychology to be ethical citizens of the world.

The frequency of instances of this coding category occurring in the senior seminar course is also to be expected, since Senior Seminar is a capstone course intended to help students see their place in the field of psychology and to see how psychology relates to the world outside of academia. The course catalog description for this course also makes reference to the macro view of the field: “Group discussions of current issues in the field such as gender and cultural diversity in psychology, the balance between research and clinical practice in professional development, and animal welfare” (Credence College, 2006). Even though this course was discussion-oriented and student-driven and therefore the percentage of words in class spoken by the professor was much smaller than the percentage of words spoken by the students, the professor still managed to incorporate many broad comments about the field.

One of the topics that this professor raised early in this course was the type of methodology that has been traditionally employed in the field of psychology. She stated, “The methodologies currently that we use most often in the field are quantitative, and these tools assume that we can neatly carve out identity. But recently you are seeing much more value in qualitative methods as well as quantitative methods. These seek to look more at intersections and some of the complicated ways that identity influences come together.” In this quotation, the professor’s comments reflect her own scholarly interests in the psychology of women and multicultural issues in psychology, both of which lend themselves to a qualitative methodology. On another day of class about a week later, she raised the issue of methodology again. She stated, “[P]sychology is often accused of context stripping. We can try to control for all of our variables, but we live in a bio-pсихо-social environment, so in fact, in real life we can’t really isolate each factor.

There are some things we miss when we boil down human behavior down to mean numbers, and the increase of qualitative research is important.” Since the vast majority of the research studies from the psychological literature that the students had read throughout the course of their major would have employed a quantitative methodology, this comment about qualitative methodology provides an important perspective about the future of research in at least segments of the field.

This professor’s research interests are also reflected in her comments about social justice and the practice of clinical psychology. She stated, “All of us to some degree are influenced by unearned privilege or disadvantages, and all of these things affect our world view. Being mindful of our own positionality is crucial when engaging with other people.” On another occasion, she stated, “I think our field has not paid nearly enough attention to diversity, privilege, and oppression. These are lifelong topics, and respect and curiosity are crucial.” In conjunction with the increasing use of qualitative methodology, this focus on one’s own subjectivities is an emerging area of psychology, limited primarily to the areas of the field that are more therapy-oriented and less research-lab-oriented.

This professor also urged students to be active advocates for social justice in their communities, informed by their knowledge of the field of psychology. In an effort to address this issue, she invited another psychology professor who is involved in political activism to speak to the class. In speaking about his forthcoming visit, she stated, “I like for him to come because he speaks about the importance of research and practice, but also about being a good citizen regarding public policies, particularly as they relate to class. These disparities that we see in our culture are quite substantial, and though we

can intervene as individuals, most of us aren't going to be able to change the social structures, but there is an emerging area in psychology in public policy. Our sociologists on campus nudge us in that way." She later stated, "psychology needs to be attentive to an ethical stance across all of what we do." In these instances, she is suggesting the connection between the material the students are learning in the classroom and urging the students to apply their knowledge that they have gained from their psychology major to ethical issues occurring in the world outside academia. These broad statements that offer students a perspective about how they, as individuals with a background in psychology, might interact with other human beings.

Additionally, this professor talked to students about the field of psychology in terms of graduate school and professional options, since these students were only months away from graduation. In addressing issues of the future and professional decisions, the professor stated,

There are themes related to money that will be involved in your decisions for the future. I think one of the pieces that is distressing is that increasingly the professional programs cost a great deal of money, as much as med school in some cases. This really limits what one can do. It's difficult to be in a field where one's primary ethic is service when you walk out of graduate school with \$150,000 debts.

Again in this quotation, the professor shows her sensitivity to ethical behavior within the context of professional work in psychology. Repeatedly this professor is drawing students' attention to the connection between their lives in psychology and lives outside of academia. Additionally, she repeatedly emphasized to students that their background in psychology should inform their ethical decisions in life after graduation.

And finally, in talking about issues of money and compensation for clinical psychologists, the professor raised the issue of prescriptions and the differences between

psychologists and psychiatrists. She stated, “Another issue related to money is prescription privileges, and in the last year psychologists have earned the right to prescribe in three states. The psychiatrists are not enthusiastic about sharing the goodies, so to speak.” In this example, the professor is sharing with students her perspective regarding the relationship between two professions whose differences are commonly misunderstood among those not in either profession. By making this statement about psychiatrists and psychologists that clearly carries a bias toward psychologists, she is communicating to her students an opinion that is likely held by many in the field of psychology and thereby acculturating the students to the prevailing attitudes of the members of the field of psychology.

Connections

These three professors provided numerous opportunities for students to learn the discourse of psychology in a variety of ways, thereby providing access to the discourse community of psychology. While some of the professors’ strategies were explicit, like direct instruction about writing conventions in psychology, much of the instruction was implicit. And as Peter Ewell might argue, the students perhaps learned more from the implicit instruction than they did from the explicit instruction. He stated, “much (and perhaps most) of learning is implicit, deriving from direct interaction with a complex local environment and a range of cues given by peers and mentors that go well beyond what is explicitly being ‘taught’” (Ewell, 1997). Thus, as these professors conducted their classes, met with students in their offices, and visited with students informally, they were unconsciously communicating the norms and conventions of the academic culture of psychology to students. Students were gathering “stolen knowledge,” to borrow a

term from John Seely Brown and Paul Duguid, regarding the bits of knowledge that learners gather without explicit instruction from a teacher. Seely Brown and Duguid state,

The shade that events, circumstances, or interactions take on in the process of learning are determined through active appropriation. This appropriation is unlikely to involve simply what an instructor hopes to impart. It is more likely to involve many other peripheral features of which the teacher might be unaware, but which collectively make sense for the learner. For the act of appropriation is simultaneously an act of sense-making in terms of the learner's view of the world. (Seely Brown & Duguid, 1996)

Seely Brown and Duguid assert that students' learning is situated within a context, and that students gather numerous bits of learning that have been transmitted implicitly by the teacher and by the community of learners.

The professors communicated the lessons about acquiring disciplinary discourses to their students both implicitly and explicitly. From analyzing their classroom language and my interview data, several pedagogical tenets have emerged. The lessons for students regarding how they can effectively learn disciplinary discourses might be as follows. Students should:

- Read course readings carefully and strategically, such that they actively engage with the texts.
- Summarize and put concepts in their own words, so that they construct their own understandings of the course material.
- Take articles in the professional literature apart and make notes as a way to own them and internalize their content and structure.

- Listen to professors' oral language use and read professors' written language attentively, since their utterances model the language conventions of the discipline.
- Be sufficiently aware when they receive the feedback from professors that the feedback is designed to assist them in becoming part of the discourse community. It is not intended to criticize their work in a punitive or negative manner.

Though the professors communicated these lessons implicitly in their communications with students, being more aware and deliberate about these lessons might help students to learn them more effectively.

Students in this study learned the discourses for their disciplines from explicit teaching as well as from innumerable implicit ways both from inside and outside the classroom. Whereas this chapter looked at student learning gained directly from professors, Chapter Six takes up the notion that learning occurs outside the classroom and examines the sources of this learning, specifically learning that is gained through interactions with librarians.

CHAPTER SIX: PERSPECTIVES ON TEACHING AND LEARNING DISCIPLINARY DISCOURSES

Introduction

Despite the examples that I presented in Chapter Five of faculty members successfully assisting students in learning the discourse of psychology, occasionally the faculty members missed opportunities for teaching or assumed student understanding when perhaps it was not warranted. As demonstrated in Chapter Four, some students were more successful at acquiring the language of the discipline than others; these students for whom the discourse was more difficult to grasp perhaps might have benefited from alternative modes of instruction to compliment the formal in-class instruction by the faculty. In this chapter, I draw from my interview data with faculty members and librarians to argue that undergraduate student learning of disciplinary discourses could be enhanced through collaborations across campus among faculty members of different disciplines and between faculty members and academic support personnel, particularly librarians. Though I believe that any academic support personnel, such as the writing consultants and quantitative reasoning consultants at Credence, have the advantage of this broad perspective, I focus exclusively on librarians in this chapter.

Through interviews with the faculty members, I learned that they acknowledged being unsure as to how to teach the discourse of their discipline and that they hoped their instruction in writing and their modeling of the oral language were effective means for the transmission of disciplinary ways. They also acknowledged that teaching their students was a shared responsibility among the faculty in their department, among the faculty in other related departments, and with other academic personnel such as librarians

across campus. However, in my observations, it became evident that the faculty did not fully tap the instructional potential of the librarian, nor did they seem to understand fully what role the librarian could play to complement their instruction. The librarian for the social sciences, Amber, was involved in disciplinary instruction throughout her everyday work with students: in the classroom, at the reference desk, and in one-on-one research consultations. Unfortunately, the instruction at the reference desk and in one-on-one interactions with students was invisible to the faculty members, and so they did not attribute any instructional role to the librarian other than what they saw in the classroom when the librarian taught a research session to one of their classes.

While Amber did provide disciplinary instruction throughout her many informal interactions with students, I observed missed opportunities in her interactions with students as well. The type of instruction by a librarian in helping students acquire disciplinary discourses that I explained in Chapter One was not realized despite being in this environment in which a team-based instructional approach was already in place. Furthermore, the director of the library, Jane, expressed her vision for the involvement of librarians in the education of the students, which was consistent with the model I proposed in Chapter One. So even though the director had communicated her vision to the librarians at Credence, the reality did not match the vision. The disconnect between vision and practice is not an uncommon dilemma in instructional settings. However, this disconnect is compounded by the faculty members' underestimation of the librarian's instructional role. The challenge, then, is to have librarians seize the opportunities for aiding in students' acquisition of disciplinary discourses as well as to have the faculty members understand and embrace the librarian's value in the classroom.

The argument of this chapter—that librarians have a unique pedagogical role in helping students acquire disciplinary discourses that cannot be filled by classroom faculty—is based largely on my own experiences as a librarian and my observations of student learning both in the classroom and in the library. Just as the instructional activities of the librarian are rarely observed and recognized by the teaching faculty, so too were these spontaneous interactions between students and librarians difficult to capture as data for this study; hence, I drew primarily on interview data. Most of the interactions I refer to in this chapter were those that typically occur between a librarian and a student in unscheduled, spontaneous conversations at the reference desk or in the librarian’s office. Interrupting these interactions after they had been initiated only a few moments earlier to obtain informed consent would be untenable for a variety of reasons. First, librarians interact with many, many students at a reference desk, some with extended, in-depth reference questions such as the ones I referred to earlier in this chapter, and others with brief, informational or directional questions such as the location of a group study room. Obviously, the second type of question would not lend itself to conversations that foster students’ understanding of disciplinary discourses, but the librarian could not know the nature of the question before the student asks it. Therefore, obtaining informed consent for each reference interaction was impractical.

Second, approaching the reference desk can be an intimidating prospect for some students (Mellon, 1986), and presenting them with an informed consent immediately upon their approach to the reference desk might have a chilling effect on the students, making them less likely to approach the desk with other questions in the future. Since reference questions often involve personal and private information requests, a request for

informed consent at the beginning of a reference interaction, before rapport has been established, might silence the questioner. Since I did not want my study to have a detrimental effect on students' experiences with librarians at the reference desk, I did not attempt to audio record reference interactions. Thus, the illustrations I use in this chapter are limited to interview data with faculty members and librarians.

Helping Students to Communicate in Writing

Because Credence is a small college that prides itself on intensive one-on-one instruction and because the psychology department endeavors to develop students' critical thinking and communication skills, writing is emphasized in virtually all classes in psychology. The three faculty members in this study, Anne, Sharon, and Karen, all provided explicit instruction to a varying degree about writing, as shown in Chapter Five. Additionally, they provided indirect instruction about the discursive practices in psychology through their comments on students' papers, through the discussion of published articles, and through their own patterns of oral language usage in class. However, these faculty members were not alone in teaching writing practices to students. In my interviews with these faculty members, they acknowledged a shared responsibility with other departments and with other personnel on campus, particularly individuals who are analogous to librarians in their relationship to the classroom, such as the writing consultants and the quantitative reasoning consultants.

In my interview with Karen, she recognized the many contributors who are responsible for students' learning of writing concepts and skills. In response to my question about who was responsible for teaching students in psychology to write in a disciplinary manner, she stated,

I think primarily the faculty in the department, but I think the writing consultants, and the quantitative reasoning consultants also. I think we rely pretty heavily on what our students gain in anthropology and sociology, and of course their work in statistics and so on. I think in terms of writing for the discipline, to a large degree the faculty in the department see it primarily as their responsibility, and although there is some teaching of writing in other contexts, the expectation in those areas is a little bit different.

At the end of this quotation, the professor is commenting on the differences in disciplinary ways of writing, and she is acknowledging that the instruction that students receive in one disciplinary area does not always apply seamlessly to another disciplinary area.

Her words are echoed by her colleague's very similar response to the same question. In Sharon's response that follows, she mentioned teaching a writing intensive course. At Credence, certain lower-division courses across the curriculum are designated "writing intensive," which means that special attention and instruction is dedicated to writing. (Even though students at Credence write papers in most of their classes, the writing intensive classes are intended to provide explicit instruction about writing in select courses across the curriculum.) Students are required to take one of these courses at some point in their first year. This program was developed in the years just prior to my data collection as part of an effort to begin to move writing instruction away from exclusively the English department's domain and toward instruction throughout the curriculum. When the writing instruction for the college was the English department's responsibility, the perception among faculty was that students were not able to transfer the knowledge and skills they had learned in their writing class taught by an English professor to writing tasks in other courses. As a result, the faculty began contemplating alternative models for writing instruction, and at the end of my tenure as a librarian there,

this new writing program began, which is based on the Writing Across the Curriculum philosophy.

As is consistent with the Writing Across the Curriculum approach, this effort was intended to provide students with writing instruction that was disciplinary in nature. However, most of the writing intensive courses were still taught as classes in the English department, with an occasional writing intensive course taught in psychology or another field. Of her own writing intensive course, this professor stated,

When I taught a writing intensive course, then I use the Writing [Studio] a lot and the staff members there were really helpful in how do you convey information. . . . And there were parts of it that I had to add . . ., such as how psychologists think about how to communicate something. And so there were parts of it that were unique as to what I could add. But [the writing consultant] of course had much more expertise about writing in general than I could ever have. So here there is a shared responsibility that I think has been really productive. So I don't feel quite so much weight that it all has to rely on me.

It is evident that both of these professors saw themselves as part of a community of teachers, all offering their expertise to students who benefit from the variety of perspectives.

The awareness of disciplinary ways of communicating had become a topic of consideration on campus due to the formation of the writing intensive courses across the curriculum and the many faculty discussions that occurred in the development of this program. The library director, Jane, who was heavily involved in the formation of the writing intensive courses across the curriculum, stated, "we continue to teach a lot of introductory writing through the English department, and I don't fault the English department in any way, except that the way that you write in literary criticism is not the way you write in any other field." And Karen spoke of the possibility of adding an

additional writing intensive course, this one highlighting the differences and similarities in disciplines within the social sciences division. She stated, “I also wonder sometimes if there would be some value in a course that would focus primarily on writing in the social sciences and would pull from anthropology, sociology, economics, politics. Because I think there are a number of conventions that we do share. That there are myriad ways that these disciplines could enrich each other.” Thus, on the campus of Credence, there is a definite awareness of disciplinary differences and a commitment to helping students acquire disciplinary discourses through both disciplinary and cross-disciplinary coursework. It is within this type of team-based instructional environment that librarians and other academic support personnel could be integrally involved in the teaching of disciplinary discourses.

The library director spoke directly to this role of the librarian as part of the instructional team. She stated, “... I think we have to be thoughtful about introducing [students] to the notion that there are different styles [of writing] and that is something a librarian can do.” Because librarians work with students in a laboratory-like environment in which the student and the librarian are together searching for disciplinary information in the midst of information from all disciplines, the opportunities to point out and discuss with students the characteristics of various disciplinary literature occur frequently, in reference desk interactions, in one-on-one research consultations, and in classroom instruction settings.

Understanding the Practices of Other Disciplines

Several times in my interviews with faculty members the issue arose of their not understanding the disciplinary practices in other departments and their wanting to have

more contact with people across campus to increase their own awareness of the unique features of their own discipline. These comments support my assertion in Chapter One that disciplinary faculty tend to be so thoroughly immersed in their own discipline that they may not be able to recognize other disciplines' practices that their students might be using. For example, one professor, Anne, stated,

This has been one of the big advantages of being on the writing program advisory committee: to see how other people [write in their disciplines], because now I'm more aware of how it is different in psychology. Because it does seem to me that what we do differently as opposed to like an English paper, and I am assuming here, so I could be completely wrong about what English papers are like, but with English papers, it's like you make an argument. Or like philosophy paper, you make an argument. But I want my students to reason from the data. And that is different.

In this quotation, Anne tempered her assertion with several qualifiers ("I am assuming here" and "I could be completely wrong") indicating that she was unsure about how her English colleagues write, but that she believed that the differences she had observed were valid. She learned of these differences through her work on the committee designated to design the writing program. Interdisciplinary in nature, this committee required the faculty members to discuss with colleagues from across the college the unique components of their own disciplines as a way for the committee to decide on the direction of the program. This sort of interdisciplinary conversation is integral in gaining perspective about the peculiarities of one's own discipline.

Later in the same interview, Anne acknowledged that she has a "vague understanding" of other disciplines' practices. She stated:

I have a vague understanding of the way people in English do it or in philosophy do it. ... So I think maybe sometimes that would help students [to teach them the differences between disciplines],

because I think they get used to writing in a certain venue, and it's hard to switch, and they don't understand why. They say, "Well, this works in my creative writing classes, so you don't know what you are talking about because my creative writing professor says I write well."

Evident in this quotation is the frustration of having dealt with students who have questioned her assessment of their writing. Making explicit the differences in writing from discipline to discipline would help students to understand the differing expectations from one discipline to another, reducing both students' and professors' frustration and increasing students' understanding of academia.

Anne's colleague Sharon expressed a similar sentiment regarding her imperfect understanding of the practices in other disciplines. It was only when students repeatedly misinterpreted her assignments that she realized that they were erroneously applying knowledge from another discipline to psychology. Her example was in regard to the use of the word "evidence." She regularly used the word "evidence" in her explanations for how students should support an argument in papers. For Sharon, providing "evidence" meant citing studies that had been published in the professional literature. She found that students frequently failed to interpret "evidence" the way she intended it. She stated:

I didn't even think that anybody would think differently about [the word "evidence"] until I saw it in student work. And then when I see it over and over in student work I say, well maybe it's not so obvious what it means when I say, "Support your argument and provide evidence." They come in with a completely different framework from other disciplines, and I think that's one of the main things I want students to get from their psychology major is how do you determine whether something is true or not. What kind of information do you use, you might have your gut feeling about it, and that's a good thing, or you might have personal experience that relates to it, and that's a good thing, but in terms of making public policy decisions, you want to make sure there's more than just personal experience or your ideas of how it should work. You want to make sure that this therapy technique is really documented to work, and that it's the most unbiased evidence that you could have.

Sharon's first sentence in this excerpt confirms the suggestion I made in Chapter One that faculty members tend to assume that their way of thinking or writing or arguing or researching is *the* way to do it, and it might come as a surprise when they discover that other disciplines do those things differently. Students moving from one class to another might be quite adept at working with the discourse of one discipline, but when they move to another discipline, their professor might, like Sharon, find their ways of writing to be incompatible with the conventions of psychology. In this instance, Sharon indicated that it was only after she saw students repeatedly misinterpreting her request for them to use evidence that she questioned her own conception of the term and began to provide explicit instruction for her students in the use of this term in psychology. This sort of reactive instruction could become proactive to avoid the frustration and mistaken expectations through two methods: through communication among specialists across the disciplines and through the use of an intermediary (such as a librarian) who can serve as an anthropologist of disciplinary cultures and point out differences among disciplines to each cohort.

Academic Support Personnel as Intermediaries across

Disciplines

Individuals who work with students and faculty members hailing from a variety of disciplines, such as librarians, writing consultants, or quantitative reasoning consultants, have the distinct advantage of having a wide-lens perspective of academic culture. When I asked each of the faculty members for their opinion on the perspective of librarians and other academic support personnel, they concurred that it could be instructionally advantageous. For example, in response to my question about whether she thought the

academic support personnel might have an instructional role that could enhance the faculty members' instruction, Anne stated,

Yeah. Especially the writing studio people and the librarians who do go across disciplines. You know, because we know our discipline, we don't understand how it's done in other disciplines. Because I think it is really good, because you know that Jane is on the writing committee, to have that perspective. And she does see it from a variety of different fields.

In this quotation, Anne refers to Jane, the director of the library, who is on the committee designated to design the writing program with Anne. Jane's perspective as a librarian—the library director, no less—gives her a vantage point of the college that no other faculty member has. In commenting on the librarians' perspective, Jane stated:

. . . a librarian is kind of in a nice position to do that because we have to cross disciplines more than a faculty member does. For the most part, not all, because there are certainly people who work in interdisciplinary fields, but many faculty are very deeply embedded in the style and character of a discipline, and you know, I think this a place where we can be an outsider and say, well yeah, but this is different. So I think we are positioned in a way that allows us to be able to do that.

Because of librarians' perspective across the academic disciplines, they have the opportunity to help students integrate learning that has been artificially segmented into separate disciplines. Imperative, though, is for librarians to seize this instructional opportunity and for faculty, administrators, and students to recognize that librarians have this important instructional role.

Unfortunately, even in the Credence environment in which the librarians worked extensively with faculty and students as teachers and research consultants, the faculty seemed not to recognize this role. When I asked Karen whether she thought the librarians could help students see differences across academic fields, she replied, "I'm not sure how much that happens, but I think that would be a really positive kind of function."

Troublesome here is that this sort of work had long been happening in this particular library program, but that it was invisible to the professors because most library instruction occurs in one-on-one conversations between librarians and students at the reference desk or in the librarian's office. The faculty members only witness the formal library instruction sessions when they arrange information literacy instruction for their whole classes. Since the formal classroom is the setting for only a small portion of the instruction that librarians engage in, it makes sense that faculty members would not recognize what occurs in the other more private settings.

For example, in my interview with Amber, she spoke of meeting with numerous sociology students either at the reference desk or in individual research consultations who needed to find information for a particular sociology class. Their professor had told the students to be sure they gathered sociological, not psychological literature. Armed with this admonition, students, confused as to how to discern whether articles they had found were sociological or psychological, approached Amber en masse. Amber recalled this situation and stated,

I give them little hints, like if the title of the journal has the word therapy or psychology or something or if the title of the article has that real therapy, psychological treatment feel to it, maybe you should shy away from it. . . . There are many topics that I would say are social psychological, you know, it's like that middle ground, and so we'll look at a topic and they'll [say] is that sociological, or is that psychological? And I'll say, well, it's kind of both. There's really this middle ground where the two meet. You can't discount the psychological completely, especially in particular topics, and you can't discount the sociological as well.

Evident in this quotation is Amber's broad perspective regarding the interconnectedness between two fields like sociology and psychology. Amber herself had a doctorate in sociology, and so she was well-versed in the sociological literature. But unlike the

professor, Amber also had a library degree and has the mindset of a librarian who could see across disciplines. She recognized the interrelatedness of sociology and psychology and was able to explain to students the different ways that the two fields approach a research question. Additionally, she could help students see that the boundaries between disciplines are not clearly delineated, and instead blur together at the boundaries. However, these conversations she had with students went undetected by the faculty member, who only saw the resulting student work. Increasing the awareness throughout academia of librarians' varied instructional roles could inform faculty members about the potential assistance librarians could provide to augment their own classroom teaching. Amber's role here as an anthropologist of the academic culture helped her to provide instruction to students that was not available in the traditional classroom environment. Understanding how disciplines relate to one another and recognizing how a research question might be approached in various disciplines is one important component of the acquisition of disciplinary discourses.

Helping Students Learn the Specialized Syntax of a Discipline

Integral to the acquisition of a disciplinary discourse is learning the specialized syntax and grammar (ways to phrase ideas) of that field. One setting in which students can try out the language in a non-threatening, non-evaluative environment is in the library when they approach the reference librarian with a question about their coursework. An academic librarian who is working with students at a reference desk is continuously talking with students about scholarly ideas, and in order to find information about these ideas, the librarian needs to help the student to use the appropriate language of the field.

The reference interaction begins with a student approaching the desk and explaining his or her information need. This act of articulating an information need is an active learning activity: students must construct their understanding of the disciplinary phenomena that they are investigating and then express it orally. Additionally, the student must articulate the need independently and individually, without the assistance of a professor or a classmate who might jump in and interrupt with a clarification or a rephrasing if the first student hesitates or stumbles over his or her words. Unlike in a classroom setting in which students can be passive receptacles of information, a reference interaction requires action on the part of the student. Actively expressing one's thoughts orally in a language is an important stage in language acquisition, and a reference encounter is a readily available and authentic setting in an academic environment for this practice to occur for undergraduate students. This concept of active learning is consistent with Lave and Wenger's notion of legitimate peripheral participation. They state, "For newcomers, the purpose is not to learn *from* talk as a substitute for legitimate peripheral participation; it is to learn *to* talk as a key to legitimate peripheral participation" (Lave & Wenger, 1991). The student who approaches a librarian with a question at a reference desk or in a research consultation has entered into an authentic interaction in which he or she can become a legitimate peripheral participant through practicing the language of the discipline.

Some students can readily acquire the language of a discipline simply by listening to their professors speak and by reading articles written in the academic register of the particular discipline. However, other students need to practice using the language themselves in order to get a firm grasp. Jane, the library director, spoke directly to this

point. She stated, “It’s a real intensive process for some [students]. It’s just like learning a language. Some [students] have great facility for learning a language. And they very quickly become fluent in Spanish, French, Swedish, whatever it is they are trying to learn. And for some [students] language is harder.” It is these students for whom the language acquisition is more difficult that practicing the language by actually having a dialogue with a librarian about a scholarly question in the discipline could be particularly beneficial.

As an illustration of this point, Jane described her work with a first-year student who was struggling with her coursework in physiology. By meeting with her repeatedly at the reference desk or in one-on-one research consultations, Jane was able to help her become more fluent in the language of the discipline. Jane stated, “But I think it is the conversations with her that have helped her get there. I think some students can get there much more quickly and undoubtedly some kids can get there just by reading. But I think just by reading is a minority. I think more of them have to find some way to practice using the language.” The opportunity for practice, facilitated by Jane’s guidance, is what Jane provided for this student through a series of conversations about the student’s information needs, allowing the student to become more fluent in the disciplinary language.

In a typical interaction between a librarian and a student in which the librarian is helping the student find information about a particular topic, it is not unusual for the librarian to follow the initial question for information with a question such as, “What do you already know about that topic?” This question has three functions. First, the librarian might ask this question in a constructivist learning framework as a way to draw

on the student's existing knowledge so that the librarian can facilitate learning of new knowledge by situating it in relation to already-understood knowledge (Elmborg, 2002). Secondly, the librarian might ask this question to ascertain what the student already knows about the topic so as not to seek information the student already has. And finally, this question functions to ensure the librarian and the student share knowledge in common about the topic before the librarian begins to help the student to find more information. By knowing what the student already knows, the librarian is better equipped to help the student find appropriate information on the topic.

This process of asking the student what he or she already knows is the key step in compelling the student to practice using the language of the discipline. The ensuing dialogue between the librarian and the student puts the student in the position of teacher and the librarian in the position of learner, as the student explains to the librarian his or her understanding of the topic. This repeated swapping of the teacher and student roles provides an opportunity for students to explain their understanding of some aspect of the discipline. By having to articulate their research need as well as the disciplinary context, students can clarify their own understanding and gain practice in using the specialized discourse of the academic discipline. In this way, students begin the process of moving from the periphery of a discourse community toward the center, as I described in Chapter Five using Lave and Wenger's notion.

Undoubtedly, some students will approach the librarian with a research need and not have the specialized disciplinary vocabulary in their lexicon, and so are not yet at the point of being able to practice their disciplinary language in a conversation with a librarian. For these students, a librarian is also uniquely equipped by virtue of their

education and experience to facilitate students' learning of specialized disciplinary languages. Jane spoke passionately about this unique capacity. She stated,

I think the thing about a librarian is this notion of thesaurus. Our training teaches us that there is a vocabulary that one uses for looking for information that is driven by the discipline within which that information resides. And so we come out of that background with this notion of a controlled vocabulary and that we own a thesaurus, and we either own it internally, or we know how to get to one, like when I go to a specialized encyclopedia and find my terms there. And I think that professional disposition that we have about finding the right words is a big reason why librarians can play a really key role in this notion of acquiring the language of the discipline.

She later stated,

... a librarian is constantly like a walking thesaurus. We just have this little thesaurus in our brain, and someone says I'm interested in whatever, and our little thesaurus is going. We think, "We could call that this, or what they really call that is that." We are always trying to think of how does that translate into what "real" people in that particular field call whatever it is.

The process that Jane described here is one to which any reference librarian in an academic setting could likely relate. If a student who approaches the reference desk asks a complex disciplinary question in non-specialized language, the first step in seeking information is to translate the non-specialized language into specialized disciplinary language by turning to reference materials such as specialized encyclopedias and dictionaries. Again, Jane spoke to this idea when she was telling me about helping the student in physiology:

And [the student and I] just start having a conversation. And again, all the while we are talking, my thesaurus is running, saying, "Ok. What kinds of language can we use?" And if I don't know the language well enough, then my inclination is to go to an encyclopedia of sport medicine and say, "Let's just read this article together." And it's not uncommon for me to drag them out to the reference collection, pull out an encyclopedia of sport medicine, drag them back to my office and tell them let's find a page about

steroids and let's read about them because I don't know what drugs are steroids or whatever I don't know. But I know enough to know that I don't know. And I know enough to know where to start to learn. So then we'll sit and look at that article, and pretty soon we start to see some of the words show up for us that don't happen to be in my thesaurus, and as I look at the student, I think, "You don't have a thesaurus yet. And you need to build one." And so I think a librarian can work that way, and can help them to begin to just get the basic bit of language of the field that they are engaging in.

By learning the appropriate language alongside the student and by showing the student strategies and available tools for learning that language, the librarian is scaffolding students' learning of the disciplinary discourse and demonstrating to the students how to use the tools available to learn disciplinary languages.

Once the librarian and the student have translated the non-specialized language into the disciplinary language, they then can delve into the disciplinary tools to seek relevant information. And through this process, the student has likely learned several discipline-specific terms to describe the concept, and the student has already had the opportunity to practice using this language. It is through this sort of practice that learners acquire language; thus, the interaction with the librarian has the potential of helping students express themselves with more sophistication in disciplinary language.

However, learning a discourse of a discipline is more than just learning appropriate terminology. Also integral to understanding the discipline is learning the characteristics of the published literature. This concept, too, librarians are well-positioned to help students learn, particularly now that many academic librarians are heavily involved in information literacy instruction. The information literacy movement in academic librarianship is an educational effort to help students to discern when they have an information need, to find relevant information, to evaluate the information, and to use the information to construct new knowledge. Information literacy instruction is

distinct from bibliographic instruction, its predecessor, in that bibliographic instruction is about sources for information whereas information literacy is about the cognitive process of constructing new knowledge (Arp, 1990). In this context, it is appropriate for librarians to address with students the issue of characteristics of the literature in a field. Since librarians have the vantage point of seeing across several disciplines, they are better equipped to point out differences and similarities between the fields than most others engaged in the educational process.

Jane addressed this idea of librarians helping students to understand the characteristics of the published literature in a discipline in my interview with her. She stated,

. . . then I think the next step is this notion of working with students to analytically read texts. And to look intentionally at how that text is constructed. To be able to say, “This is a discipline of passive voice,” or “Do you notice how they always begin with some standard sort of stylistic phrase that begins a sentence or a paragraph within this domain?”. I think we have this responsibility when we teach information literacy. That to me is the difference between information literacy and teaching bibliography. It is that information literacy should mean teaching beyond finding the information and using the right key words. I think information literacy has to do with meaning and with style and with discourse. And so if we stop short, if we stop at helping [students] just find information, then we aren’t doing anything we hadn’t done forty years ago. But if we are really thinking about information literacy, and not terminology literacy, then part of that information literacy curriculum, part of our teaching needs to be, “Look at this paragraph. How is it organized? What does it mean? How do we pick it apart so we can build a paragraph that fits this style?” So I think that is a part of what we need to be teaching when we teach information literacy.

Teaching students to read texts analytically, as Jane refers in this passage, is a task that academic librarians are called to do by their professional standards, the Association of College and Research Libraries (ACRL) Information Literacy Competency Standards for Higher Education (ACRL, 2003). In these widely recognized guidelines, Standard 3

speaks directly to this responsibility. Standard 3 states, “The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.” This standard is accompanied by seven performance indicators along with several outcomes for each of these indicators. This set of performance indicators, outcomes, and the standard itself call for librarians to take responsibility for teaching students not just to find information but to assist them in making sense of it, as Jane suggests. Librarians who find themselves teaching strategies for finding information (Standard 2) but have difficulty in teaching Standard 3 could address disciplinary characteristics of the literature as a way to assist students in analytically read texts, as Jane suggests.

Librarians can speak to the characteristics of the published literature of a field in the context of formal information literacy instruction sessions or in more informal one-on-one interactions at the reference desk or in research consultations. Especially when helping students research interdisciplinary topics, librarians can point out differences in style and structure of the literature in various fields. Because the academic library is not segmented into disciplines the way that academic coursework is, the library is one of the only settings on a college campus in which comparative conversations about disciplinary characteristics are particularly apt. Librarians should capitalize on this pedagogical opportunity.

Thus, interactions with librarians can be an important part of helping students learn how to express themselves in the language of a discipline and how to recognize characteristics of a particular academic field. These interactions that librarians have—or should have—with students at the reference desk and in one-on-one research

consultations are largely invisible to everyone in an instructional environment except for the student and the librarian. The professor may see the result—a student gaining fluency in the discourse of the discipline—but it would be very rare for a professor to witness a reference interaction or to talk to a librarian about interactions he or she had with the professor’s students. Therefore, this potentially important learning interaction is largely invisible and therefore undervalued. Additionally, many librarians do not recognize these teachable moments in their interactions with students, and therefore miss opportunities to enhance the students’ educational experience and to strengthen their own instructional role.

Approachability of Librarians

One final way in which librarians can provide instructional interactions that students cannot typically get from their interactions with their classroom faculty members is that librarians are neutral members of the academic environment in terms of power relationships with students. Unlike teaching faculty members, librarians are seldom involved in grading or evaluation of student work. For this reason, the power imbalance between student and teacher is diminished, and students can approach librarians for help without the complication of grade pressures. The student has nothing to lose by seeking help from the librarian, and the librarian has nothing to lose by helping the student. Additionally, the dynamic between the librarian and the student is one of collaborative learning in a truer sense than with the teaching faculty members. When students approach the reference desk or meet a librarian in his or her office, the two engage in mutual questioning. After the initial question that the student poses, the librarian typically will follow up with one or more questions that lead to the student “teaching” the

librarian about the assignment and about the topic as a first step in the encounter. In explaining his or her information need, the student takes on the role of the teacher. Then the librarian uses this information, coupled with the expertise gleaned from experience and professional preparation, to guide the student through information sources to seek relevant information. Throughout the process, the librarian is likely to check repeatedly with the student regarding whether they together are finding information that suits the student's needs, putting the student in the leadership role. Thus, the relationship between the librarian and the student has a balance of power that is difficult to achieve between classroom teachers and students. Librarians can capitalize on this "pure" relationship to fill an instructional role that teaching faculty cannot.

Amber spoke of the unique dynamic between librarians and students in my interview with her. She stated,

... a role we can play is [for students] to be able to ask those questions [that they are afraid to ask their professors] because they are intimidated by their professors. They don't want to ask them because they don't want to appear to be stupid, so I think we can play that mediator role.

The questioning that Amber referred to suggests that the relationship between librarians and students is by nature dialogic. Students approach librarians with an initial question, and typically the librarian follows the initial question with a series of clarifying questions. Depending on the students' responses, the librarian will adapt his or her research strategy to fit the student's needs. This dialogic interaction in which student and librarian elicit information from each other further removes the perception of the discrepancy of power between the two.

The position of a librarian as someone whose job it is to answer students' questions has the potential to create a non-threatening environment for students to seek answers to questions whose answers they think they are "supposed to" know. As we saw illustrated in previous chapters, faculty members occasionally assumed more knowledge than the students actually had about the conventions of a field. If students feel awkward asking professors to clarify, they could approach a librarian who can help them make sense of the point of confusion. Regarding this idea, Amber commented,

... [For example,] a professor might ask a student to find literary criticism on something, and [the student] doesn't even know what literary criticism is. A lot of times I think the professors make assumptions that students will know these things and the students don't actually understand. ... when you have been so ingrained or immersed in your discipline for so long, it's just like second hat. It's like, "How do I explain what this is? How do you not know that? It's just this." It is almost like asking someone, "what does the word 'the' mean?" As a librarian, your core function is to find out information. So I can say, "I don't know what that means either. Well, let's go find out."

Here Amber suggests that she puts herself on the same level in terms of power as the student by stating that she doesn't know about a concept in question either. However, through their own disciplinary acculturation, librarians are inclined both to provide service and to be skilled at finding information. The faculty culture does not necessarily impart this service ethic or the skills in finding unknown information, but rather faculty culture emphasizes subject expertise. Thus, a student approaching a librarian with a question about a confusing disciplinary convention has the advantage of a well-educated academic but without the power imbalance.

Finally, the librarian (and other academic personnel like writing consultants) is one of the few individuals in a college community who sees class assignments, other than the faculty members and the students. When students approach a librarian at the

reference desk of in a research consultation, very often one of the early requests that a librarian typically makes in the interaction is for the student to explain the assignment or to let the librarian read the assignment sheet. With questions, the librarian is typically able to ascertain whether the student is having difficulty understanding the assignment. If the student admits to being confused about the assignment itself but is hesitant to approach the professor with the question, the librarian can serve as a go-between between the student and the professor. This is particularly apt if multiple students have approached the librarian with confusion over the same assignment. In this case, the librarian can contact the professor and ask for clarification. The librarian, as someone who is both an insider to academic culture and also an outsider to a particular discipline, could “translate” the assignment for the confused student or students, without the student’s identity being revealed to the professor, an arrangement that the student might prefer. Additionally, in this process, the professor may learn that the students could benefit from further explanation, perhaps in class to the whole group, since at least some students expressed confusion to the librarian. In a college environment in which teaching tends to be solitary and infrequently observed by academic peers, the librarian is in a rare position to provide faculty members instructional support in the form of notification when students have confusion about an assignment.

Conclusion

The instructional environment is, then, one that can nurture an undergraduate learner both in and out of the classroom. For students for whom the acquisition of disciplinary discourse is arduous and fraught with barriers, librarians (and other academic support personnel) can provide the sorts of assistance that might complement the

instruction that they receive by the classroom teaching faculty. It is in the numerous small, informal interactions between students and librarians that librarians' instructional potential may be both at its peak in terms of effectiveness and at its nadir in terms of recognition from others across campus. By articulating this instructional role for librarians in assisting undergraduate students acquire disciplinary discourses, I hope to encourage librarians to be more deliberate in their interactions with students and to raise the visibility of librarian's instructional role to faculty members, to whom the bulk of the librarian's instructional work is invisible.

CHAPTER SEVEN: IMPLICATIONS, REMAINING
QUESTIONS, AND CONCLUSION

Imagine that you enter a parlor. You come late. When you arrive, others have long preceded you, and they are engaged in a heated discussion, a discussion too heated for them to pause and tell you exactly what it is about. In fact, the discussion had already begun long before any of them got there, so that no one present is qualified to retrace for you all the steps that had gone before. You listen for a while, until you decide that you have caught the tenor of the argument; then you put in your oar. Someone answers; you answer him; another comes to your defense; another aligns himself against you, to either the embarrassment or gratification of your opponent, depending upon the quality of your ally's assistance. However, the discussion is interminable. The hour grows late, you must depart. And you do depart, with the discussion still vigorously in progress.

Kenneth Burke, *The Philosophy of Literary Form: Studies in Symbolic Action*
(Burke, 1941)

Introduction

The epigraph above vividly illustrates the substantial task we in higher education ask students to do when we invite them to join the scholarly conversation. As academics, faculty members have likely grown accustomed to the boisterous parlor conversation, and they are not intimidated by the jargon and posturing and situated practices of the others participating in the parlor conversation. But to our undergraduate students, this parlor scene is likely to be overwhelming. Some students, after listening to the conversation for a spell, may have learned enough about the vocabulary and the accepted ways of communicating to feel ready to contribute a comment. However, others may have not been able to acquire the language just by listening to the other participants. These

students remain silent, and perhaps at a certain point give up and decide to leave the parlor. The conversation continues without them.

If we want all of our students to engage in the scholarly conversation, we need to provide support for all learners to acquire the language of the disciplines. Some students acquire the discourse by listening to their professor's language in class and by reading the language of members of the field, but other students need more practice and intervention to learn the language enough to become fluent. Particularly for these students, the learning cannot be limited to the time they spend in the classroom. We in higher education must re-conceptualize the time and place for learning so that it extends well beyond the confines of the classroom.

Academic librarians might be conceived of as hosts in the parlor conversation, inviting the students into the parlor and then sitting next to them on the sofa, whispering helpful hints into their ears while the faculty members enthusiastically engage in dialog. Employing the librarian's thesaurus that Jane described in the interview excerpts that I included in Chapter 6, these librarians busily translate the parlor language into the students' language and draw from discipline-specific resources to help the student find the appropriate language to contribute a comment to the conversation.

Relevance of the Present Study

This research project was a study of the many ways that undergraduate students take up disciplinary discourses through the course of their undergraduate years. Through close analysis of my focal students' written artifacts and through interviews with these students, I examined the process through which students took up the discourse of psychology. Then, by observing four courses and analyzing the professors' language in

these courses, I was able to speculate how the professors' use of disciplinary language influenced students in their acquisition of the discourse. Additionally, my interviews with faculty members helped me to triangulate and confirm my analysis. Through my examination of both successes and missed opportunities, I was able to suggest ways that faculty members might more intentionally assist students in joining the scholarly conversation. And finally, through interviews with librarians and by observing library instruction sessions, I was able to speculate about how librarians could contribute in important and substantial ways to undergraduate students' education, specifically to their acquisition of disciplinary discourses.

I embarked on this study with the following research questions:

- How do undergraduate students learn the rhetorical practices of various disciplines; in other words, how do students learn to read, write, think, research, and behave as members of a particular scholarly community?
- Through what institutional and instructional practices do undergraduate students learn the academic discourse of their chosen major? How might these practices be enhanced to avoid missing opportunities to facilitate students' acquisition of disciplinary discourses?
- What patterns of tension or instances of contradiction are evident in students' accounts of their experiences as learners of disciplinary discourse?

In the following pages I return to these questions to speculate about possible answers and to pose remaining questions.

Raising Awareness of Disciplinary Practices across
Academia

This dissertation began with questions about how students learn the discourses of their chosen discipline. Through collecting and analyzing classroom and interview data, I was able to suggest some possible answers to this question in the analysis in chapters 4, 5 and 6. However, in answering that question, several other larger questions arose regarding the education of undergraduate students: How might members of the higher education community work together across academic disciplines and administrative entities (academic departments and the library, for example) to enhance students' learning of disciplinary discourses? How might faculty members learn about the conventions of academic disciplines other than their own? How might faculty members' knowledge of other disciplines be integrated into instructional practices that would benefit students in their acquisition of disciplinary discourses? And ultimately, how might we overcome the disconnect between vision and practice in educational settings? In other words, how can the ideas put forth in this dissertation be realized for the betterment of undergraduate learning?

In an attempt to respond to these questions, I propose that institutions of higher education provide ample opportunities for all of its constituencies—faculty members, students, and academic personnel—to become aware of disciplinary differences. Ideally, these opportunities would be integrated into other activities or responsibilities so as to avoid creating an “add-on” to existing responsibilities. For example, as several of the faculty members mentioned that I cited in chapter 6, collaborating with faculty members from across the college on a curriculum committee (such as the committee designated to

develop the writing program at Credence) can help faculty members understand the peculiarities of their own disciplines, enabling them to be more explicit and specific in their explanations of expectations for students. Providing opportunities for faculty members to collaborate with other faculty members from across campus and making explicit the benefit of learning about each other's discipline would be one way to encourage dialog across disciplinary lines.

Secondly, faculty members and other academic personnel like librarians ought to have structured and regular institutionally-sponsored opportunities to engage in discussions with each other about teaching and learning. By providing formal opportunities for individuals involved in the education of undergraduates to discuss pedagogical issues, the institution can communicate its commitment to deliberate, reflective instruction. Particularly in a higher education environment in which professors typically have little or no formal preparation in teaching methods and practice, conversations about teaching and learning are necessary to encourage individuals to be reflective about their pedagogical approaches.

Finally, institutions ought to foster a culture of peer teaching observations among faculty members across disciplinary boundaries. After my observations of the four psychology courses, several of the professors indicated to me that my presence in their classrooms made them more aware of their own disciplinary assumptions, since they knew from the interviews that the acquisition of disciplinary discourses was the topic of my research study. Similarly, faculty members could experience a heightened awareness of their language usage and disciplinary assumptions if they had a peer to observe their

class periodically and with whom to discuss disciplinary characteristics and other pedagogical issues.

Encouraging faculty members to attend their colleagues' class sessions periodically in a discipline that is not their own could be an effective way to encourage discussion and understanding of disciplinary differences. By seeing how other professors explain course writing assignments, for example, professors could uncover assumptions that they hold about how writing should be done, since they will likely see a colleague expressing different expectations than they themselves have for their students. Observing each other with the intention of learning about each other's discipline (not evaluating the teaching) would encourage faculty members to become more conscious of the disciplinary conventions to which they expect their students to adhere.

Raising Awareness of Disciplinary Cultures among Students

Having faculty members increase their awareness of the peculiarities of their own disciplines is futile if it is not done for the purpose of increasing student learning and facilitating students' entry into the scholarly community. Therefore, professors should talk regularly with students about the characteristics and conventions of their field. This information could seamlessly be incorporated into explanations of course writing assignments or into class discussions of disciplinary literature. For example, when explaining the requirements for a course writing assignment, a professor might explain how the assignment is similar to and different from the published literature in that particular field.

Being able to move from one disciplinary context to another is something that virtually all undergraduate students who study in the typical curricular structure with general education requirements in addition to requirements for a particular major need to be able to do. It is not enough for a student to be a skilled writer in one disciplinary area if this student is not able to adapt to the conventions of another discipline. As illustrated in chapters 4 and 6, frustration on the part of both the student and the professor is likely to ensue if the student writes with the conventions of one field in a different field. Just as it is important for individuals to be able to transfer reading skills from one context to another, it is equally important for individuals to be able to transfer writing skills from one disciplinary context to another. As the nation's educational system turns to ever-increasing emphasis on assessment, one way to assess students' success in higher education is to look at the student's fluency across disciplinary boundaries.

Undergraduate students should see that their writing assignments are not just course exercises that have no pertinence outside that particular class, but rather that course writing assignments are initial attempts at entering the scholarly conversation in a particular field. Providing students with the concept that their written work has a place in a broader context of scholarship is a way to lend authenticity to course assignments and a way to help students avoid writing in a manner that is clearly bound by the context of a particular course, as I showed in chapter 4 that Jessica tended to do in her papers.

Raising Awareness of the Instructional Contributions of
Academic Librarians

The academic library has the potential to function as a laboratory in which students practice using disciplinary discourses in conversation with librarians. In order for this potential to be actualized, faculty members must recognize the many learning opportunities that students have outside of their classrooms and then embrace librarians as partners in the education of students. Librarians' instructional work with students can extend and enrich the disciplinary work that professors do, since librarians have a broad view of academia and can help students understand disciplinary knowledge in a larger scholarly context. In light of the American Library Association's statement that an information literate student should be able to find, evaluate and use information, librarians' instructional work should not be limited to helping students find information. Though locating information is important, more crucial is for librarians to help students to construct new knowledge and new understandings, which can be accomplished through students using disciplinary discourse in new ways. By engaging students in conversation about disciplinary discourses, librarians can actively contribute to the education of undergraduate students.

Administrators and faculty members need to recognize that the pedagogical contribution librarians can extend far beyond the full-class library instruction sessions that the professors witness. By acknowledging the learning that occurs outside of the classroom, the academic community may come to recognize the usefulness of the many informal and spontaneous interactions librarians have with students at the reference desk

or in a librarian's office that have heretofore largely gone undetected and underappreciated. Thus, faculty members might recognize that librarians play a complementary instructional role to their own, since librarians possess a unique and useful perspective to help students learn disciplinary discourses.

But just as important as having faculty members recognize librarians' role is for librarians themselves to recognize the value of their own instructional role and seize the many opportunities to play this role. Librarians need to feel empowered to think of themselves as teachers of undergraduate students, not just when they are conducting an information literacy class session, but also when they are interacting with students at the reference desk, meeting with students in one-on-one research consultations, or communicating with students in spontaneous informal conversations. Librarians need to make their all of their instructional activities (formal and informal) deliberate and intentional. Thus, the faculty members and the librarians here have a reciprocal and complementary relationship, in that they both have responsibilities in creating an instructional environment that extends well past the walls of the classroom, each depending on the other to provide instruction that they themselves are not equipped to provide.

As librarians become more intentionally involved in the learning processes of students as I am suggesting, they ought to pay particular attention to the complex and potentially contentious relationship with faculty members. Because teaching at the college level has long been a solitary endeavor, faculty members are accustomed to feeling solely responsible for their students' learning. Expanding the sphere of student learning beyond the classroom to the library and beyond could bring about negative

feelings on the part of faculty members, who might resent the librarians' involvement. Necessary here is a librarian who is equally skilled in instructional methods as well as in diplomacy and interpersonal skills. By maintaining the focus on student learning and by cultivating a healthy respect for each other's expertise, the faculty member and the librarian can avoid disrupting this complex and sometimes fragile relationship. When the relationship between faculty member and librarian is positive and productive, the students benefit greatly by experiencing an integrated learning experience that seamlessly permeates their academic life.

It would behoove librarians to make a practice of documenting the instructional activities in which they participate so as to increase faculty members' and administrators' awareness of their work and to increase their own consciousness of their role as teachers. In addition to librarians documenting their own instructional activities in an informal manner, additional formal research projects should be conducted to investigate the many ways that librarians participate in the education of undergraduate students in addition to information literacy instruction sessions. Few in academia fully understand what librarians actually *do* (Hardesty, 1995). Therefore, publishing research about the instructional role of librarians in disciplinary or higher education journals, not just library science journals, will increase the awareness of the impact that librarians can have on the education of undergraduate students.

Just as I found it difficult to capture the interactions between students and Amber, the social sciences librarian, due to the complication of seeking informed consent in spontaneous student-librarian interactions, other researchers will likely find it difficult to capture data of a librarian's myriad instructional moments. However, innovative research

designs might enable a researcher to follow an instruction librarian for a period of time to document the many instructional activities in which the librarian partakes. The academic community, including students, would benefit from understanding how exactly a librarian contributes to the educational experience of undergraduate students.

Applicability of this Study to Other Settings

This study was conducted at a small, liberal arts college where collaboration between faculty members and librarians is commonplace and communication among faculty members of disparate disciplines is regular. However, this type of academic community serves only a minority of undergraduate students in the United States today. In fact, in 2005, only 9.9% of undergraduates attend small institutions like Credence (institutions with approximately 2500 students or fewer), while 31.3% of undergraduates attend large institutions (institutions with approximately 20,000 students) (Carnegie Foundation, 2005). How might the findings of this study apply to a different sort of institution, such as a large research-intensive university where undergraduate education is just one of many foci? How might this research study be situated in the context of national educational research efforts?

While the recommendations detailed in the previous sections may be less complicated to implement in a small college setting, they can be scaled to fit a large university environment as well. For instance, regardless of the size of the institution, undergraduate students would benefit from purposeful instruction regarding the characteristics of disciplines. For this reason, faculty members in all types of institutions might include instruction in the conventions of disciplines as part of course content. Typically undergraduate education is focused primarily on the content knowledge of a

chosen major; I am proposing that faculty members pay more attention to making the “how” of a discipline explicit to students. Adding awareness of disciplinary conventions to the outcomes for each major would be a way to encourage departments systematically to incorporate this content into the required courses for a major.

Secondly, collaborations among faculty members can occur and be fruitful in a large university setting, though they will happen more readily if these interactions are supported and rewarded by the institution. In a large institution, faculty members in different disciplines likely have little contact with each other. If the institution provides opportunities for faculty from disparate fields to work together for a common curricular purpose on university committees, they will interact with each other and learn about each other’s disciplinary conventions.

Additionally, collaborations between faculty members and librarians need also to be supported by the institutional culture. In order to become integrated into the educational mission of the institution, librarians, especially those at large institutions, need to market themselves and their services aggressively to the faculty, highlighting the benefit that librarians can provide in complementing the classroom teacher’s instruction. By fostering an environment of collaboration, an institution can encourage faculty members to work with librarians.

Especially in light of Secretary of Education Margaret Spellings’s recent report calling for greater accountability in higher education, faculty members of all types of institutions may at some point in the future be required to show what exactly their students have learned at the end of a course (U.S. Department of Education, 2006). Since the successful acquisition of an academic discourse is one way of signifying learning in a

particular field, this study might provide insight as to ways in which institutions might document student learning. Additional research projects should be conducted to provide further insight into the processes of undergraduate learning, an area of educational research that has been largely neglected. Thus, this study and future studies about the acquisition of disciplinary discourses will shed much needed light on the ways that undergraduates learn disciplinary conventions and the ways that their identities are shaped by their acquisition of (or resistance to) disciplinary discourses.

Potential Barriers to Implementing this Model of Collaboration

As beneficial as collaboration between faculty members and librarians seems to be for undergraduate student learning, there are a number of drawbacks that complicate its full implementation. First, incorporating librarians into active participation in the education of undergraduates would create a substantial cost in additional staff requirements. In a small institution like Credence, the ratio between the number of librarians to the number of students tends much higher than the proportion of librarians to students at a large university. In order to have the staffing to conduct the kind of intensive one-on-one instruction with undergraduates that I propose, large institutions would likely have to add librarians to their current staff.

However, much of what I am suggesting would occur in activities in which librarians are already engaged: reference work and one-on-one research consultations. Therefore, more than adding new positions, existing librarians would need to rethink the way they interact with students. Librarians in any type of institution would need professional development sessions to raise their awareness of disciplinary issues and to

promote the incorporation of disciplinary conversations into virtually all of the librarians' instructional tasks. These changes would require strong and charismatic leadership in the library so that the existing librarians would be willing to adapt their ways of interacting with students and so that new hires would be selected on the basis of their interest in instruction.

Secondly, faculty members would need to be willing to allocate class time to discussions of disciplinary conventions. A common complaint among faculty when faced with the prospect of adding instructional content is that they can't add more material because they then would not be able to cover everything they needed to cover in the semester. While this is a legitimate issue, I would propose that this learning of disciplinary conventions would lead to a deeper understanding of the course content because the students would have learned not just the content but also the ways that experts in the field approach the content. Thus, the students learn ways of thinking about disciplinary questions, not just the answers to the questions.

And finally, faculty members would need to be willing to collaborate with librarians and not be a solitary and independent teacher for their classes. This collaboration would require a great deal of trust and respect by both the faculty member and the librarian about the other's work. Undoubtedly, there would be moments of tension, but if all involved could keep student learning at the forefront, students would benefit from such collaborative efforts. With strong leadership in the library and support from the administration, a culture of collaboration could be fostered across the institution, which could lead to faculty members working with librarians as well as with each other

across disciplinary lines. Both of these collaborations have the potential to facilitate students' acquisition of disciplinary discourses.

Concluding Words

Finally, I turn to one of my focal students for her perspective regarding her perceptions of how she acquired the disciplinary discourse of psychology. Teri, who was graduating shortly after this interview, stated,

I had no background experience, no experience reading professional journals, and when you are constantly reading like ten journal articles every night of your life for like four months in psychology, you just kind of start adapting to the way that they write and you know, when you hear [Karen] talk, she doesn't talk like just a normal person, she talks like psychologist talks. And it's very professional, and it makes you want to strive to be like that. Especially because I am graduating, I don't want to talk like I used to talk. I want to present myself well in job interviews. So I think reading the journals and listening to [Karen] really helped that.

In this excerpt, Teri explains that she learned the discourse of psychology by listening to her professor Karen and by reading from the professional literature. Each of my focal students cited these same two sources for their learning. While these two sources are unquestionably powerful, students undoubtedly also learned from their peers, from their interactions with librarians and other academic personnel, and likely from innumerable other sources. By being more deliberate and explicit about instruction in the disciplinary conventions, faculty members and librarians will enrich students' education so that students like Teri—and especially her classmates for whom the acquisition of this second language is more difficult—will become fluent in this secondary discourse.

Like Teri, most undergraduate students don't want to "talk like [they] used to talk." They want to learn to participate in the parlor conversation with confidence.

They want to embrace the new identity that learning a disciplinary discourse provides. By making undergraduate education more intentionally focused on students' acquisition of disciplinary discourses, we in higher education from across the academic community can assist all students in gracefully joining the parlor conversation.

APPENDIX A: ROLES OF PARTICIPANTS

Students

- Teri
- Jessica
- Mark
- Greg
- Andrea

Professors

- Karen
- Sharon
- Anne

Librarians

- Jane (library director)
- Amber

APPENDIX B: INTERVIEW PROTOCOL FOR
STUDENT INTERVIEW

1. Demographic info
 - a. Please describe your background: your hometown, your family, etc.
 - b. What is your parents' and siblings' educational background?
 - c. High school experiences: How well-prepared did you feel when you moved from high school to college?
2. What year are you at Credence? How far are you through the psychology major?
3. How did you choose psychology as your major? Who or what influenced you to select psychology as your major?
4. Have you changed majors at any point in college thus far? What other majors have you considered? How confident are you that the major you have chosen currently will be the one you have when you graduate? Have you considered a second major or a minor? If yes, which one? Why?
5. How successful have you been in your college career thus far? How successful in psychology? What have been your struggles within your major or in other classes?
6. For the papers that you gave me, did you feel like you were assessed fairly? Did you have frustrations with any of your papers?
7. How did you use the feedback you received on your papers?
8. Can you describe any critical moments when you learned something about how to be a successful student of psychology? Do you recall any "a-ha" moments?
9. How would you describe a smart student in psychology? How might someone who knows you from a class within your major describe you?
10. What does it mean to read/write/research/think/speak well as a psychology major? Do you feel that you are up to all of the academic demands of this major? Explain.
11. How have you learned to read/write/research/think/speak as a psychology major
12. Have you learned about how to be a student of psychology from anyone else on campus? (Other students, librarians, writing consultants, quantitative reasoning consultant, etc.)?

APPENDIX C: INTERVIEW PROTOCOL FOR
INSTRUCTORS (FACULTY MEMBERS AND
LIBRARIANS)

1. Briefly describe your educational background, including degrees and majors.
2. What was your undergraduate major? Did you change majors throughout college ever? What other majors did you consider?
3. How did you decide to major in and go to graduate school in your chosen field? Who or what influenced you in choosing this field?
4. How would you describe a smart student in your field?
5. What does it mean to read/write/research/think/speak well as a psychology major? Do you recall any incidents or events that helped you to learn these ways of being a scholar in this field?
6. How do you think students learn the disciplinary ways of being in a particular major? Do you think students are generally successful at this process? How does the process occur? Whose responsibility is it to teach these rhetorical processes for students to succeed in a major?
7. In thinking about the classes you are teaching this block, do you think that you are teaching anything about how the discipline worked? Do you think students “got it”? How do you know?

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