UNDERSTANDING WRITING: COMMUNITY COLLEGE FACULTY

CONCEPTUALIZATIONS OF DISCIPLINARY WRITING

ACROSS TEXAS

by

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A dissertation submitted to the Graduate Council of
Texas State University in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
with a Major in Developmental Education
August 2014

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DEDICATION

This piece is for

Arthur, Erin, Ingrid, Ella, and Clayton.

The future awaits you. Make yourself proud of what you become.

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS

Abbreviation	Description
AACC	American Association of Community Colleges
CM	Conceptual metaphor
GTM	Grounded theory method
MLE	Metaphorical linguistic expression
WFQ	Word frequency query

ABSTRACT

This dissertation presents a study designed to uncover instructors'

conceptualizations of disciplinary writing in order to understand how those

conceptualizations may hinder or support students' development as successful writers

across disciplines. Data sources included surveys, where instructors answered open

response questions and constructed analogies about disciplinary writing, and a series of

semi-structured focus groups and interviews with key informants.

Data analysis included content analysis to identify the contexts surrounding

instructors' discussions of disciplinary writing, discourse analysis to elucidate instructors'

personal conceptualizations about disciplinary writing, and metaphor analysis to

illuminate the analogical expressions instructors used to make sense of disciplinary

writing.

Analyses revealed that instructors not only held wide-ranging conceptualizations

of disciplinary writing, but also that when instructors' conceptualizations were grouped

together by field, conceptual mismatches of disciplinary writing were uncovered within

and between disciplines, within and between fields, and even within and between

content-area courses and literacy courses. The findings suggest that instructors'

conceptualizations about the purposes, descriptions, and values of disciplinary writing are

embedded within unconscious and conscious understandings of the nature of each

discipline, as well as within instructors' understandings of their responsibility to the

teaching of writing.

CHAPTER I

Introduction

This chapter begins with an overview of the context and background that frame the study, followed by the problem statement, purpose, and research questions. The chapter ends with the rationale and significance of this study, along with definitions of key terminology as they are used within this research study.

Background and Context

To many people, according to Lea and Stierer, "the qualities of 'good writing' are assumed to be self-evident, and largely a matter of learning and mastering universal rules of, for example, grammar, usage and text organization" (2000, p.5). Students are expected to use these universal rules for all of their academic writing tasks (Sperling, 1996). Yet, in more than twenty years of research and theory, scholars have demonstrated repeatedly that a solitary definition of writing competence and academic discourse does not exist (Bartholomae, 1985; Carter, 2007; Diller & Oats, 2002; Mosenthal, 1983; Russell, 1991; Shaughnessy, 1977). Thus if writing competence is as variable and indefinable as researchers claim it is, it becomes problematic when writing scholars claim composition studies provide students with the necessary skills and knowledge to transfer their writing abilities across disciplines (Downs & Wardle, 2007) through the teaching of general writing knowledge. Downs and Wardle (2007) stated, "those of us working in writing studies find ourselves today confronted by the fact that our research and theory calls our cornerstone course – and the underlying assumptions upon which it is based – into question" (p. 552).

If there is not a solitary definition of writing competence, the process of learning

to write successfully in college can prove to be a daunting task for many students. Shanahan and Shanahan (2008) argued that students may find it difficult to differentiate disciplinary knowledge from one task to another, because most students need explicit instruction of complex genres, unique language uses, disciplinary and higher-level practices. And Carter (2007) and Russell (1991) implied that instructors themselves might not provide explicit teaching because they often learn to write in the disciplines through slow observation and apprenticeship, and not through explicit instruction. Thus, instructors may not see that the form of writing in their discipline is actually a practice specific to the discipline. Russell (1991) proposed that faculty members within the disciplines might still see writing as a universal skill, generalizable to all disciplines. Additionally, Macbeth (2010) asserted that expert academics often do not realize that the social, discoursal practices within their discipline are unique and invisible to novices.

Scholars have examined how students have attempted to navigate their control of writing across disciplines, only to discover that students find the process to be mysterious and confusing. For example, one student whose work was acceptable in history was told that his writing was lacking in structure and in argument in anthropology (Lea & Street, 1998). The general writing process he was using did not work for both disciplines. In another study, Stockton (1995) found that a literature major, trained with similar interpretation skills as history majors, received good marks in literature but low scores in history. This study suggested that each discipline required different methods for writing up interpretations. In another example of a study uncovering students' difficulties in understanding writing tasks between disciplines, Chanock (2000) found that students received different critical comments from history and English instructors, suggesting that

their writing skills are not being valued or shared equally across disciplines. These studies suggest that although some general writing knowledge may be universal and shared across various disciplines, other specific writing knowledge is valued for varying disciplinary tasks.

Lee (2000) asserted that students continue to understand their tasks by inserting their ideas into pre-existing shapes, regardless if that shape fits or limits their ideas. If disciplinary writing beliefs and practices are not made explicit, this can lead to gaps between teacher expectations and student interpretations of certain tasks and activities (Paxton, 2007). Incorrect assumptions of instructors' belief systems and pedagogical practices regarding writing may lead students to misrepresent the role and the use of writing, as they move from discipline to discipline.

Because students are not fully prepared for the complexity and disciplinary demands of writing without explicit instruction (Shanahan & Shanahan, 2008), implicit teaching by faculty can cause students to navigate writing in college with only a vague understanding of the general writing process, often causing them to experience confusion (Husain & Waterfield, 2006) and barriers (Bartholomae, 1985; Shaughnessy, 1977) in their attempts to become successful writers across disciplines. Existing literature provides suggestions and pedagogical implications about how faculty members could become more explicit in the teaching of writing or discourse specific to their disciplines of expertise (Diller & Oates, 2002; Faigley & Hansen, 1985; North, 2005b). Other scholars also suggest that disciplinary writing studies are too advanced to be taught to undergraduate students who are still struggling to learn basic literacy skills (Faggella-Luby & Seshler, 2008). In addition, some studies indicated that instructors are resistant

to the idea of writing instruction falling partially within the duties of the disciplinary instructors, because they see themselves as content-specialists and not writing teachers (Brzovic & Franklin, 2008; Fulwiler, 1984; Richardson, 2004). With the varying conceptualizations instructors have regarding disciplinary writing, there is a need to analyze those conceptualizations to examine whether they support or hinder students learning to write across disciplines.

Learning to write successfully in college is not only a matter of learning disciplinary writing strategies and knowledge. Scholars argued that learning to write in their disciplines requires working out their own identities, weighing prior knowledge, and learning social practices (Diller & Oats, 2002; Kapp & Bangeni, 2009; North, 2005a; Paxton, 2007; Richardson, 2004). North (2005a) suggested that the ability to write any particular discourse is not only a cognitive skill, but is also a reworking and product of students' sociocultural history. Students must become familiar with the functions of the discipline, with the proper use of language and terminology, with the demands of the discipline, and be able to do that for each discipline of which they are members (North, 2005a). Since writing as a literacy practice is a socially constructed and culturally mediated practice, then it is important, as Williams (2010) claimed, to gain a better perspective of how instructors themselves conceptualize writing in their disciplines and how they share those understandings with students.

Problem Statement

There is a plethora of pedagogies suggesting positive and impactful methods of incorporating writing into the disciplines, yet many instructors do not include writing instruction in their classrooms to further develop students' formal writing instruction

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beyond composition courses. Although students often complete assigned writing tasks, many students remain confused about the writing processes in the various disciplines and thus find themselves replicating faculty behavior regarding writing. Briscoe (1991) demonstrated that teachers depend on metaphors or conceptualizations to make sense of their teaching, which has a significant effect on their pedagogical practices. Therefore, this study uncovers instructors' conceptualizations of disciplinary writing, in order to understand and provide an impetus for change of those conceptualizations that may be creating too many limitations for students in their quest for writing success across disciplines.

Statement of Purpose and Research Questions

The purpose of this study is to understand how Texas community college instructors conceptualize writing. Students may experience an invisible barrier that prevents them from being successful writers in the disciplines (North, 2005b) and faculty members in the disciplines view themselves as content-specialists rather than writing instructors (Brzovic & Franklin, 2008; Richardson, 2004). This scenario presents a stalemate of sorts. And, as suggested by Armstrong (2007), further investigations of educators' conceptualizations of writing can only help to make sense of how their conceptualizations affect the way they teach postsecondary literacy. By investigating how instructors conceptualize writing, especially within the disciplines, it becomes possible to make their conceptualizations explicit in order to begin closing the gap between instructors' views about writing and students' understandings of the writing tasks they receive. To shed light on the problem, the following research questions are addressed:

1. How do Texas community college instructors conceptualize disciplinary writing?

2. How do Texas community college instructors' conceptualizations of disciplinary writing differ within and between the fields of literacy, math and science, and social science?

Rationale and Significance

The rationale for this study emanates from the need to bring instructors' conceptualizations of disciplinary writing to conscious awareness and develop an understanding for how they may be encouraging or limiting to students. Increased awareness of the conceptualizations that instructors are sharing with students, whether unconsciously or not, regarding writing across disciplines, may encourage instructors to change, keep, or modify their conceptualizations in order to affect the positive understandings and competencies of students as they write across disciplines.

Definition of Terms

Academic writing – The term academic writing, as used in this study, refers to a set of universal or condensed skills, which students learn during general composition studies and believe to be transferrable to other contexts. This type of writing taught to college students in general composition courses encompasses a variety of general, universal writing practices that serve as templates that students need to modify to conform to the specific writing tasks of different discipline. However, this concept of writing focuses largely on surface features and presents writing as a technical process. This definition is crucial to this study, because this rudimentary approach has resulted in a refinement of the term skills and has brought attention to the idea of learning through social context and situated learning (Street, 2004), which is what disciplinary writing

aims to do.

Conceptualizations – Conceptualization is the mental process by which people interpret how they understand and define something (Kovecses, 2010; Lakoff & Johnson, 1980). In this study, participants were asked to describe their conceptualizations by answering survey, focus group, and interview questions as well as form conceptualizations of their understandings about writing in their respective disciplines by constructing analogical expressions.

Discipline – In this study, the term discipline refers to a singular subject. When I refer to writing within or across disciplines, I am referring to writing across all subjects.

Disciplinary writing – In this study, disciplinary writing refers to the process of writing based on the identities and social meanings of a community or group, in this case, a discipline. This definition views the literacy practices of writing as the need to switch practices between settings, to use a different set of linguistic practices depending upon the setting, and to grapple with the social meanings and identity issues that are part of each setting. Overall, disciplinary writing targets issues of epistemology and identities rather than surface features and the technical writing process. This view of disciplinary writing is influenced by the research of several scholars (Barton, 1994; Gee, 1991; Moje, 2008; Shanahan & Shanahan, 2008, 2012; Street, 1995, 2004).

Discourse – The term Discourse (with a capital 'D') in this study refers to Gee's distinction between discourse and Discourse. Kucer (2009) explains Gee's term, such that "Discourse (upper-case D) signifies the appropriate way to use discourse within a particular setting and as part of membership within a particular social group" (p. 221). This type of Discourse is always linked with a particular group or community's way of

thinking, believing, and valuing. In this study, analyzing the Discourse of faculty participants as they discuss and conceptualize writing in their perspective disciplines provides insight into how they think, feel, believe, value, and understand writing.

Field – In this study, I will use the words discipline and field. I initially attempted to examine writing across and within each discipline, but I did not garner the data necessary to make general claims per discipline. However, to explore any differences in writing across disciplines, I grouped similar subjects together to form fields. These particular disciplines are grouped together in fields representing the historical grouping of disciplines into colleges at universities and colleges. For example, there are the College of Liberal Arts, Humanities and Social Sciences, and the College of Science and Engineering. By grouping the various subjects together representing the subjects within the colleges, I was able to investigate writing differences between fields. The fields are literacy, math and sciences, and social science.

Metaphor – A metaphor in this present study, following the cognitive linguistic view of metaphor (Lakoff & Johnson, 1980; Kovecses, 2010), represents the cognitive analogical process by which one unfamiliar thing is understood and represented by a familiar thing. Metaphor originates from the Greek word *metapherein* ("to transfer"), where *meta* means "among" and *pherein* means "to bear, to carry." Consequently, metaphor represents the transfer of meaning from one thing to another.

Metaphor analysis – In this study, metaphor analysis rests on the belief that metaphor is a powerful linguistic device due to its ability to extend and encapsulate knowledge about the familiar and unfamiliar (Hong-bo & Wen-juan, 2010), which stems from the work of Lakoff and Johnson (1980). Lakoff and Johnson describe how humans'

underlying conceptual nature is metaphorical and how human actions are dictated by their conceptualizations of something. Thus, by examining humans' conceptual metaphors, it is possible to bring to consciousness the beliefs, attitudes, and perspectives they have on something. In this study, metaphor is regarded as a way of thinking about or conceptualizing the world, which is represented through the cognitive analogical process participants demonstrate when understanding one thing in terms of another.

Metaphorical linguistic expression (MLE) – A metaphorical linguistic expression (MLE) represents the linguistic expressions made by participants in which they attempt to represent their conceptualizations of disciplinary writing. In this study, participants were specifically asked for these expressions through a process of completing fill-in-the-blank simile stems, "A is like B." Here, A is considered the target domain, and B is considered the analogical domain used to understand A. For example, A=disciplinary writing and B=snowflake. The resulting metaphorical linguistic expression by imposing these domains on the fill in the blank simile is, "Disciplinary writing is like a snowflake." Specifically, an MLE is an expression in which the language and terminology of domain B enables domain A to be understood in more concrete terms (Kovecses, 2010). The completed simile stem becomes an analogical expression. In this study, each MLE also represents an individual instructor's conceptualization of disciplinary writing.

Conceptual metaphor – In this study, a conceptual metaphor (CM) is developed through thematic categorizations of MLEs. If there are several MLEs that describe domain A in a similar fashion, then a conceptual metaphor is made discernible through the shared theme of the MLEs (Kovecses, 2010).

Delimitations and Limitations

About 60% of incoming community college students are required to enroll in at least one form of a developmental education course (Bailey, 2009), causing community colleges to be the largest arena for students in developmental education. Although this study does not specifically target instructors from developmental courses, I aimed to examine the range of writing views that students will be expected to encounter and work through from the start to end of their academic career. Because students in developmental education are more prevalent at community colleges and may face larger obstacles in completing a certificate or degree, I wanted to examine the variety of conceptualizations of writing they will encounter as they move from introductory courses to content-area courses in order to make these views more tacit and informative for students. The insight gained from this study has the potential to discover those instructor conceptualizations that may be creating too many limitations for students in their quest for writing success across disciplines.

Summary of Chapter One

Chapter One presented the background and context, problem statement, purpose, and significance of this study. This chapter also provided the guiding research questions and a list of defined terms.

Organization of the Dissertation

Chapter Two reviews the literature on the methodological and theoretical foundations that not only guided my study but also revealed a gap in the literature, from which my study was formed. Topics in the literature review included academic writing assumptions, disciplinary writing as a social practice, epistemological belief systems, and

conceptualizations using metaphor analysis. Chapter Three described the recruitment and

sampling procedures of participants, the background of the methodologies, and the

analysis procedures used in this study. Chapter Four presented the analysis results.

Chapter Five discussed results, implications, and recommendations for research.

CHAPTER II

Review of Literature

The purpose of this grounded theory study was to investigate community college instructors' conceptualizations of disciplinary writing. Specifically, I sought to bring to the surface instructors' implicitly implied conceptualizations of disciplinary writing in order to examine how those conceptualizations may support or hinder students' in their endeavors in learning to write across disciplines. To carry out this study, I had to first understand what factors led to the promotion of disciplinary writing as a suggested pedagogical and research based practice, before trying to understand how instructors react to or conceptualize disciplinary writing. Current literature provides a plethora of pedagogical exemplars and reasons for implementing disciplinary writing into college coursework, but very little literature covers the reactions, attitudes, values, or understandings instructors have regarding disciplinary writing. Furthermore, many students and instructors consider general writing courses to be the location where *good* writing is taught and learned, and very few studies have actually presented how content-area instructors conceptualize good writing in their respective disciplines. The purpose of this study is to examine those conceptualizations instructors have of disciplinary writing in order to understand how instructors' constructs might affect student learning, as well as to examine what content-area instructors understand to be good writing within the various disciplines. This review was ongoing throughout data collection, data analysis, and synthesis phases of the study.

This critical literature review explores the interconnectedness of research, experience, and personal belief systems on teaching practices, thus making a connection

between how instructors' personal belief systems concerning disciplinary writing may affect their pedagogical practices. I critically reviewed several major areas of literature: (a) academic and disciplinary writing, (b) expert and novice learning practices, (c), tacit and explicit teaching practices, and (d) sociocultural and situated learning theory, as well as metaphor analysis as the theoretical frameworks guiding this study. A review of literature on academic and disciplinary writing provides an understanding of how the view of academic writing as a rudimentary and technical practice led the way into expanding learning views to include social and situated learning, which is now present in the view and issues on disciplinary writing. Expert and novice learning practices are reviewed to provide a context for understanding the difference between how experts and novices think, do, and explore, which resembles the relationship between how a teacher thinks a student should learn and how a student actually learns. Moreover, the research on experts and novices illuminates implicit, and often invisible, practices experts have that they are unaware of, making explicit instruction to novices difficult. Finally, I reviewed sociocultural and situated learning theory to provide context for understanding the knowledge, skills, attitudes, and beliefs held by the participants in regards to disciplinary writing and how they conceptualized their thoughts to explain their understandings based upon social and situated experiences. Following the review of literature, I then explain the conceptual frameworks that form this study and the reasoning for the methodology used in this study.

In conducting this selected literature review, I used multiple information sources, including books, dissertations, Internet resources, professional journals, periodicals, and professional blogs. When beginning the review of literature on disciplinary writing

leading up to this study of faculty conceptualizations on disciplinary writing, the four categories of the review of literature became common and thematic strands throughout most of the literature, and thus I considered them significant categories that revealed themselves as factors relating to possible formulation of faculty conceptualizations of writing.

From Academic to Disciplinary Writing

For decades, scholarship on writing has indicated that academic literacy is too unique and varied across disciplines to generalize writing instruction within a general composition course. Although academic writing conventions are routinely and successfully taught in basic writing and first-year composition courses (Bartholomae, 1985, 1993; Hjortshoj, 2001), many scholars have proposed that current methods of teaching general composition may not be enough to help students succeed in their advanced coursework writing tasks (Carter, 2007; Russell, 1991). As a result of generalized instruction, Lee (2000) suggested that students continue to perceive their writing tasks as putting their ideas into an existing format, regardless of whether that format supports or hinders their ideas.

To many, writing instruction in general composition courses appears to be a set of basic skills, or generalizable and assimilative rules, which students are expected to use for all of their academic writing (Sperling, 1996). However, as students move forward in their coursework into discipline-specific courses, the overgeneralized and underassimilated writing rules from general composition courses can burden students and strain their ability to write (Bartholomae, 1985; Hull & Rose, 1990; Rose, 1998; Shaughnessy, 1977). These generalized writing rules may also mislead them about the

underlying goals and demands of academic writing in the various disciplines (Sperling, 1996).

According to DePalma and Ringer (2011) and James (2010), many students experience difficulty transferring their generalized writing knowledge from composition courses to content-area courses. James (2010) argued that transfer does occur, however it is more frequent in some disciplines over others and more frequent with some tasks over others. Thus, he concluded, although transfer is possible, it is not inevitable, especially when general writing instruction has the objective of providing students the skills that transcend any discipline. Consequently, students struggle to discern the seemingly mysterious and tacit writing knowledge necessary for the discourses within the disciplines.

In opposition to genre-based writing, Faggella-Luby and Seshler (2008) defended general strategy instruction. They argued that generalized instruction uncovers and teaches universally applicable strategies, routines, skills, language, and practices to content-area learning, and are thus defined as generalizable to other domains. An example of a general writing practice is teaching students the five-paragraph essay format and how to expand it to fit longer papers in other courses, or teaching the concept of audience and expecting students to modify their language based upon audience awareness. However, scholars asserted that even when instructors in the disciplines do not explicitly teach or buy-in to disciplinary writing conventions, their students claim that the general academic writing knowledge they use successfully in one discipline does not always count as good writing in another discipline (Chanock, 2000; North, 2005b; Stockton, 1995). Shanahan and Shanahan (2008; 2012) and Snow (1987), argued that

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even though disciplines share some commonalities in their academic language and practices, each discipline engages in its own unique practices in language, syntax, and conventions.

Hyland (2002) suggested that the teaching of formulaic and model-like practices in current composition courses works, in theory, because students will eventually learn how to work toward independent construction as they approach higher and more complex tasks within academic writing. Independent construction includes the transfer of writing knowledge to other domains. For example, when considering the element of audience when writing, students should be able to transfer that concept to the disciplines and be aware that they may have to tailor their language to fit the rhetorical demands of the audience based on disciplinary discourses. However, students discover that what they learn does not easily transfer to other contexts (Perkins & Salomon, 1994) or to discipline-specific courses (North, 2005a).

Disciplinary writing aims to teach students what it means to write, talk, and think as members of a particular discipline, which requires students to be enculturated into the discipline (Pemberton, 1995; Shanahan & Shanahan, 2008). Disciplinary writing does not serve as a replacement for academic writing, but rather as a supplement to students' formal writing instruction. Linton, Madigan, and Johnson (1994) explained that this is not to say that general composition instructors are not doing their job sufficiently. Rather, the idea of disciplinary writing, also known as Writing in the Disciplines (WID)[1] (see Bruffee, 1984; Maimon, 1981), is to counter the idea that a couple of composition

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[1] Writing in the disciplines (WID) differs from writing across the curriculum (WAC) in the sense that WAC refers to the use of student writing as an instructional tool with a focus on fluency, and WID refers to the teaching of writing specific to a field and to the formal study of rhetoric and discourse within a discipline.

courses is all the writing instruction students need to be successful in the rest of their academic writing experiences.

Some researchers suggested that students struggling with writing may require some form of basic writing before they engage in any form of advanced disciplinary writing (Faggella-Luby, Graner, Deshler, & Drew, 2012), suggesting that disciplinary writing is nearly impossible to practice without foundational writing skills. However, even when considering basic writers, Lea and Street (1998) argued that although some students may require extra help in writing, suggesting that it is important to switch from focusing on skills-based, deficit models of student writing to the high-level, complex practices that universities are expecting students to use. Johnson and Watson (2011) supported disciplinary writing as a means to involve students in deeper learning. They said, "To a large degree, what occurs in schools is the transmission of knowledge through lectures and talks about the discipline, rather than the actual doing of the disciplines" (p. 107). It is important to consider the benefits of teaching disciplinary writing to students, if only because studies suggest that the current academic writing practices do not consistently transfer to disciplinary writing tasks (DePalma & Ringer, 2011; James, 2010).

Hyland (2002) questioned the amount of specificity in college writing instruction needed to enable students to transfer their knowledge without restraining or misrepresenting the social practices of the disciplines. He contended that a close examination and analysis of a disciplinary-specific text should enable students to uncover the features and rules for writing within specific disciplines. Husain & Waterfield (2006) asserted that as students write within various disciplines, they believe that success lies in

complying with an unattainable, mysterious tacit code, rather than in a well-composed piece of writing. This is the case simply because a well-written piece of text is often not enough to satisfy instructors' implicit writing expectations of students. In addition, content-area instructors also struggle with how to assign and evaluate writing in a manner specific to the disciplinary knowledge (Fernsten & Reda, 2011).

Thus, with current literature attesting to academic writing being indefinable as a static set of rules or conventions, and academic writing being variable according to the situation, discipline, or setting within which it is used, writing becomes a complex construct. If writing is hard enough for scholars and researchers to define and explain, then it is likely that instructors may also experience difficulty in explaining good writing to students, especially across disciplines.

Students' Experiences with Writing across Disciplines

Scholars have found that disciplinary expectations differ from one context to another; consequently, students discovered their writing skills valued in one course may be unwelcomed in another (Johnson & Watson, 2011; North (2005a; 2005b).

In a classroom study, Johnson and Watson (2011) examined the fields of mathematics and geography in an attempt to understand what it means to be literate in different disciplines, as well as to understand what reading and writing tools disciplinary instructors use for acquiring knowledge. They found that both mathematics and geography, due to the nature of each disciplines, are founded on examining and observing patterns, but for different purposes (Johnson & Watson, 2011). Math is more descriptive based in respect to pattern, where mathematicians attempt to understand how a model might be applied, if it fits the real world, and what happens if things are added or

removed from the pattern. In geography, the pattern is assessed in a time-based manner, and geographers would want to know what processes created it. Although both disciplines focus on the use of patterns, they have different tools, language, and texts for doing so. Despite how similar these disciplines are to each other, the use of language and text differs according to the functions within each discipline. Therefore, the writing practices useful in one discipline may not work in another, even if the two disciplines appear similar to each other in practice. Johnson and Watson's (2011) study is important because although this present study examines similarities and differences between fields, it is necessary to acknowledge that further research between individual disciplines may uncover greater differences of conceptualizations in writing practices, knowledge practices, and thinking processes that may advance the findings of this study.

In a university-wide study, North (2005a; 2005b) examined disciplinary variation in student writing in essays over a three-year period. She divided her findings into two categories: arts and sciences. She found that work in the sciences often involved a shared paradigm in which research builds upon what has come before and moves forward, whereas the arts reflects a view of knowledge as open to interpretation with research often being revisited rather than being deemed as resolved (North, 2005b). Her findings suggest that the disciplinary backgrounds of arts students prepare them better than science students in the writing field. For example, she found that the arts students tended to focus on critical thinking, oral and written expression, and analysis and synthesis of course content, whereas the science students tended to focus on skills in dealing with facts and figures, with little writing required beyond the exposition of experimental results (North, 2005a). Hence, when it came to grades, the arts students tended to be

awarded high marks, suggesting that they may be better prepared to present knowledge as constructed and contested rather than as a set of facts (North, 2005b). Thus, writing practices differ among the disciplines as a method of acquiring knowledge.

In another study regarding written work by students, Stockton (1995) found that a literature major, trained in similar interpretation skills as history majors, received good marks in literature but low scores in history. English majors are often trained to avoid writing plot summary, and to instead focus on interpretation of text. However, when these English majors wer in history courses, they avoided writing enplotment only to discover that a certain amount of narrative is required to relay historical events before interpreting them. Thus, Stockton (1995) argued that instructors need to make disciplinary writing purposes and structures explicit to students.

In addition, Lea and Street (1998) relayed that one student wrote two different papers, one for a history course and one for an anthropology course. The student employed similar writing process for each paper, yet he receiving conflicting feedback. He was told his work was acceptable in history and was told his writing was lacking in structure and argument in anthropology. This study suggested that generic writing processes for discussing interpretations vary not only across fields, but also across disciplines.

These exemplar studies speak to the confusion students experience, not only as they go from discipline to discipline but also as they go from course to course within one discipline, in regards to understanding successful writing practices. Much of these student experiences of viewing writing as a mysterious process are attributed to how instructors use, define, or value writing and how they express those views to students. In

the next section, the review of literature suggests that how instructors view writing in their discipline may be implicit for students because instructors, who are experts in their fields, may not realize that the practices they partake in are, in fact, disciplinary practices. Thus, they may be unaware of how to define writing as it truly pertains to the knowledge processes of their discipline.

Expert and Novice Practices

Current research also suggests that faculty members may unconsciously hold disciplinary writing knowledge and practices which they want their students to be implementing. In a study examining whether students understand tutor comments on history assignments, Chanock (2000) found that students often misunderstand tutor's comments on their written work during tutoring sessions, such that each student had a different idea of what a tutor meant by the words "Analytically, [your essay] is rather undernourished" (p. 96). She also found that faculty members have a preference for certain comments regarding students' work, such as "the paper only lists, narrates, or describes data" (p. 96), or "students . . . paraphrase instead of analyze" (p. 96), suggesting that students are not meeting instructors' preferences or standards of good writing. Her conclusion was that students may simply not understand tutors' and faculty's feedback phrasing. Furthermore, she suggested that the word "analyze," which often is used in writing prompts across disciplines, means something different in terms of task depending on the discipline as well as between instructor and student. Overall, she found that students received different critical comments from history instructors, for example than they did from English or art history instructors, suggesting that students' writing skills are not only difficult to transfer across disciplines without explicit expectations or

instructions of disciplinary writing tasks, but also that instructors in general had different understandings than students regarding task definitions. This is not to say that writing is difficult because it differs between fields and disciplines, but that writing is difficult because students are unaware of how writing differs between and across fields and disciplines.

Not only do students struggle to find the correct writing practices to use for each discipline, but faculty members and students often have different ideas as to how a piece of text should be analyzed or created. In a comparison study, when given the same text to analyze, teachers discussed political, social, and cultural constructions as where the students only saw facts (Wineburg, 1991). These studies attest to how students have experienced confusion and lack of success, as they tried to apply the writing knowledge they were taught to be the format for all academic writing assignments and as they attempt to make sense of instructors' writing task requirements. As suggested by Faigley and Hansen (1985), students need help to understand the work required to learn the questioning and answering methods of their discipline and how they differ from other disciplines, in order to know what writing characteristics belong to each discipline.

These studies provide examples of how students misunderstand instructors' conceptualizations of what represents good writing. Not only do students not understand what instructors are asking for in disciplinary written tasks, but also they do not understand what each discipline understands to be good writing. Thus, it is important to further investigate instructors' conceptualizations of writing in their respective disciplines to understand how those views are affecting students' learning.

Role of Explicit Instruction

Shanahan and Shanahan argued that students find it difficult to transfer knowledge from one task to another, or writing knowledge from general composition to discipline-specific courses, because most students require explicit instruction on the advance genres, specialized discourse conventions, and disciplinary and knowledge building processes.   Some scholars implied that instructors might not provide explicit teaching because they often learned to write in the disciplines through slow observation and apprenticeship, and not through explicit instruction (Carter, 2007; Russell, 1991). Thus, professors may not see that the form of writing or the uses of discourses in their discipline are actually practices specific to the discipline. Therefore, Russell (1991) proposed that faculty members within the disciplines see writing as a universal skill, generalizable to all disciplines. Additionally, Macbeth (2010) explained that expert academics often do not realize that the social, discoursal practices within their discipline are unique and invisible to novices.

Richardson (2004) argued that it is important for faculty to take a role in the explicit teaching of writing practice within their disciplines. Otherwise teaching practices can leave unintended impressions and cause students to make incorrect inductions about disciplinary demands. If disciplinary writing beliefs and practices are not made explicit, gaps between teacher expectations and student interpretations of certain tasks and activities will occur (Paxton, 2007). For example, Lee (2000) stated that students are still applying their ideas to pre-existing formats, even when the format hinders their ideas.

Because writing is often viewed as a generalizable skill unrelated to content, Russell (1990) implied that many faculty assume they are free from grading and

interacting with students, resulting in more personal time to attend to research and service duties within their discoursal communities. He added that this perception inadvertently allows instructors to ignore other disciplines, because as Richardson (2004) argued, instructors' ignorance of other disciplines might cause them to not even have the ability to be explicit. He said that this ignorance of other disciplines "highlight[s] the pedagogical barrenness of much undergraduate teaching and learning, and point[s] to an inability of university teachers to explicitly articulate or openly explore the discursive and literacy expectations of their professed discipline" (p. 506). If faculty members do not understand how their disciplinary literacy practices are different from general writing practices, it becomes difficult to explicitly instruct students on how to succeed in specific disciplinary literacy practices. Although faculty may not be explicit in their disciplinary writing advice to students, students still need guidance.

Sociocultural Theory

To attain disciplinary writing practices, one must be part of a discourse community, which necessitates an understanding of concepts, knowledge, phenomena, and language/terminology unique to the discipline (Diller & Oates, 2002; Kapp & Bangeni, 2009; Mitchell, 2010; North, 2005a; Richardson, 2004; Roozen, 2010; Woodward-Kron, 2008). As Russell (1993) explained:

> It is a matter of learning to participate in some historically situated human activity that requires some kind(s) of writing. It cannot be learned apart from the problems, the habits, the activities – the subject matter – of some group that found the need to write in that way to solve a problem or carry on its activities. (p. 194)

Learning disciplinary conventions happens as a result of a contextualized learning

environment that a student is within (Bazerman, 1988; Lea & Street, 1998), and as a socio-culturally situated practice (Gee, 2001). Based in this theory,, writing is an activity with social and cultural origins, meaning that it has to be learned and developed as a cognitive tool (Vygotsky, 1978). Hence, for a student to succeed as a writer in each discipline, he or she must comply with the social and cultural practices of the discipline. However, writing researchers have yet to fully understand their role in contributing to the generation of knowledge through disciplinary writing and for how it can be used to fulfill specific disciplinary learning demands (Sperling, 1996). Thus, it is important to understand how instructors themselves understand disciplinary writing in order to help determine their role in teaching disciplinary knowledge through writing.

In summary, the literature argues that academic writing is hard to define (Elbow, 1991; Lillis & Turner, 2001; Mosenthal, 1983; Spack, 1998), is constantly changing and being redefined (Liilis & Turner, 2001), is difficult to transfer (James, 2010), and is a social practice (Bazerman, 1988; Gee, 2001; Lea & Street, 1998). Therefore, each discipline, and the instructors within each discipline, should maintain their own disciplinary and social practices of writing so that students can acquire the ways of knowing in discipline rather than just having knowledge of a discipline (Johnson & Watson, 2011; Russell, 1990; Shanahan & Shanahan, 2008). Although most instructors are favorable to the idea of students producing better writing, many instructors continue to resist the idea that the teaching of any form of writing may fall within their disciplinary duties.

Faculty Resistance to Writing Instruction within Content-area Courses

Some studies indicated that faculty are resistant to the idea of writing instruction

falling partially within the duties of the disciplinary instructors because they see themselves as content-specialists and not writing instructors (Brzovic & Franklin, 2008; Fulwiler, 1984; Richardson, 2004). However, Elton (2010) argued:

> The genre of academic writing is discipline dependent, so that neither specialists in academic writing nor practicing academics in a discipline can, independently of each other, provide students with the necessary help to develop the ability to write in their academic disciplines. (p. 151)

Linton, Madigan, and Johnson (1994) suggested that to introduce students to disciplinary genres, general composition instructors should introduce students to formal differences in the writing characteristic of different disciplines, and faculty in the disciplines can continue to develop the writing mastery of students by providing them with explicit teaching of those disciplinary writing nuances. Furthermore, the authors stated:

> Truly mastering a disciplinary style means mastering the reasoning, the conventions, and the epistemological assumptions of the relevant discourse community; because completion of the undergraduate major is typically the first state in mastery of the discipline, it makes sense to incorporate explicit attention to writing at that level. (1994, p. 2)

Some composition scholars already encourage teachers to introduce students to the kinds of writing expected of them in their advanced coursework within the disciplines (Carter, 2007; Smit, 2004). However, more research is required to know how instructors conceptualize good writing in their respective disciplines. It is important for disciplinary faculty not to see themselves as writing teachers per se, but rather to find themselves responsible for teaching that the ways of knowing and doing in their disciplines carry

over to writing as an essential component to their discipline (Linton, Madigan, &

Johnson, 1994). By presenting disciplinary writing in this way, as Carter (2007) stated:

> Faculty come to understand that what counts as good writing is writing that
>
> meets the expectations of faculty in their disciplines. It's also beneficial that
>
> all this takes place on their own turf. It is not the writing professional who is
>
> telling them what counts as good writing in their fields. The faculty
>
> themselves are the experts. (p. 408)

Having faculty members explicitly instruct students on the writing characteristics of the

discipline enables students to learn the ways of knowing and doing within that specific

discipline, training them to not only "know" the knowledge of the field, but to also

"work" in the manner of a disciplinary member.

In short, due to academic writing being difficult to define, faculty members not

being aware of their own expert practices, and disciplinary writing instruction not being

explicit, faculty members' conceptualizations of writing are complex, variable, and

dynamic. Despite where or how these faculty conceptualizations of writing were formed,

it is necessary to bring to consciousness what those conceptualizations are in order to

understand how those constructs of writing may support or hinder students'

understanding of and growth as academic writers.

One way to reveal these often unconscious understandings of something is

through conceptualization studies, which provides a means for people to filter reality

through their own cognitive understandings of their experiences with real world

phenomena (Nikitina & Furuoka, 2008). The following section discusses the importance

of conceptualization and belief studies in education.

Instructors' Beliefs Systems about Learning

Beliefs play a significant role in understanding how people perceive knowledge (Buehl & Alexander, 2001; Schommer, 1990). For example, if an instructor believes knowledge is given to students, he or she will likely engage in teaching practices that present information to students in a manner requiring students to listen and take notes, such as lecturing. If an instructor believes that students should construct their own knowledge, he or she will likely engage in teaching practices that provide opportunities for students to build their own understanding of a topic instead of taking the instructors' information as a given.

Similarly, faculty members' beliefs about writing knowledge and writing instruction affect their instructional practices and how students learn to write. Given the idea that differing beliefs about writing affect the conceptualizations of writing tasks and the teaching of writing, it becomes important to study the conceptualizations and belief systems that faculty and students may have about disciplinary writing. If, as White and Bruning (2005) suggested, writing quality is linked to implicit writing beliefs, then it is necessary to understand the factors that contribute to a person's conceptualizations of disciplinary writing. Thus, it is important to explore whether instructors' writing beliefs also affect their instructions on writing quality. One way to understand people's conceptualizations is through employing metaphor analysis, which is one of the analysis procedures in this present study.

Understanding Learning through Metaphors

Johnson (1987) and Gibbs (1994) argued that humans understand and know the world through metaphors and, in turn, express their understanding through metaphors.

For example, Sfard (1998) distinguished between those who understand learning as acquisition and those who understand learning as participation. In the acquisition model, the product or point to be learned has central importance, and every purpose for learning is directly linked to knowing the product or point to be acquired. In contrast, learning in the participation model focuses on the engagement and participation with social communities and their contextualized learning activities. The point behind these two examples is to show the implication these metaphorical constructs have on conceptualization what learning is, how good learning can and should be evaluated, and how learning can be improved.

Lakoff and Johnson (1980) and Kovecses (2010) argued that humans often understand constructs via metaphor; thus, Bowman (2008-2009) encouraged, "Because the language of metaphor shapes our perceptions and influences our behaviors as teachers, we clearly need to have a conscious awareness of the dominant metaphors that guide us" (p. 3). Furthermore, according to Nikitina & Furuoka (2008), metaphors not only aid in the human cognitive process, but they also can determine how people act based on their perceptions of their own reality.

Defining Metaphor Analysis and Its Theoretical Framework

Lakoff and Johnson (1980) proposed a complex theory of metaphor, which allows for the reconstruction of cognitive strategies in action, such as patterns of thought, perception, and communication. Additionally, they challenged the traditional view that metaphors are only literary and of poetic origin; rather, they defended metaphor, in their cognitive linguistic view of metaphor, as more of a cognitive matter than a linguistic matter. They stated, "metaphor is pervasive in everyday life, not just in language but in

thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature" (p. 3). Furthermore, they described how this conceptual metaphorical structure enables us to understand our perceptions and experiences when using language as proof of that system.

Metaphor originates from the Greek word *metapherein* ("to transfer"), where *meta* means "among" and *pherein* means "to bear, to carry." Metaphors enable us to understand an unfamiliar thing by transferring the meaning of a more familiar thing onto it (Kovecses, 2010; Lakoff & Johnson, 1980). Kovecses (2010) explained that it is easier to completely understand an abstract construct by relating it to another more concrete concept. Thus, this theoretical approach to metaphor as cognition relies on the idea that language and metaphor impose structure on thought (de Guerrero & Villamil, 2002), enabling us to make sense of, and most of all understand, the way we see the world and our everyday experiences. Furthermore, not only do metaphors have the ability to aid in human cognitive process, but they also help determine the way people act based on their perceptions of reality (Bullough, 1991; Lakoff & Johnson, 1980; Nikitina & Furuoka, 2008). As Lakoff and Johnson (1980) observed,

> In all aspects of life . . . we define our reality in terms of metaphors and then proceed to act on the basis of the metaphors. We draw inferences, set goals, make commitments, and execute plans, all on the basis of how we in part structure our experience, consciously and unconsciously, by means of metaphor. (p. 158)

Known as metaphor analysis, a type of discourse analysis, this methodology is based on the premise that people can begin to uncover meanings that writers or speakers have by examining the metaphors they use. Also, in this framework, metaphors are not simply

literacy devices, but also claim to pervade nearly all realms of discourse and communication (Deignan, 2005).

Moser (2000) argued that metaphor analysis is useful for accessing tacit knowledge and exploring sociocultural processes of understanding, and as Cameron and Low (1999a) asserted, the process of metaphor analysis enables researchers to make inferences regarding a group. They said, "the process of metaphor analysis can infer thought patterns and beliefs of a whole social group from a sample of metaphors, and it is often further assumed that individuals are guided in their actions by the thought patterns and beliefs thus inferred for the group" (p. 88). The process of illuminating a social group's metaphors on a topic provides explicit understandings they hold regarding that topic, and is used to suggest an understanding, thought pattern, or theory, which constructs or constrains people's beliefs and actions. Thus, this theoretical framework and methodology is a strong instrument for this study as it enables me to study and ascertain a pattern as to how faculty members conceptualize writing in their perspective disciplines. Furthermore, enquiring into people's thoughts and beliefs through less explicit meanings has the advantage of eliciting findings that are more likely to be authentic and genuine, revealing beliefs and values that people cherish (Block, 1992; McGrath, 2006).

Applications of Metaphor Analysis in Education

The creation of metaphors has been used frequently in academic settings to encourage teachers' and learners' insight and understanding of a construct. Analyses of metaphors have been recorded to be a valid and reliable way of making hidden and unconscious assumptions explicit (Armstrong, Davis, & Paulson, 2011; Cameron & Low,

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1999b; de Guerrero & Villamil, 2002; Kovecses, 2010; Lakoff & Johnson, 1980), informing the methodology of several researchers. Largely, much of the research employing metaphor analysis in educational contexts focuses on in-service teachers' attitudes towards classroom practices and on teachers' beliefs about learning and teaching (Knowles, 1994; Leavy, McSorley, & Bote, 2007; Saban, Kocbeker, & Saban, 2007). These studies helped teachers articulate and construct representations of their experiences and of themselves (Kramsch, 2003) in order to make sense of their everyday experiences. Other studies have examined the interactions between learners and institutions (Hoffman & Kretovics, 2004) and investigated learners' beliefs of learning (Bozlk, 2002). Finally, metaphor analysis research has examined belief systems from both the students' and teachers' perspectives in several areas of research.

Belief Studies employing Metaphor Analysis

Beliefs systems are a central construct in every discipline that deals with human behavior and learning (Fishbein & Ajzen, 1975). Researchers in several disciplines have employed metaphor analysis arguing that uncovering belief systems and conceptualizations held by teachers and learners are important to their field of research, since these personally and socially constructed belief systems often affect pedagogical practices. Metaphor analysis research has covered students' and teachers' beliefs regarding ESL classrooms (Farjami, 2012), language teaching and learning (Cameron & Low, 1999b; Nikitina & Furuoka, 2008; Salomone, 1998), education as a business (Comesky, McCool, Byrnes & Weber, 1991), the role of textbooks (McGrath, 2002), and conceptualizations in science (Cortazzi & Jin, 1999) and in mathematics (Hodkinson, 2005).

More specific to the field of writing, Lavelle & Zuercher (2001) examined students' perceptions on writing in general, including self-concept, attitudes, and beliefs about composition, and found that students' fear and avoidance of writing played a role in their self-efficacies and beliefs about writing. Researchers asked students for metaphors, and from those metaphors, they were able to examine students' beliefs about college reading and writing in developmental courses and concluded that it is important for teachers to meet students where they are in terms of prior knowledge, experience, and epistemologies of learning (Armstrong, 2008; Paulson & Armstrong, 2011).

Armstrong (2008) and Paulson and Armstrong (2011) asserted that students' varying conceptualizations for reading, writing, and integrated reading and writing were useful for instructors to be aware of in order to meet students where they are in their learning in those subject areas. They also found that students' personal conceptualizations may limit or encourage self-learning.

My purpose is to expand the exploration of metaphors about writing, to examine them from a faculty perspective, and to explore how faculty conceptualizations of writing in their respective disciplines may affect students' ability to learn or form their own useful conceptualizations of writing. Since beliefs play a significant role in understanding how people understand and define knowledge (Buehl & Alexander, 2001; Schommer, 1990), my study aims not only to illuminate instructor conceptualizations of disciplinary writing, but also to reveal how those conceptualizations influence how students understand disciplinary writing. After all, as Bullough (1991) emphasized, metaphor analysis has the power to provide insight into assumptions.

Summary of Chapter Two

The studies reviewed in this section demonstrate that the focus of research on disciplinary writing embodies purposes for encouraging and implementing disciplinary writing strategies into content-area courses, provide evidence of students' struggles when writing across disciplines, uncover concern with the transfer of writing knowledge, and reveal writing expectation differences between novices and experts. However, in the push to implement disciplinary writing as a literacy practice to enhance student learning within and across disciplines, little has been done to understand instructors' attitudes, values, beliefs, and conceptualizations of disciplinary writing. Since much of instructors' personal perspectives on learning emerge in their pedagogical choices and instruction (Briscoe, 1991), scholars should examine how instructors conceptualizations of disciplinary writing are supporting or hindering students' understanding and developmental of writing success. By illuminating these conceptualizations, instructors can begin modifying their understandings to support student learning.

CHAPTER III

Methodology

The purpose of this grounded theory study was to investigate community college instructors' conceptualizations of disciplinary writing and the implications of those understandings on student learning. Bringing these understandings to conscious awareness provides insight on how instructor conceptualizations, whether constructed individually or through group interaction, might enhance or hinder students' understanding of writing and how writing relates to disciplinary knowledge. In seeking to understand instructors' views on writing, this study addressed two research questions:

- How do Texas community college instructors conceptualize disciplinary writing?

- How do Texas community college instructors' conceptualizations of disciplinary writing differ in the fields of literacy, math and sciences, and social science?

This chapter describes the study's research methodology and includes discussions of the following areas: (a) rationale for research design, (b) research sample, (c) methods of data collection, (d) analysis and synthesis of data, (e) ethical concerns, (f) issues of trustworthiness, and (g) limitations of the study. The chapter concludes with a brief summary of the methodology used to employ this study.

Rationale for Qualitative Research Design

The goal of qualitative research, based in a constructivist theoretical view, is to examine social situations or interactions and to study how the complexities of a society or culture are interpreted, experienced, and understood by participants in a particular context

and at a particular point in time. Qualitative researchers build a holistic rather than a reductionist understanding (Merriam, 2009; Patton, 1990; Schram, 2003), whereby findings are transferable to other contexts rather than generalizable across contexts. Transferability refers to the degree to which the results of the study can be generalized to other contexts or settings, requiring the researcher to become responsible for making the judgment of how sensible and valid the transfer is (Guba & Lincoln, 1998).

Using only quantitative methods would not elicit the specific and rich descriptive data I sought to use in addressing my proposed research questions and purposes. Using qualitative methods, I was able to take an interpretive stance and engage in conversation with participants and maintain methodological flexibility as I worked through this study (Creswell, 2013). Although my methodology is primarily qualitative, I used descriptive statistics to get an overall picture of the participants' demographics.

Rationale for Grounded Theory Methodology

Within the framework of a qualitative approach, my study was most suited for a grounded theory method (GTM) design. As a form of research methodology, GTM is defined as the discovery of theory from data (Glaser & Strauss, 1967). The premise behind grounded theory is to create or discover new theories and emphasize plausible relationships between concepts and sets of concepts, which can be described and reported as a set of propositions or in a narrative framework (Creswell, 2013; Dey, 1999). Following GTM methodology, I surveyed literature to develop background and context for my investigation, and I returned to the literature again upon completion of data analysis. In returning to the literature, I was able to seek what the data indicates rather than corral it into a preexisting theory.

Participants

The participants in this study were community college instructors throughout the state of Texas, recruited through the American Association of Community Colleges (AACC) database. I used the state of Texas as a population to sample because it has a large number of community colleges and a variety of institutional settings, and geographical locations, which would enable me to elicit a large and wide-ranging group of participants.

Sampling procedure. I utilized a maximum variation sample procedure to recruit participants. Maximum variation sampling is a method that enables a purposeful sampling of selected people or settings to represent the wide variety of experiences related to the topic under study (Creswell, 2013). I aimed for a sample that consisted of community college instructors from different institutions, different educational and ethnic backgrounds, different geographical locations, and different disciplines that conceptualize, value, and share or differ in their understandings of disciplinary writing. I also chose a snowball sampling strategy, otherwise known as network or chain sampling (Miles & Huberman, 1994; Patton, 2001), whereby participants and recruited individuals were able to refer other individuals whom they knew to be employed as instructors at community colleges in Texas.

To obtain maximum variation, I visited the American Association of Community College's (AACC) webpage to find a list of community colleges in Texas, after which I searched each institution's webpage to collect publicly listed email addresses of instructors. I sent a bulk recruitment email to those individual instructors requesting their participation in the study. To obtain a snowball effect, I allowed individuals who emailed

me seeking permission to forward the recruitment email and survey onto others whom they felt would be interested in my study.

Participant recruitment procedure. The AACC database was useful for recruiting a large variety of faculty members. The database provided a direct web link to 72 Texas community college webpages (campuses as well as separate colleges), which I combed for email addresses (2,979 email addresses) of instructors teaching within nine targeted subject areas described in the next section. In two data collection phases, I sent instructors in these community colleges recruitment emails asking for their voluntary participation in the survey; I attached the survey (see Appendix A) to the email for immediate participation. The first phase took place during the summer semester of 2013, and the second phase took place during the spring semester of 2014. The criteria for selection of participants were as follows. All participants:

- Were faculty members within community colleges in Texas

- Taught courses within one of nine targeted disciplines

- Could be from any Texas community college institution; of any ethnic, educational, or cultural background; of any gender; or from any geographical location.

At the end of the survey, I asked the participants if they would be interested in participating in a follow-up focus group and/or interview. As an incentive for further participation in my study, I offered the opportunity for instructors to win one of two $25 Amazon gift cards in a drawing if they participated in a focus group and/or interview. I followed up with the participants who provided insightful information regarding how they conceptualized disciplinary writing either through a focus group and/or interview.

Participants indicated their voluntary status to participate in a focus group at the end of the survey. I selected focus group participants from the volunteer list following these criteria. Participants:

- Completed the entire survey

- Indicated an understanding or awareness of the term disciplinary writing

- Provided insight on the uniqueness of writing as it related to their discipline

Following the focus group, I selected voluntary participants for further discussion in the form of an interview following these criteria. Participants:

- Participated in a focus group

- Provided insight on the uniqueness of writing as it related to their discipline

- Provided insight in the focus group that required further discussion

Selection of disciplines. For the scope of the study it was impossible to survey every discipline, so I purposively selected disciplines to gain a range of disciplinary writing conceptualizations, from the place where instructors teach literacy knowledge to the place where instructors expect students to implement literacy knowledge to understand disciplinary content. Thus, I chose instructors from these courses: developmental reading, developmental writing, composition, biology, chemistry, mathematics, history, psychology, and sociology. I chose developmental reading and developmental writing courses based upon the idea that literacy courses are the stages where course content emphasizes reading and writing processes. I also recruited content-specific instructors according to disciplines that contain the most common general core education courses that students take to fulfill their general studies (biology, chemistry, history, mathematics, psychology, and sociology); I chose these six disciplines since

these courses are where students are expected to implement their literacy skills.

Table 1 displays the demographics of the participants in my study. The demographics indicate similar participation rate between females (48.7%) and males (51.0%). The majority of participants had master's degrees (58.2%), were from public institutions (98.9%), were in full-time, non-tenure track positions (48.7%), and were instructors (81.9%). Although I did not request participants to identify their exact geographical location, I was aware of their institutions' locations due to the participants' recruitment email suffix (e.g. @txstate.edu or @blinn.edu). The participants came from all seven of the regions in Texas – Big Bend Country, Gulf Coast, Hill Country, Panhandle Plains, Pineywoods, Prairies and Lakes, and South Texas Plains regions (Texas Almanac – providing me with a wide representation of instructors.

Table 1

Survey Participant Demographics

	Number	Percent
Sex		
Female	126	48.65
Male	132	50.96
Undisclosed	1	0.39
Highest Level of Education		
Bachelor's	4	1.59
Master's	146	58.17
Doctorate	101	40.24
Institution		
Public	256	98.84
Private	3	1.16
Employment Status		
Tenured	51	19.69
Tenure track	16	6.18
Full-time (non tenure)	126	48.65
Part-time (non-tenure)	49	18.92
Other	17	6.56
Role		
Administrator	5	1.93
Instructor	212	81.85
Both	42	16.22

Overview of Research Design

I followed several processes in implementing the research design. The process

included obtainment of Institutional Review Board approval to conduct the study, review

of literature, data collection, and data analysis. The data collection also included two

major phases.

Literature review. I conducted an ongoing and selective review of literature to

inform the background of the study. A few topics of literature were identified: academic

and disciplinary writing, expert and novice learning practices, and belief systems. The

review of literature also covered sociocultural and metaphor analysis theoretical

frameworks that guided my study. The focus of the literature review was two-fold. First,

I gathered basic information to identify a gap in the research and the need for further

research. The purpose of this first review of literature was to limit my bias and to prevent

my imposing of other theoretical understandings on my data before the data had a chance

to speak for itself. Second, I expanded and deepened the initial literature review after an

emergent theory began to form during analysis of the data, following grounded theory

methodology (Glaser, 1992).

   IRB approval. Charmaz (2006) recommended that researchers seek approval and

conduct a second or even third phase of data collection, and for those phases to include

observations as well as interviews. Although she was referring, in this case, to working

with the same participants as phase one, I used this method to elaborate on preliminary

categories from phase one in order to fine-tune the survey and the interview questions

before sampling a second round of instructors. In addition, a second round of data

collection served to maximize and provide more depth to the data by bringing in more

insight. The first phase served as a type of pilot study, allowing the fine-tuning of the

study's survey questions in the second phase to improve the specificity of responses.

Table 2 shows the difference of methods and participants between phase one and phase

two of data collection.

Table 2

Data Collection Phases

	Phase 1 – Summer 2013	Phase 2 – Spring 2014
Participants	Community college instructors in Texas	Community college instructors in Texas
Disciplines	Developmental reading Developmental writing --- Biology Chemistry Mathematics History Psychology Sociology	Developmental reading Developmental writing Composition Biology Chemistry Mathematics History Psychology ---
Methods	Survey Focus groups Interviews	Survey --- Interviews

The only differences between the two phases are that composition was added as a discipline during phase two, focus groups were not used as a method of data collection during phrase two, and survey and interview questions were fine-tuned from phase one to phase two for clearer language use. Composition was added as a discipline since many developmental instructors during phase one identified as compositionists rather than as developmental specialists, and because composition is one of the major courses in which students learn how to write. Focus groups were not used during phase two because it was difficult to schedule participants for a specific time when crossing time-zones and busy schedules. From this point further, I will discuss the two phases of data collection methods together because the questions asked of participants were the same in both phrases.

Data collection methods. To obtain in-depth understandings of how instructors

conceptualized disciplinary writing, I used three data collection methods and data analysis triangulation. Thus, this study employed a number of different data collection methods and phases, including survey, focus groups, and interviews. Using multiple methods added rigor, breadth, and depth to my study and provided corroborative evidence of the data I obtained (Creswell, 2013; Denzin & Lincoln, 2011).

Survey. I contacted potential research participants via a recruitment email containing a direct web link to the survey (see Appendix A). Of the 2,979 individuals I contacted, 259 volunteered to participate in the survey. Of those participants, 196 of them completed the survey in its entirety, and 63 of them completed the survey partially. I counted everyone in the demographic data as having participated in the study because their insights and understandings of disciplinary writing helped me in answering the research questions, whether they answered only one open-text question or the entire survey.

I designed the survey to collect demographic data as well as participants' conceptualizations of disciplinary writing, including, but not limited to, their values, attitudes, understandings, and beliefs about disciplinary writing within their respective disciplines. Furthermore, I used the survey to implement the collection and elicitation of analogies (known as metaphors in metaphor-analysis methodology), using fill-in-the-blank stems in the form of a simile (e.g. "Disciplinary writing is like ____."). These survey questions, eliciting analogies, were listed as the last two items of the survey, with my intent being that the preceding questions would get participants thinking about writing in their disciplines so that by the time they reached the metaphor questions, they would be prepared to describe their conceptualizations of disciplinary writing.

Fowler (1993) asserted that an advantage of survey methodology is that it is unobtrusive and easily administered. With the goal of gaining insight into participants' understandings of disciplinary writing, I included five open-ended questions in the survey to tap into personal experiences. Here, I was able to use the survey as having a purposeful place in the research design, serving as a useful complement and predecessor to the other data collection methods and as a starting place to a discussion on instructor conceptualizations of disciplinary writing. However, surveys have limitations in their ability to examine intricate social relationships or patterns of interaction with no way of observing participant habits or actions, or being able to respond with immediate follow up questions during the survey completion process. Thus, to hone in on instructors' personal experiences with disciplinary writing, I conducted focus groups.

Focus groups. From a data collection perspective, a focus group is essentially a group discussion focused on a single theme (Kreuger and Casey, 2000). I used focus groups to garner a range of perspectives, to understand the differences in perspectives, to discover and investigate factors specific to affecting participants' opinions, and to uncover ideas that emerge from the entire group (Kreuger & Casey, 2000). My goal was to create an open, in-depth conversation that addressed instructor experiences and understandings of disciplinary writing.

I contacted two key informants from each of the disciplines, based upon the usefulness and insightfulness of their survey responses (using the criteria listed earlier), to join a focus group discussion. I informed participants of the focus group's purpose, which was to discuss their understandings of the purpose, role, and value of disciplinary writing within their specific discipline. In addition, I asked participants to discuss their

conceptualizations of writing as a part of their discipline. I formed three focus groups: (a) literacy group (n=3); (b) social science group (n=2); and (c) math and sciences group (n=2). I held the focus groups virtually and recorded them using a web-based virtual meeting room called AnyMeeting[2]. Since the participants were located in different institutions across Texas, I chose not to hold the focus groups in person and instead allowed the key informants to participate from the comfort of their home or office. Overall, each focus group lasted an average of 40 minutes.

Interviews. Interviews were employed because they had the potential to elicit rich, thick descriptions (Creswell, 2013). They gave me an opportunity to clarify statements and probe for more information to supplement the instructors' conceptualizations elicited in the analogy stems in the survey. I used interviews because they were a legitimate way to generate data by talking and listening people, capturing the meaning of their experience in their own words (Kvale & Brinkmann, 2009; Patton, 1990).

I used my research questions as the framework for developing semi-structured interview questions (see Newton, 2010) to determine the relationship between my study's questions and the questions I wanted to ask participants (see Appendix C). To triangulate my data during analysis, two classmates and one advisor reviewed and provided constructive feedback before I finalized the semi-structured interview questions.

Table 3 shows the characteristics of the instructors who participated in focus groups and interviews (all names are pseudonyms). Those hoo participated in a focus group are marked with an asterisk. Participants came from all seven of the regions in

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[2] Information and downloads for AnyMeeting can be found at http://www.anymeeting.com.

Texas: the Big Bend Country, Gulf Coast, Hill Country, Panhandle Plains, Pineywoods,

Prairies and Lakes, and South Texas Plains regions (Texas Almanac).

Table 3

Focus Group and Interview Participant Characteristics

Participant (pseudonym)	Sex	Discipline	Highest level of education	Years taught	Classes per semester	Employment status
Amy	Female	Mathematics	Master's	20+	5	Tenured
Anna	Female	DE Reading	Master's	20+	3	Full-time
Beth	Female	Psychology	Master's	11-15	6+	Tenured
Brent*	Male	Biology	Master's	2	4	Tenure-track
Cindy*	Female	DE Reading	Master's	1	1	Part-time
Don	Male	History	Master's	20+	6+	Tenured
Heather	Female	History	Doctorate	8-10	6+	Tenure-track
Jolene	Female	DE Writing	Master's	8-10	6+	Tenure-track
John	Male	Mathematics	Doctorate	16-20	4	Full-time
Julie*	Female	DE Reading	Master's	20+	5	Full-time
June*	Female	Sociology	Doctorate	16-20	6+	Tenured
Leo	Male	DE Writing	Doctorate	20+	5	Tenured
Martha*	Female	DE Writing	Master's	16-20	1	Part-time
Mary	Female	Mathematics	Master's	3-4	2	Part-time
Patty	Female	Biology	Doctorate	16-20	5	Full-time
Peter	Male	Composition	Doctorate	20+	6+	Tenured
Richard	Male	Chemistry	Master's	5-7	4	Full-time
Scott*	Male	Sociology	Doctorate	8-10	5	Full-time
Sheila	Female	Psychology	Doctorate	20+	4	Full-time
Stacy*	Female	Biology	Master's	16-20	3	Part-time

NOTE: *indicates participant participated in a focus group

The timeline of data collection events is illustrated in Table 4 and indicate a

continuous momentum of data collection methods to analysis, which was purposeful to

promote carry over from one session to the next.

Table 4

Timeline of Data Collection Events

	Survey	Focus groups	Interviews	Analysis
Phase 1	Summer semester 2013	Fall Semester 2013	Fall Semester 2013	Fall Semester 2013
Phase 2	Fall Semester 2013 & Spring Semester 2014	---	Spring Semester 2014	Spring Semester 2014

The timeline of data collection events allowed for a continuous flow of data, as well as time for data analysis in order to fine-tune data collection tools before performing a second phase of data collection.

Methods for Data Analysis and Synthesis

I analyzed data during and after collection using metaphor and discourse analysis through a process of open coding (Glaser & Strauss, 1967; Strauss & Corbin, 1994). It is important to note that in addition to the use of open coding, I followed the bottom-up coding procedure (Urquhart, 2013), whereby the open codes were suggested by the data rather than a priori codes suggested by the literature. The data underwent member checks, peer checks, and metaphor checks following qualitative (Lincoln & Guba, 1985) and metaphor analysis (see Armstrong, Davis, & Paulson, 2011) procedures, where required and where necessary, to increase the trustworthiness of the findings. My analysis included three procedures: content, discourse, and metaphor analysis.

Content analysis. White and Marsh (2006) described content analysis as the analysis of texts for the purpose of describing and interpreting society-produced written artifacts. Content analysis has multiple broad uses and application in research, but the method used in this present study is the application of content analysis as the inspection

of patterns in written text (Hoffman, Wilson, Martinez, & Sailors, 2011) with the purpose as a quantifying description of distinct content in written communications (Berelson, 1952). In this study, content analysis serves as a research tool used to focus on the presence of certain words and concepts within the discourse data in order to quantify and analyze the presence, meanings, and relationships of frequently used words and concepts used by instructors during their discussions of disciplinary writing. This method served as a tool in which I was able to investigate common topics, ideas, and constructs instructors used in their discourse in order to begin understanding how instructors contextualized their understandings of disciplinary writing.

Discourse analysis. Discourse analysis is largely the study of language-in-use (Gee, 2011). Much discourse analysis is connected to the study of linguistics, whereby analysis is closely aligned to the study of grammar. However, the approach I used in this study was analyzing discourse to concentrate on ideas, issues, and themes as they are discussed and expressed in talk and writing (Gee, 2011). In this study, I used conversation and written discourse analysis procedures to analyze the open-text narratives in the survey and the audio-recorded, and transcribed, focus groups and interviews.

Conversation discourse. Conversation discourse refers to verbal exchanges of participants in social, cultural, or specific activities (Florio-Ruane & Morrell, 2011). Hymes (1974) claimed these verbal exchanges are significant because they reveal the creation and negotiation of meaning and social identity of the participants doing the talking. In other words, verbal communication, or talk, is the source for information on or about a specific community, and is a way in which this specific community's cultural

views, beliefs, and practices are passed on, shared, and changed. Specific to my study, conversation discourse enabled me to study the discourse used by instructors as they described their attitudes, beliefs, values, and views about disciplinary writing. Since I held interviews and focus groups in a semi-structured and controlled setting, it is important to note that the structured setting may have affected participants' discourse.

In addition to verbal, oral, and conversational discourse providing insight into and about a community's cultural belief systems and practices, they also provide a way to gain insight on the social construction of knowledge, power, and identity in particular situations (Florio-Ruane & Morrell, 2011). These discourse analyses provided me the opportunity to investigate knowledge, power, and identity that instructors impose upon the idea and role of disciplinary writing as it fits into college learning. Furthermore, verbal discourse works to illuminate participants' rooted referential information and situational knowledge in each act of communication when discussing particular issues. In regards to my study, I was able to understand how instructors share norms, express shared values on what is important, and reveal biases and prejudices (Florio-Ruane & Morrell, 2011).

Written discourse. Written discourse analysis is a method to describe ideas and relations among the ideas that are present in a text (Gee, 2011). As Goldman & Wiley (2011) described, written discourse focuses on understanding the relations between and among ideas within a text, especially in understanding and illuminating the ideas that make up the coherence of a text. In other words, segments of written discourse cannot be given meaning in isolation; rather, written discourse is given meaning when combining segments together to understand the coherency of a text. By examining discourse

segments, it is possible to describe and analyze how the structure and content of the text encodes ideas and the relations among the ideas.

Together, by using conversational and written discourse, I was able to examine the social knowledge, power relations, shared knowledge, ideas, and relations of instructors and their knowledge as they described their conceptualizations of disciplinary writing.

Metaphor analysis. Metaphor analysis (Kovecses, 2010; Lakoff & Johnson, 1980) provides a means for uncovering individual and collective patterns of thought and action. In metaphor analysis research, a metaphor is understanding, often by defining, one conceptual domain in terms of another conceptual domain (Kovecses, 2010), which reflects descriptions and images of social phenomenon through a process of mapping one domain onto the other (Kramsch, 2003). Lakoff and Johnson's (1980) cognitive theory of metaphor makes tangible and examinable abstract conceptualizations that are difficult to see and understand. As Paulson and Armstrong (2011) stated, "Metaphor analysis is an investigational and analytical approach that examines metaphors articulated by participants, and then categorizes those metaphors in terms of the themes that emerge from the analogical mappings that underlie participants' metaphors" (p. 495). These mappings illuminate the meaning of the individual metaphorical expressions making the resulting conceptual metaphors visible (Kovecses, 2010), which allows researchers to study conceptualizations.

In my open-ended survey of community college instructors' beliefs about writing, specifically within their respective disciplines, I elicited metaphors in the form of simile fill-in-the-blank sentences, which resulted in analogical expressions. Thus, in this study,

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metaphor analysis was used to make sense of the participants' constructed analogical expressions. What this means is that the term "metaphor," in metaphor analysis procedure, simply means that comparisons were made by transferring the characteristics of a familiar thing onto an unfamiliar thing. Specifically, these comparisons were made by asking participants to complete fill-in-the-blank simile stems because this format required them to make explicit comparison between writing and analogical representation of a subject, idea, or thing. Because explicit simile comparisons were constructed strictly for the purpose of studying a relationship between the two subjects, this examination of the literal comparisons between the two subjects resulted in the completed simile stem becoming an analogical expression. In metaphor analysis research, this completed analogical expression is also known as a metaphorical linguistic expression (MLE) (Kovesces, 2010). Thus, to clarify the relationship between metaphors, similes, and analogies, since metaphor is the umbrella term for comparisons made, regardless of how they are constructed, I will refer to the completed simile stems and resulting analogical expressions as metaphors or MLEs.

The analogical elicitation statements used in the study were:

Phase I

- My writing in my field is like _____. Explain what you mean _____.

- Disciplinary writing is like _____. Explain what you mean _____.

Phase II

- Writing in (insert discipline) is like _____. Explain what you mean _____.

- Academic writing in general is like _____. Explain what you mean _____.

Characteristics of the elicited metaphor. The stems of these sentences are

considered the targets, whereas the source is the analogical construct that participants used to compare their conceptualizations of the target to another thing. Specifically, I asked participants to think about the abstract topic of disciplinary writing and to create an analogical comparison to help provide a tangible illustration for how they viewed disciplinary writing. In one case, pulling an example from the data, a participant described disciplinary writing [the target] as a snowflake [the domain]. Kovecses (2010) explained, "The conceptual domain from which we draw metaphorical expressions to understand another conceptual domain is called the source domain, while the conceptual domain that is understood this way is the target domain" (p. 4). The participant went on to explain that disciplinary writing is like a snowflake because each discipline is unique and requires its own form of writing. Thus, the characteristics of the source domain reveal tangible understandings of the target domain. The completed statements, such as in this example, "Disciplinary writing is like a snowflake," are metaphorical linguistic expressions or MLEs (Kovecses, 2010).

   Metaphor member checks. According to Armstrong, Davis, and Paulson (2011), researchers should engage in metaphor checking with the participant to ensure that the researcher's understanding is on par with what the participant meant and to increase the trustworthiness of the findings. I found it useful and important to request that participants explain their constructed metaphors. This member check was performed by having participants explain their completed MLEs. Thus, in the survey, the metaphor questions contained two parts: (a) create a metaphor by completing the fill-in-the-blank simile stems; and (b) explain the completed metaphor.

   Identifying usable metaphors and mapping source knowledge. Once I collected

the MLEs, I filtered out the non-metaphorical linguistic expressions and put the MLEs through a process of mappings. Non-metaphorical linguistic expressions are the resulting comparisons between the target and the domain that were not metaphorical in nature (e.g., Disciplinary writing is like writing concisely and precisely), where the resulting comparison attempt is more of a description of writing rather than a comparison between two items. Kovecses (2010) explains mappings as a procedure by which the researcher forms, or identifies, similar elements between the target and the domain. Using the example described earlier, the snowflake characteristics that correspond to the disciplinary writing target include the ideas that a snowflake is a unique identifier and that no two snowflakes are the same, corresponding to the idea that writing looks different in every discipline and that no two disciplines are the same. Kovesces also reminded researchers that, "not any element of B can be mapped onto any element of A. The linguistic expression used metaphorically must conform to established mappings, or correspondences, between the source and the target" (p. 10). Thus, using the snowflake example again, one could not take the characteristic of a snowflake being wet and applying it to disciplinary writing and saying that it was wet as well. Mapping refers solely to the elements that correspond between the domain and the target. Once I mapped the source domain on the target domain with the properly shared elements, the aligned characteristics between the two domains formed, which are "metaphorical entailments" (p. 122). This means that the conceptualizations that instructors have of disciplinary writing can be studied and explained explicitly.

  Categorizing MLEs into CMs. Following the metaphor analysis procedure set forth by Armstrong, Davis, and Paulson (2011), I coded and organized the MLEs based

on metaphorical language and emergent themes. These emergent themes became conceptual metaphors, representing the grouping of MLEs that fit into that category. Once a conceptual metaphor was identified, it is was put through a process of mapping, described above, in order to identify the metaphorical entailments that illustrated the corresponding features between the target and the domains.

In addition to coding for conceptual metaphors, the MLEs can be coded according to semantic themes and patterns. For example, the MLEs may fall into patterns of most frequent word usage, or into dichotomous groupings, or into continuum conceptualizations. This form of coding was useful in discovering the attitudes, personal beliefs, and opinions that instructors had towards disciplinary writing. However, Kovesces (2010) recommended categorizing data and following entailment patterns that best fit the purpose of the research study.

Ethical Considerations

I considered ethical issues related to protecting the research participants. I made sure to uphold my responsibility for both informing and protecting participants. Although I did not anticipate any serious ethical threat, I used safeguards to ensure the protection and rights of my participants.

I first maintained that informed consent was a constant priority throughout the entire study. Participants gave electronic consent before completing the survey, and the focus groups and interviews required signed informed consent forms before commencement of our verbal interaction. Next, I made it a priority to consider participants' rights and interests as I made choices regarding the reporting and dissemination of any of my data. I also made sure to provide pseudonyms to all

participants to ensure privacy and confidentiality. Finally, I made certain that all data were kept in my possession, under lock and key, on a password, encrypted flash drive. No one else had access to this material.

Issues of Trustworthiness

Trustworthiness addresses concerns with validity and reliability. Guba and Lincoln (1998) advise researchers to illustrate trustworthiness by considering credibility, dependability, confirmability, and transferability. Thus, during the course of my study, I sought to control for potential biases and incorrect understandings that might be present throughout the design, implementation, and analysis of the study.

To enhance the methodological validity of the study, I triangulated data sources as well as data collection methods. With the goal of receiving a fuller and richer picture of my research study, I gathered data from multiple sources and through various methods. To account for the dependability of my analysis, I triangulated my data with two classmates and my advisor. When inconsistencies arose, I returned to my data and resolved any differences in interpretations. Furthermore, I used a method of memoing, and occasionally journaling, to document the progression of my thought processes as well as my rationale for certain analysis decisions, which also accounted for this issue of confirmability. Finally, to account for transferability of my findings, I used thick, rich descriptions of the participants and the context of my study, as recommended by Schram (2003).

Limitations of the Study

In this qualitative study, the analysis of data rests with my thoughts and choices, limiting the study by my own subjectivity. One key limitation of this study was my

potential bias regarding my own experience as a student learning to write and feeling frustrated with the variety of teacher explanations I received regarding successful writing tips. A related limitation was that while I held focus groups and interviews, participants at first gave little responses to my specific questions and instead attempted to ask me questions about my topic. I led semi-structured interviews, with the flexibility to accommodate new questions and create secondary questions as needed, but I was not prepared to speak about my research as a professional development resource at the end of the interviews. I quickly took back control of the interview by offering to share results of my study once I completed my dissertation.

Another limitation of this research was that I set out to uncover conceptualizations about disciplinary writing per discipline, but I did not receive enough data per individual discipline to make any assertions regarding writing per disciplines. Thus, I made the decision to focus on disciplinary writing across and within fields, where I did have enough data.

Finally, a third limitation of my study was allowing participants to be interviewed by phone, which resulting in a few instructors taking my interview phone call at home. As mentioned earlier, interviewing them by phone was a positive action enabling me to access instructors all across Texas; however, there was a down side to home phone calls. I could sense, and often hear, that the participants were engaged in other home activities, distracting them from focusing on my questions. Thus, I believe this to be a limitation because my interviews with those at home were shorter and less detailed as those with people at work, possibly due to participants not in an atmosphere conducive to an interview.

Summary of Chapter Three

In summary, this chapter provided a detailed description of my study's research methodology. Qualitative grounded theory methodology was employed to illustrate the perspectives of instructor conceptualizations of disciplinary writing on learning. The participant sample consisted of community college instructors located across Texas. Three data collection methods, across two phases, were employed, including a survey, focus groups, and interviews. The data, once emergent themes were developed from analysis, were reviewed against the literature. Trustworthiness of my findings were accounted for through the use of various methods, including source, peer, and member check triangulation.

CHAPTER IV

Findings

In this study, I sought to (a) uncover how community college instructors in Texas conceptualized writing within their respective disciplines, and (b) to investigate how those conceptualizations differed between fields. To answer the research questions guiding this study, I used grounded theory to analyze the data collected through a variety of research tools. The survey yielded demographic information, open-response narratives, and constructed analogies; focus groups and interviews yielded personal accounts of instructor conceptualizations of disciplinary writing. To examine an overview of how instructors conceptualize disciplinary writing and to answer research question one, I analyzed the data together across disciplines to investigate the patterns and themes that appeared in the data. In addition, to examine whether there were variations of conceptualizations and perspectives regarding writing between fields and to answer research question two, I disaggregated the data into three general fields, with each field containing similar subjects. The first field is literacy, which contained the subjects of developmental writing, developmental reading, and composition. The second field is the math and sciences, which included biology, chemistry, and mathematics. The third field is the social sciences, which consisted of history, psychology, and sociology.

To answer my research questions, I analyzed data using three analysis methods – content, discourse, and metaphor - to triangulate the data and to build the findings across research methods. After compiling the demographic data, in order to determine how community college instructors conceptualized writing across and between disciplines, I conducted content, discourse, and metaphor analysis on the data, first on all of the data

together and then on the data disaggregated by field. The findings illustrate how Texas community college instructors conceptualize disciplinary writing.

This chapter presents the findings of the analyses used to address my research questions, illustrating how Texas community college instructors conceptualize writing across and between disciplines. Before presenting the findings by research question, I present the instructor demographics to show that their experiences and background make them strong informants as participants in this study.

Participants' Characteristics

For this study, it was important to include instructors who came from a variety of disciplines to examine how they understand writing in their respective fields. The knowledge and insight thse instructors have with students, writing, and teaching indicate that these participants had the insight I required in answering the research questions.

Table 5 presents the demographic characteristics of the instructors in this study. Participants came from a variety of fields: literacy (23.1%), math and sciences (47.4%), and social sciences (34.3%), and the majority of instructors had taught for over 21 years (32.9%). In regards to instructors' own experiences with writing, 44.6% engaged in "other" writing activities (i.e., syllabi, course notes, and homework assignments), 25.1% engaged in writing research articles, and another 25.1% wrote book and article reviews. However, the majority of instructors spent less than one hour per week working on their own writing activities (45.8%). In this specific study, the limited time instructors spent per week on their own academic writing tasks and scholarship suggests that these instructors' main roles were teaching rather than researching.

Table 5

Instructor Characteristics

Characteristic	Count (n)	Percent (%)
Subject		
Developmental reading	25	9.96
Developmental writing	25	9.96
Composition	8	3.19
Biology	57	22.71
Chemistry	11	4.38
Mathematics	51	20.32
History	38	15.14
Psychology	32	12.75
Sociology	16	6.37
Other	35	13.94
Years taught		
1	2	.80
2	4	1.59
3-4	12	4.78
5-7	24	9.57
8-10	41	16.33
11-15	48	19.12
16-20	40	15.94
21+	80	31.87
Writing activities		
Research reports	56	22.31
Research articles	63	25.10
Other academic articles	50	19.92
Creative writing	34	13.55
Books/monographs	20	7.97
Book/Article reviews	63	25.10
Grant writing	30	11.95
Other	112	44.62
Hours spent on writing activities		
0-1	115	45.82
2-4	65	25.90
5-7	33	13.15
8-10	17	6.77
11-15	3	1.20
16-20	6	2.39
21+	4	1.59

It is important to note from these characteristics is that the average instructor is

highly experienced in his or her field, having taught more than 21 years and having

experience with a range of writing activities and tasks. With their years of experience

with students and teaching in a variety of disciplines, these particular participants have

the expertise, personal hand-on experiences, and insight useful in informing my research

questions.

Research Question One: How do Texas community college instructors conceptualize disciplinary writing?

To understand how instructors conceptualize writing across disciplines, I analyzed

data in three ways in order to maximize the findings and to triangulate the data across

methods. I began with a content analysis to look for patterns in instructors' discourses

when discussing disciplinary writing and to obtain the most frequent word usage. The

most frequent words provided me with a general understanding of how instructors

contextualized their understandings of disciplinary writing.

Content analysis. Using NVivo10, a qualitative analysis program, I employed a

content analysis word frequency query (WFQ) on the discourse data, which consisted of

five survey open-response questions with 259 responses, three transcribed focus groups,

and sixteen transcribed interviews. I ran a query on the discourse data across all

respondents to obtain an overview of the most frequent words in conversations

surrounding writing. When I ran the word frequency queries, I made a list of the top

seven[3] most frequent words used by instructors when discussing writing. The most

frequently used words when examining the discourse data across all respondents (Table

6) are: *writing*, *students*, *use*, *know*, *think*, *research*, and *reading*.

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[3] I originally focused on the top ten words to analyze, but the last three words after the seventh word for each analysis were function words. Therefore, I focused on the top seven words during the content analyses.

Table 6

Word Frequency Counts: All Respondents

Ranking	Word	Count (n)	Word Frequency Percentage (%)	Similar Words Included in Count (n)
1	Writing	868	4.52	Write, writes, writing, writings
2	Students	342	1.78	Student, students'
3	Use	269	1.40	Used, Useful, uses, using
4	Know	250	1.30	Knows, knowing
5	Think	231	1.20	Thinks, thinking
6	Research	160	.83	Researches, researched, researcher, researchers, researching
7	Reading	137	.71	Read, reads, readings

Writing. These key words, when analyzed in context, provided significant insight regarding writing. The top word, *writing*, is not surprising to see as the most frequently used word since it is difficult to talk about writing without calling it by its term. However, the context surrounding the word *writing* revealed that instructors hold two general perspectives of what constitutes writing.

On one hand, instructors tended to use language that indicated an understanding that writing was good if the writer demonstrated the ability to apply structure; use proper grammar, mechanics, and punctuation; and follow the general writing process. One instructor stated, "students must have complete sentences, correctly spelled words, know the 5-paragraph essay, and have organization." This view of writing hinged on the technical appearance, rules, formatting, and models of writing.

On the other hand, instructors used language defining good writing as the

presence of content and a demonstration of knowledge and critical thinking, identifiable within written text. Instructors with this perspective tended to say writing was good if the writer showed that he or she knew the content and was able to demonstrate the ability to think critically about it. These instructors did not emphasize grammar, spelling, and punctuation as core qualities of writing. One instructor even stated, "I'm a horrible speller myself, so I don't mark off for misspelled words. I'm more interested if they [students] know the material and can grapple with it." With this understanding, good writing in this view is not defined by its technical characteristics (e.g.. thesis, correctly spelled words, and formatting), but rather it is defined by what can be demonstrated by the use of writing (e.g. grapple with the material, think about it critically, show a new perspective). The other six words of the content analysis word frequency query also point to meaningful insight regarding how instructors contextualize their conceptualizations of writing in their fields.

Students. Roughly half of the context surrounding instructors' use of the word *student* revolved around discussing the functions of assignments that students did in their classes, such as "students write to explain processes," or "students write to understand biases." When examining the context in which instructors discussed students in regards to writing outside of detailing assignments, instructors related that they understood writing to be important for students' success and learning. One instructor said, "I perceive writing to be essential to the lives of my students." Another instructor said, "students have to write to learn." And one other instructor emphasized this importance and said, "Students must realize that why they write truely [*sic*] matters." Despite emphasizing that writing was important for students, instructors also noted that it was

difficult to get students to learn to use writing.

Instructors used language to imply the difficulties students appeared to have with writing. One instructor said, "I require my students to write clearly about my subject, which seems to be difficult for most students." Another instructor also noted that difficulty, "It is hard to get the students to write because they do not see the merit of it." And, another instructor simply said, "Writing for students is very difficult." Interestingly, many instructors also explained that despite students' difficulty with writing in their disciplines, the instructor did not play a role in teaching students how to write better. One instructor said, "I do not teach my students to write." Another instructor said that it was not part of the teaching duties, and said, "I do not teach students to write in my field." Instructors emphasized that their specialty was content and not writing, as one instructor said, "I am not a writing teacher."

Overall, instructors understood writing to be important for students' learning and success, albeit a difficult task for them. Instructors stated that their roles as content-area instructors did not include the duties or roles of helping students to learn to write in their respective disciplines. However, they explained that although they do not teach writing, they attempted to help students by giving them advice.

The advice non-writing instructors stated that they gave to students to clarify writing assignments were largely ambiguous. A biology instructor explained that she tells her students to "write accurately." A sociology instructor offered the advice that students should "just write clearly." A developmental writing instructor emphasized that she "correct[s] their spelling and correct[s] their sentences." A mathematics instructor told his students to "write completely." A reading instructor mentioned that she just

points out what they did wrong, but does not explain or correct it. And a psychology instructor stated that she writes "SF [sentence fragment] on their papers, but [she doesn't] explain it if they don't ask." Despite the instructors' attempts to help students develop stronger writing abilities, these examples may be ambiguous and unclear to students, should they not ask for clarification.

Use. In regards to the high frequency of the word *use*, instructors described writing in terms of how it is used, should be used, or could be used by students and instructors. A biology instructor said, "I use writing to explain biological processes." A sociology instructor claimed, "writing can be used to show multiple perspectives on an issue." A math instructor explained, "writing in my discipline is used to explicate patterns." A composition instructor said, "writing is used to summarize, respond, and reflect." The context surrounding the word *use* in relation to writing demonstrated that the way writing is used in a discipline matters greatly. For example, many composition instructors were concerned that students *use* writing to demonstrate the ability to follow modes or formats. However, in a biology class, one instructor was less concerned with using templates to write well, and more concerned with the writing being used to explicate a process. This is not to say the biology instructor was not interested in complete sentences, flow, or grammar, but more interested in content. The focus on the *uses* of writing differed between disciplines, often illuminating the various values disciplines placed on how writing was used. This finding suggests that some disciplines understand writing in their discipline as being different from other disciplines in terms of what they do with writing rather than what it looks like.

Know. The context surrounding the word *know* revealed instructors' emphasis

that good writing often depends upon the writer's knowledge of something, and that good writing is often a result of that demonstration of knowledge or the ability to know in a certain way. For example, instructors stated, "writers must demonstrate the ability to communicate knowledge in biology," "they need to elaborate their knowledge of topics in chemistry," "in my reading class, students must demonstrate their knowledge through written response," "students must know how to write like a historian," and "they must know and demonstrate their ability to write Sociologically [*sic*]." Largely, the instructors related that the way a person knows or can demonstrate knowledge affects writing in very specific ways. This relationship of knowledge to writing suggests that instructors understand that the way knowledge is constructed in a discipline should be reflected in the construction of writing.

Think. The frequency of the word *think* revealed that critical thinking was a common topic discussed by instructors in relation to writing. Instructors stressed the importance of critical thinking in writing. One stated, "there is an emphasis on showing critical thinking." Another said, "writing is another way to show their critical thinking and learning." Instructors provided language suggesting that critical thinking is developed, used, and demonstrated through writing. As instructors said, "we focus on fostering critical thinking in writing," "we use writing to build critical thinking skills," "writing gives them a way to show their thinking, and "writing illustrates critical thinking." The context surrounding the word think suggested that instructors often use writing as a means to get students to think critically about topics or use writing as a means of assessing how students are critically thinking in their disciplines. Based on the context in which instructors talked about critical thinking, instructors noted that they

value the intellectual formation of knowledge that happens through thinking, and they expect students to showcase the studnets' critical thinking in writing.

  Research. Most instructors found disciplinary writing to center around research. As one stated, "writing is to communicate research findings." Another said, "writing is to provide information derived from research performed." Similarly, another asserted, "students write to describe research." Instructors across all disciplines noted that writing was the method by which new research information is portrayed within their disciplines. Thus, many instructors noted that they value disciplinary writing as a type of sustainable practice that helped their individual disciplines to thrive and continue to expand disciplinary knowledge by producing new research. In addition, since writing sustains knowledge in each discipline, many instructors' comments tended to value the conventions of research articles, such as teaching the common sections of a research article to students.

  Reading. Another frequent word using by instructors when contextualizing disciplinary writing was the word *reading*. Instructors held the view that reading had a direct connection to disciplinary writing. One instructor said it clearly: "One of the things that was more obvious was the more they read the more they write." Other instructors said that writing was an important method by which instructors could evaluate how students interpret and understand what they read. Another instructor claimed, "I use writing to promote active engagement with readings." In addition, an instructor continued, "students read primary sources and we use writing to research sustainable conclusions about what they read." The context surrounding the word *reading* indicated that instructors found strong disciplinary writing to be heavily influenced by what

students read.

Synthesis of content analysis. The content analysis I employed on the discourse data elicited patterns of concepts and words that revealed that instructors contextualize their understandings of disciplinary writing. Overall, the content analysis on the discourse data revealed that when instructors have students write in their discipline, regardless of the subject, there are several factors important in determining good writing in the disciplines. Data presented here illustrates that disciplinary writing was contextualized by several factors: (a) the importance of writing to students' success; (b) the ways in which writing was used; (c) writers' knowledge and their ability to know in a particular way; (d) critical thinking skills; (e) research; and, (f) reading. However, assertions from most instructors that they do not teaching writing and that they are not writing teachers also suggests that most instructors conceptualize writing as belonging to the English field, thus dismissing content-area instructors from having to teach writing to students within their respective disciplines, despite the difficulty students have with writing.

Despite these instructors conceptualizing writing as being very important to student success and learning, in this study, the non-writing instructors noted that they leave the teaching of writing to the writing instructors. These particular non-writing instructors said they provide writing advice to students to help guide them in the direction of writing success; however, much of their advice is ambiguous. Furthermore, instructors use language suggesting that factors of good writing include the demonstration of knowledge and thinking skill; however, deeper analysis indicates that instructors have specific ideas of what constitutes knowledge of a discipline and the ability to think in

ways unique to a discipline. The largest point here is that despite instructors

conceptualizing disciplinary writing as having different uses, strategies, knowledge, and

thought processes, they also indicated that they do not provide explicit advice to students

on how to improve writing within their respective disciplines. In addition, because the

contexts surrounding these frequently used words suggest that instructors' seemingly

shared conceptualizations of writing across fields differ in this specific study, I performed

a discourse analysis on the data to examine instructors' understandings of disciplinary

writing more closely.

   Discourse analysis. Three broad thematic categories emerged regarding

instructors' conceptual understandings of disciplinary writing from the five open-

response survey questions, including 259 responses, three focus groups, and sixteen

interviews. I present the categories here to represent the broader understandings that

instructors share regarding disciplinary writing and to answer research question one;

however, the analyses of the disaggregated data of these categories are described in more

detail in the discussion of research question two. The purpose for providing only a brief

overview in this first research question section is due to the data suggesting that

instructors, on the surface, appear to share conceptualizations of disciplinary writing

communally across disciplines, but specific nuances emerged during deeper analyses,

indicating that particular conceptualizations actually differ between fields. Across

disciplines, instructors' conceptualizations of disciplinary writing resulted in the

emergence of three broad categories: (a) as being related to the instructional focuses of

composition courses; (b) as being representative of quality communication; and (c) as

being dependent upon evidence.

Conceptualizations of composition writing instruction. In general, instructors used language suggesting that their understandings of writing instruction in composition courses were widely different between disciplines, that there were little to no writing differences between disciplines, or that the instructor did not have enough information to make any claim regarding writing across disciplines. Overall, instructors in the content-areas held mismatched understandings about writing instruction in composition courses. These understandings between the various disciplines are so varied that this discussion best fits and is continued under the discussion of research question two. However, another understanding instructors revealed regarding disciplinary writing was that writing did not differ between disciplines.

Analysis of the surveys, focus groups, and interviews revealed another conceptualization of disciplinary writing, where content-area instructors found little to no differences when writing between disciplines. One particular instructor did not see any differences in writing between disciplines saying, "It doesn't differ. A complete sentence in an English class is a complete sentence in a Math class." Another instructor also said, "The rules of grammar are the same everywhere." These two instructors conceptualized writing by what it looks like structurally rather than by what it could do. One instructor described no difference between disciplines in writing other than conventions, claiming, "Research writing is the same in all disciplines. The only difference is MLA vs. APA." These instructors who thought that there were little to no differences when writing in various disciplines explicated writing as a static concept such that writing had a very specific set of grammatical rules, formats, and research conventions that are shared by every discipline. These instructors tended to say that the largest difference between any

discipline rested in the difference of research conventions such as APA and MLA; therefore, some of these instructors claimed to teach disciplinary writing by teaching the research conventions of their field.

In addition to those instructors who thought that there were minor differences when writing between disciplines, other content-area instructors felt that they did not know enough to make a claim about writing across disciplines. These instructors said that they did not hold the knowledge to make assertive claims about writing across disciplines. "Frankly," one instructor said, "I'm not sure how my writing in my discipline differs, not being an English teacher." And, continued another instructor, "I could not say about the difference. I only teach math, so I don't know what writing looks like in other disciplines." Another instructor stated this lack of knowledge another way, "I don't have enough experience in other disciplines to say. Nearly all my teaching is in science." When these instructors were asked specifically about the difference in writing between composition and content-area courses, they claimed that they were unable to make assertions regarding writing differences because they were unfamiliar with what was taught in other courses; yet, they claimed that writing did not transfer from composition courses to content-area courses. This particular understanding of writing presents mismatching understandings held by individuals – writing does not transfer from composition to content-area courses, yet not enough information is held by the individual to makes claims about writing differences.

Both the instructors who understood there to be little to no difference when writing in other disciplines, as well as those instructors who did not want to make comparison claims about writing across disciplines often described writing in their

respective disciplines as having the same characteristics as a research article. One biology instructor detailed writing as "describ[ing] methods and results." A chemistry instructor said the purpose of writing was to "write procedure, record data and observations, report results, and explain findings." A psychology instructor claimed that writing was "a research paper that is the same for all disciplines." A sociology instructor said, "our disciplinary conventions tend to mimic research article writing methods." These instructors conceptualized writing to be a straightforward ability to model the sections of a research paper or article, such as the introduction, literature review, methods, findings, and results section.

In addition, these instructors who noted little or no difference in the writing between disciplines, when asked, had a difficult time describing what writing looked in their respective disciplines when I asked them to detail specific characteristics unique to their disciplines. Instead of specifying what writing looked like in their discipline, they would define writing as being the same across disciplines in terms of research writing, such as following MLA or APA conventions according to the disciplines. Furthermore, this finding implies that if the instructors cannot, or do not, know the difference in writing characteristics from their discipline to another, it is likely that they have an idea of what constitutes good writing in their discipline, but may not know which of those good writing characteristics are unique to their discipline themselves.

Whether or not instructors conceptualized writing to differ between disciplines, they were all asked how they advised students to improve writing when writing in their discipline. Other than the literacy instructors, who said they are teaching writing across disciplines, all of the content-area instructors stated that they knew or had an idea of what

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was important for students to know when writing in their respective disciplines, but very few actually instructed students on those disciplinary differences. As one biology instructor said, "I don't teach a major course, so just general writing skills are needed." A chemistry instructor said, "While I write, sadly I do not teach my students to write." Likewise, a psychology instructor stated, "I am not a writing teacher." Many instructors felt that writing was not their responsibility or that there was too much disciplinary content to cover that there was no time to talk about writing. As a biology instructor asserted, "I am not a writing teacher, and I cannot afford the class time to teach students writing. I teach them course content." Thus, there appears to be a general understanding that writing differs between composition courses and content-area courses; however, many content-area instructors do not view the teaching of writing in any form, even disciplinary writing differences, to be part of their teaching roles despite how important they feel writing to be in their discipline.

In addition to understanding disciplinary writing as being affected by writing instruction in composition courses, many instructors contextualized their understandings of disciplinary writing as communication.

Conceptualizations of writing as communication. Instructors across all disciplines described disciplinary writing as being representative of communication. Most of them tended to say that disciplinary writing was a tool or manner of communication by which a person could share his or her thoughts. Table 7 presents the language used by instructors as they described disciplinary writing as communication.

Table 7

Communication: All Respondents

"Writing is a form of communication."
"Writing is communicating information."
"Writing is our way of communicating universally."
"Students need to use writing to communicate effectively."
"Writing is to focus on communication."
"You have to use writing to communicate information."

As instructors identified communication as a core conceptualization of their understanding of disciplinary writing, they tended to emphasize the need for quality communication. One instructor summed up how most of the instructors conceptualized disciplinary writing as communication by saying, "Communication is communication. Just say what you mean." In addition, most instructors also used language such as "effectively," "universally," "completely," and "clearly" to identify what constituted good written communication. These discussions revealed that on the surface most instructors conceptualized disciplinary writing as a mere sharing of thoughts, ideas, information, or data. However, in the discussion under research question two, I will present how deeper analyses of this communication conceptualization reveal conceptual differences between fields. In addition to viewing disciplinary writing as representative of communication, instructors also conceptualized good disciplinary writing as being dependent upon evidence.

Conceptualizations of writing as evidence. No matter what discipline the instructors were from, evidence and support were key characteristics to what constituted

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solid writing in their disciplines. Table 8 presents the various ways in which instructors

asserted evidence to be a core factor in their understanding of writing in their respective

disciplines.

Table 8

Evidence: All Respondents

"Everything that you are going to write or publish you have to kind of put your money where your mouth is."
"You have to say where did you find that out."
"We follow this basic rule if there is no evidence to support a phenomena it does not exist."
"We have to support it, you know, we can't just be, things like you read on the opinion page of the Wall Street Journal, for example. It's got to be really, really, really supported."
"The most important thing they have to be able to do, is that they have to be able to provide evidence to back up their claim."

To consider something as being good writing, the instructors stated that there had to be an

evidence trail or proof of claims made in order to support anything written. Some

instructors indicated that evidence was worth something. As one instructor said, "you

have to kind of put your money where your mouth is." Other instructors found

phenomena within their discipline to not exist without evidence. One said, "we follow

this basic rule if there is no evidence to support a phenomena [*sic*] it does not exist."

These instructors conceptualized disciplinary writing to be reliant upon evidence and

support to the extent that much of writing is not valuable or worth much without a trail of

evidence or claims to back up what is being said.

On the surface it appears that instructors agree that general evidence and support

are highly valued in writing within their respective disciplines; however, in the next

section, I will discuss how a closer investigation of instructors' conceptualizations between the various disciplines revealed mismatched understandings of evidence.

Synthesis of discourse analysis. The semantics of instructors' conceptualizations suggest that they share common understandings of disciplinary writing. In the surveys, focus groups, and interviews, instructors emphasized similar constructs, such as communication, evidence, and composition instruction, as being factors that play into their understandings of disciplinary writing.

However, deeper investigations of these broad categories, when the data was disaggregated and examined by field, suggested that instructors held differing definitions of what constituted composition instruction, communication, and evidence. This finding suggests that instructors across disciplines may use language indicating they have the same ideas, understandings, and conceptualizations of disciplinary writing. Therefore, if they think they all have the same understanding, they may believe that writing truly can be taught as universal constructs and be applicable across disciplines. This poses a problem, because it was in the nuances of these disciplinary writing definers that suggested instructors' underlying understandings are different between fields.

Metaphor analysis. As discussed in Chapter Three, one method of investigating instructors' understandings of disciplinary writing was to ask them to construct metaphors of their conceptualizations. However, to avoid misrepresenting their metaphors based upon my own beliefs and conceptualizations, I followed up the metaphors by asking participants to provide an explanation of their analogical expressions as well. Through this method of discourse analysis, I could analyze instructors' conceptualizations through their linguistic expressions and conceptual

metaphors. Conceptual metaphors, as described in Chapter Three, are comparisons made between two concepts, usually one unknown and one known, in order to facilitate an explicit understanding. These conceptual metaphors, examinable through a process of mapping (Kovesces, 2010), are a result of an individual's existing understanding of how something works, are largely founded in physical and interactive experiences with the world, with social and cultural influences (Lakoff & Johnson, 1980).

In this study, instructors constructed analogical expressions to demonstrate their understandings of disciplinary writing. Since these understandings are embedded socially, culturally, and situationally for the instructors, it is important when examining these MLEs to acknowledge the individual, cultural, and social influences on instructors' conceptualizations. To understand the differences between the MLEs and conceptual metaphors (CMs), the MLEs are instructors' conceptualization utterances of disciplinary writing and the CMs,are broader conceptual understandings of disciplinary writing made manifest through themes. Each theme is determined by the frequency of MLE utterances.

MLEs. Much of this study hinges on the conceptual metaphors, since I am investigating the general trends of how instructors conceptualize disciplinary writing across disciplines. However, I present Table 9 to demonstrate the range in views that all respondents hold regarding disciplinary writing.

Table 9

Range in MLEs: All Respondents

MLE	Explanation
Disciplinary writing is like giving directions in Paris to a blind man.	The complexity of the ideas and concepts is hard to explain the in absence of landmarks, and fails when the landmarks are not shared between you and your reader.
Disciplinary writing is like comparing tap to bottled water.	Is water. Just water in all cases – what are your thoughts?
Disciplinary writing is like morse code.	To the person who does not understand (or know Morse Code), it is nonsense, but to the person with knowledge it is communication.
Disciplinary writing is like going to a gymnasium.	The more you do, the more fit you become.
Disciplinary writing is like wearing sun glasses.	The world is seen through the lens of history, a pink lens, through biology, a green lens, mathematics, a yellow lens…
Disciplinary writing is like a moving target.	Every time I write something a new discovery changes it.
Disciplinary writing is like building a brick wall.	Each sentence sets up the thought process until the whole idea is revealed.
Disciplinary writing is like putting on a smaller pair of shoes.	You have to force your concepts to fit within a framework no matter how uncomfortable.
Disciplinary writing is like heart surgery.	Only an expert can do it.
Disciplinary writing is like a pig in its own filth.	Individuals caught up in their own interests.
Disciplinary writing is like pulling teeth.	Students do not see the important of it and always are more worried about the answer than how to get the answer and what it means.

Instructors held understandings of disciplinary writing that ranged from negative to positive views of writing, prescriptive to descriptive definers of writing, supportive and hindering constructs of writing, individual versus student uses of writing, to shared versus unique characteristics of writing. It is unknown, since I did not ask, how instructors developed their understandings, but the range in conceptualizations provides a glimpse of the variety of views that students are exposed to throughout their academic career in community colleges. One instructor held the view that disciplinary writing was like heart surgery, such that only an expert could do it, whereas another instructor saw it as going to the gym, where disciplinary writing could be learned through more practice. Another viewed writing as the difference between tap and bottled water, explaining that water is all the same, just like thoughts; another described writing as putting on a smaller pair of shoes, such that disciplinary writing can be constricting when having to fit concepts into a particular framework. One instructor also viewed it as pulling teeth, where students have a difficult time knowing why it is important, thus misrepresenting the task as completion rather than process and knowledge; another instructor viewed disciplinary writing as similar to swimming in a river, where the writing should be "fun and easy" and result in something "new and beautiful."

These conceptualizations of disciplinary writing should not be viewed as binary, or always oppositional, of each other. Rather, these conceptualizations speak to the range of understandings that instructors hold and potentially share with their students. Once I examined these views and made connections between their analogical expressions and the construct of disciplinary writing, I was able to begin identifying the shared characteristics between the target (disciplinary writing) and domain (analogical

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expression). From these characteristics, I was able to begin grouping the MLEs into themes through their shared characteristics, which resulted in the emergence of conceptual metaphors.

 Conceptual metaphors. In metaphor analysis practices (Lakoff & Johnson, 1980), once the MLEs are grouped together based on a theme, a conceptual metaphor (CM) can be identified. In Table 10, I present the most prevalent CMs that emerged from examining the MLEs across all respondents. There were several CMs that emerged through the thematic categorization process, which were formed from the grouping of two or more similar MLEs. However, to determine the most frequent conceptualizations that emerged, I identified the top CMs based upon frequency rates.   The most frequent CMs, shown in Table 10, contained at least fifteen to twenty-five MLEs, making up the thematic strand. The most frequent CMs present disciplinary writing as a) unique identifier; b) exploration; c) building; d) a court of law; and e) language, (see Table 10).

Table 10

Most Frequent CMs: All Respondents

CM	MLEs
DISCIPLINARY WRITING IS A UNIQUE IDENTIFIER.	*Disciplinary writing is like a snowflake.* *Disciplinary writing is like a fingerprint.* *Disciplinary writing is like a personality.* *Disciplinary writing is like learning the difference between venomous and harmless reptiles.*
DISCIPLINARY WRITING IS EXPLORATION.	*Disciplinary writing is like ambling through an endless forest.* *Disciplinary writing is like exploring the deepest depths of the deepest ocean.* *Disciplinary writing is like an explorer visiting new vistas.* *Disciplinary writing is like exploring a new and exciting area.*
DISCIPLINARY WRITING IS BUILDING.	*Disciplinary writing is like building a brick wall.* *Disciplinary writing is like building a bridge.* *Disciplinary writing is like building a bridge.* *Disciplinary writing is like building a house.*
DISCIPLINARY WRITING IS A COURT OF LAW.	*Disciplinary writing is like a legal case.* *Disciplinary writing is like a lawyer defending or prosecuting a case.* *Disciplinary writing is like taking a stand.* *Disciplinary writing is like arguing a case in a court of law.*
DISCIPLINARY WRITING IS LANGUAGE.	*Disciplinary writing is like speaking a different language.* *Disciplinary writing is like a secret language.* *Disciplinary writing is like being fluent in a foreign language.* *Disciplinary writing is like Pig Latin.*

The conceptual metaphors that emerged thematically across respondents are

important because they provide evidence of the underlying implicitly implied conceptualizations that instructors hold overall regarding disciplinary writing.

Disciplinary writing as a unique identifier. This understanding of writing as a unique identifier appeared with the largest frequency among instructors across disciplines. The term *unique identifier* in this conceptual metaphor represents the idea that no two things are alike, such as an I.D. photo, a fingerprint, or snowflake, including the idea that writing is not the same across disciplines. As one instructor stated, "writing is like a personality, everyone has one but they can be so different. Just like the different disciplinary writings." Similarly, another instructor described disciplinary writing as a fingerprint, because it "has unique goals and objectives, as well as styles and methodologies for each discipline." Further explanation of analogies that fit into this category of identification indicated that instructors felt that failure to recognize the unique writing requirements of each discipline can be problematic. For example, one instructor conceptualized disciplinary writing as knowing the differences between venomous and harmless reptiles, such that "a person should be able to differentiate the specific requirements that are necessary for success in each discipline. If they cannot, then there will be adverse consequences." Overall, when examining instructors' understandings of writing across disciplines, instructors viewed writing as being different and unique within each discipline.

Disciplinary writing as exploration. Another perspective instructors held about writing in the disciplines was the idea that writing was exploration. Exploration, according to these instructors, represents the idea that the process of writing in a discipline provides opportunities for sorting through disciplinary information where one

never knows what discovery or information will be discovered. One instructor said, "Writing in my discipline is like ambling through an endless forest. There are always new discoveries to be made." Similarly, another instructor described writing as "exploring the deepest depths of the deepest ocean," because "you never know what new discoveries you'll make." These instructors claimed that exploring information through writing improves learning. As another instructor claimed, "writing is like exploring new and exciting areas" because "it should help to open one's eyes to new ways of thinking and learning." This perspective of writing in the disciplines illustrates exploration being discovery, resulting in new experiences, new information, new ways of thinking, and new data to consider.

Disciplinary writing as building. This building construct represented instructors' views that disciplinary writing was a foundational method for learning to write. Instructors described disciplinary writing as a structured process by which one can gradually build an idea. For example, an instructor stated, "each sentence sets up the thought process until the whole idea is revealed." Furthermore, as another instructor detailed, "writing is a complex process of construction, and particularly it has a series of modules and activities that are sequenced and embedded and returned to repeatedly." In this view of writing, instructors tended to view writing as a set of building blocks by which students can build a foundation of writing literacy. These instructors, who described writing as building, tended to describe the foundation of writing as including specific formats, modules, or models that could be used as building blocks to better writing.

Disciplinary writing as a court of law. This court of law construct represented

instructors' views that writing was all about evidence. Instructors provided explanations

for this evidence-based conceptualization of writing such that "disciplinary writing is like

a lawyer defending or prosecuting a case, because there are hundreds of facts but only a

select group can actually be evidence." Another stated that writing is "a legal case,

because I can use the evidence to prove the progression and causation of events." One

instructor also commented that writing is "taking a stand, because there is no room for

wishy-washy responses." In this conceptualization, instructors said that good writing is a

result of strong evidence.

Disciplinary writing as language. Finally, another common conceptualization

instructors had regarding disciplinary writing was that of viewing writing as language.

Instructors commented about the jargon of a discipline causing an outsider to feel as if he

or she were hearing a new language. Also, even when a person could successfully write

within more than one discipline, instructors' MLEs indicated that writing between

disciplines felt like having to work with two different languages. Furthermore, having to

write within a discipline and then talk about that disciplinary content to someone outside

of the discipline creates a situation in which a translation had to take place between lay

terms and disciplinary terms. In this view, instructors not only stated that jargon caused a

person to feel as if he or she were dealing with another language, but it was the different

ways in which material was discussed that also made writing feel like a different

language in each discipline.

Synthesis of metaphor analysis. Instructors hold wide ranging and complex

understandings about the purposes, preferences, and practices of disciplinary writing.

There is the potential for students and instructors to experience conceptual mismatches in

understandings of disciplinary writing, and there is the potential for students to assume the same conceptualization of disciplinary writing that their instructors hold, especially if students believe instructors to be the holders of knowledge, teachers of knowledge, and users of knowledge. Since instructors' conceptualizations are far from homogenous, resulting in students being presented with wide ranging perspectives on writing, it is important for instructors to openly share, describe, and understand how their personal conceptualizations of disciplinary writing play a role in the development of students' understandings of disciplinary writing.

Research Question Two: How do Texas community college instructors' conceptualizations differ across the fields of literacy, math and sciences, and social science?

To answer my second research question guiding this study, I disaggregated all of the data by fields: literacy, math and sciences, and social science. By disaggregating the data, I discovered conceptualizations of disciplinary writing that differed between fields. I employed the same analyses on the data – content, discourse, and metaphor – to explore differences in conceptualizations between fields.

Content analysis. As noted earlier, a content analysis on the data determines the frequency of words within discourse. In this case, determining the frequency of words in the instructors' discourses provided contextualization for how instructors understood writing. I employed a word frequency query on the discourse data disaggregated by field. The purpose in examining the word frequencies is to examine whether new insights emerge when disaggregating data, to check for triangulation of data among research tools as well as to build findings from one method to the next.

Word frequency counts: Literacy. The most frequently used words when

examining the literacy instructors' discourse data are *writing* (5.60%), *students* (2.32%), *know* (1.47%), *reading* (1.39%), *think* (1.28%), *use* (1.10%), and *learn* (.92%; Table 11). These descriptions depicted contexts that instructors associated with disciplinary writing.

Table 11

Word Frequency Counts: Literacy

Ranking	Word	n	Word Frequency Percentage (%)	Similar Words Included in Count (n)
1	Writing	275	5.60	Write, writings, writes
2	Students	114	2.32	Student, students'
3	Know	72	1.47	Knows
4	Reading	68	1.39	Read, readings, reads
5	Think	63	1.28	Thinking
6	Use	54	1.10	Used, uses, useful, using
7	Learn	45	.92	Learned, learning

The results of the word frequency counts on the literacy instructors' data showed that the top most frequent words literacy instructors used when discussing disciplinary writing were nearly identical to how instructors discussed disciplinary writing across disciplines. However instead of having *research* as one of their most frequently used words, literacy instructors discussed disciplinary writing in terms of *learning*.

Learning. Literacy instructors conceptualized disciplinary writing as a learning process. Writing was described as a means in which a student could learn information. For example, an instructor said, "students write to learn." Another said, "writing serves as a form of practice to learn concepts and principles." One instructor even claimed that, "writing is the paramount emphasis to facilitate learning." As literacy instructors

discussed writing further, they also began to differentiate between writing to learn and

learning to write. Regardless, in the literacy instructors' courses, in addition to

conceptualizing writing as thinking, using, knowing, and reading, writing was also

conceptualized as a process by which learning takes place.

Word frequency counts: Math and sciences. The disaggregated analyses of the

discourse used by math and science instructors when discussing disciplinary writing, in

addition to the findings from the overall findings, indicate that they contextualized

writing through means of explanations and processes. Table 12 presents the most

frequently used words by the math and science instructors when discussing disciplinary

writing.

Table 12

Word Frequency Counts: Math and Sciences

Ranking	Word	n	Word Frequency Percentage (%)	Similar Words Included in Count (n)
1	Writing	360	4.52	Write, writings
2	Students	147	1.85	Student
3	Use	118	1.48	Used, using, useful, uses
4	Explain	62	.78	Explaining, explained, explains
5	Think	60	.75	Thinking
6	Processes	56	.70	Process
7	Know	55	.69	Knowing, knows

Explain. Math and science instructors described writing often in terms of how it

is used to explain concepts in biology, chemistry, and mathematics. An instructor said,

"writing is used to explain case studies." Others said, "writing is used to explain a

specific concept," and "writing is used to explain logic," and "writing is used to explain

research." However, the largest concept the math and science instructors wanted students to explain was processes, which is the next frequent word in their discussions on disciplinary writing.

Processes. This key word is important in the math and sciences, because nearly all information that instructors want students to understand, know, and learn are in the form of processes. For example, one instructor said, "students need to explain biochemical processes." Another said, "they need to explain physiological processes." Others emphasized lab processes, biological processes, logical processes, reactionary processes, and thinking processes. This finding implies that much of math and science knowledge is depended upon the understanding of processes.

Word frequency counts: Social science. The findings of the disaggregated discourse data by field indicated that social science instructors also conceptualized writing by contextualizing it through discussions about students, knowledge, thinking, and uses of writing. However, the word that is different between the social science instructors and the overall findings is *evidence* (Table 13).

Table 13

Word Frequency Counts: Social Science

Ranking	Word	n	Word Frequency Percentage (%)	Similar Words Included in Count (n)
1	Writing	271	4.03	Write, writes, writings
2	Know	126	1.87	Knows, knowing
3	Think	108	1.61	Thinking
4	Use	103	1.53	Used, uses, using
5	Students	95	1.41	Student
6	Research	89	1.32	Researched, researching, researches
7	Evidence	44	.65	Evidences

Evidence. Instructors in the social science field emphasized evidence as a factor

in good disciplinary writing. Instructors provided examples of this by saying that

"students must use historical evidence," "they must utilize evidence to prove their

conclusions," and "writing is evidence-based information and research." Discussion

surrounding evidence suggested that the nature of the three disciplines within this social

science field rely heavily upon evidence to prove phenomena, assert a historical truth, or

document a social or human behavior. Thus, this word implies that little can be written

within this field without documentation of evidence.

Synthesis of content analysis. This content analysis provided a short list of the

most frequently used words said by instructors during data collection. The similar overall

and disaggregated results, and the context in which they were used, suggest how

instructors come to understand what defines good writing in their disciplines. This

convergence of data sources indicates that instructors viewed the uses of writing, ways of

knowing, and critical thinking as being important aspects of writing in their disciplines.

However, when disaggregating the data by fields, some of the overall findings drop out, such as research and reading, and topics more specific to each of the fields took places among the top seven ranking words. This finding implies that, when disaggregating the data, the discourse of a particular community, such as literacy, math and science, or social science, it is possible to begin understanding how instructors conceptualize disciplinary writing more specifically within a field.

Discourse analysis. It was in the nuances of those shared general views that I discovered mismatched conceptualizations of what instructors understood to be writing. Throughout the survey, focus groups, and interviews, the instructors explicated the functions, uses, purposes, and characteristics of writing in their respective fields, revealing opposing perspectives on the idea that writing transfers from composition courses to content-area courses. The discussions surrounding whether or not writing transferred from composition to content areas also revealed the ways in which instructors valued and defined the purposes and characteristics of writing. Instructors from all disciplines, despite their views on writing transfer, described writing to be all about communication and evidence. However, it was in the nuances of what communication and evidence meant between the disciplines that suggested that different disciplines had different values and conceptualizations of what constituted writing in their field. The following three themes are explicated here for analysis because these topics appeared in discussions with instructors from every discipline I examined: mismatched understandings of writing instruction, communication, and evidence.

Conceptual mismatches of composition writing instruction. During ongoing analysis of data, I discovered that there was a clear difference between how instructors, in

all of the disciplines I examined, thought about the writing taught in a composition

course. The largest difference exists between what composition instructors believe they

teach as transferable academic writing knowledge and how content-area instructors

viewed the writing characteristics taught in composition courses. To examine the

differences in perspectives, I disaggregated the data by field.

    Literacy instructors' conceptualizations of writing instruction. As presented in

Table 14, all of the literacy instructors I surveyed or spoke with during a focus group or

interview included as a core aspect of their conceptualizations that they taught skills or

generalizable techniques that would enable students to successfully writing in any

discipline, course, or career path they had.

Table 14

Conceptualizations of Composition Writing Instruction: Literacy

"My job is to teach writing across discipline lines. When a student leaves me, he/she must be prepared to write in every discipline."
"I advise students on the general conventions common to academic writing they'll be expected to do as undergraduates in any discipline."
"Within Composition we like to think we are teaching a generalizable skill for students' academic and professional careers."
"We teach how to write across the curriculum."
"As an English instructor, I am teaching our students the knowledge and skills to be successful with any college expository writing."

Among the literacy instructors, though, they had differing methods for teaching students

to write across disciplines. Some of the methods were more technical and focused on

formatting and using essay modes as the focus of learning to write. One instructor stated

that she taught "expository, compare-contrast, cause-effect, argumentative and basic

writing from paragraph to multiple-paragraph essay" because students would see these types of writing in other disciplines. Another instructor involved in teaching a reading and writing integrated course explained that she taught students "how to write 5 paragraph essays," because if they can master the 5-paragraph essay, they should easily be able to expand it in other disciplines. These instructors strongly focused on teaching writing through modes, models, and formats whereby students are expected to learn a mode of writing, such as compare and contrast, and then find content to fit that mode to practice that type of writing.

Other literacy instructors were more explicit in trying to get students to learn to write across disciplines. These literacy instructors said they taught writing across disciplines by bringing in experts from content-areas to help students learn the types of writing that they will need to do in advanced courses. For example, an instructor who taught both developmental writing and composition courses said,

> "In my department, faculty members ask students to write essays using a variety of essay modes. Faculty members from the sociology department and the history department worked with developmental writing faculty members to design essay/research paper prompts on several concepts in these disciplines as a way to contextualize writing tasks and show students the kinds of papers they will need to write in these classes."

These literacy instructors described assignments that were less focused on mode as the starting place for writing, and more on how topics and rhetorical arguments in the different disciplines demanded different types of modes. For example, the class would study a prompt provided by a content-area instructor, examine what type of information,

material, and content was needed to answer that prompt, and then decide what type of mode(s) were needed to be employed to answer the prompt. Despite the methods they used, literacy instructors believed that they teach students to be able to write in any discipline.

In contrast to what literacy instructors understood about what is taught to students in a composition course, instructors from the math and sciences and social science disciplines I examined revealed that they did not think composition writing transferred or worked in their discipline. Where as the literacy instructors stated that writing instruction in composition courses should result in students knowing how to write across disciplines by providing students with characteristics of what they deemed to be good writing, content-area instructors' examples suggested that writing instruction in composition courses provided students with and caused them to use writing characteristics viewed as unfavorable in content-area disciplines.

Math and science instructors' conceptualizations of writing instruction. Table 15 presents the math and science instructors' understandings of the writing instruction in composition course. These instructors have the understandings that students are taught "fluff," "attention grabbers," and "transitions" in composition courses, which they state are not useful in the math and sciences.   The terms that some of these instructors used when describing the characteristics of writing in a composition course such as "bs" and "fluff" suggest that the math and science instructors conceptualize the writing instruction in composition courses not to be applicable to their respective disciplines.

Table 15

Conceptualizations of Composition Writing Instruction: Math and Sciences

Biology	"Scientific writing is very concise and precise. It seems that Introductory English writing is more about fluff."
	"The writing is more 'dry' and 'to-the-point' in science (versus English). In English, writers are taught to capture the interest of the reader. In biology, there is very little concern for this. The interest in a scientific article is something the reader already has if he/she bothered to look up the paper in the first place."
	"There is much emphasis on connecting paragraphs in English, which is useless for scientific writing. Many of our students have been taught in English classes that the material written in parentheses () can be ignored, which is definitely not the case in science writing. Even worse, introductory English students are often taught to ignore figures and graphs. Scientific communication depends on figures and graphs. Good scientific writing also is not emotive or deliberately persuasive, as taught in English comp."
Chemistry	"There is absolutely no room for bs, like they seem to do in English. Direct communication is the rule."
	"There is a persuasive element to writing in science, but every statement must be backed up by scientific evidence (never opinions like in an English class)."
	"Content, not comp creativity, is most important."
Mathematics	"Composition is not transferable to math. Math tends to be more straight-forward and objective. We don't care if the sky is a melancholic shade of cyan. The sky is blue. Period."
	"Mathematical writing values brevity and simplicity over colorful language and repetition like they seem to bring with them from English classes."

Math and science instructors hold the understanding that much of what is taught to students in composition courses as good writing is not useful and is occasionally even a barrier to how students should be writing in the math and sciences. For example, some math and science instructors felt that students were taught to use frivolous details, ignore

information in parentheses, favor personal opinion over evidence, and deliberately entice or persuade rather than focus on direct communication. Therefore, according to these math and science instructors, students are learning characteristics of writing that they are told to be good characteristics when they actually are adverse characteristics to have in the math and sciences.

Social science instructors' conceptualizations of writing instruction. Instructors in the social sciences also described writing instruction in composition courses as a hindrance to writing in their disciplines (Table 16). One of the most frequent statements was that students used their feelings and opinions when writing in the social sciences, which is not viewed as a favorable practice by the instructors in the social sciences.

Table 16

Conceptualizations of Composition Writing Instruction: Social Science

History	"English writing courses focus on how students 'feel.' Historians do not care what you 'feel' but what you have evidence for. Furthermore, the writing needs to be impersonal in history."
	"I find that many of my students have mastered the format of a test essay, but they are not accustomed to using the information we cover in class to make an informed argument [*sic*]. I feel like they learn the form of writing a test essay from their English courses. That is very good, but they seem to prefer expounding upon their opinions rather than using evidence from class to back up those opinions."
Psychology	"They need to use the personal opinion they learned in English sparingly."
	"The format is different from what is taught in introductory composition or English courses. Also, the writing is a lot drier, less colorful, calls for more specificity and less description, and the creativity that is encouraged and nurtured in composition courses has to be inhibited to a large extent in psychology."
Sociology	"Sociology writing is not opinion and interpretation."

These social science instructors' felt that in composition courses good writing should include an expression of feelings and opinions, the use of lots of details, and a demonstration of literary interpretation. A historian said, "English writing courses focus on how students 'feel.' Historians do not care what you 'feel' but what you have evidence for. Furthermore, the writing needs to be impersonal in history." A

psychologist said, "They need to use the personal opinion they learned in English sparingly." Similarly, a sociologist said, "Sociology writing is not opinion and interpretation." These sociology instructors also found personal opinion and personal interpretation to be a characteristic from the composition courses that they found to be a barrier to good writing in sociology classes. Similar to the math and science instructors, social science instructors widely asserted that very little writing knowledge from the composition courses was transferrable to the social sciences, mostly because this knowledge hindered the writing quality within their respective courses.

Although most of the content-area instructors in the social sciences and math and sciences largely conceptualized writing instruction in composition courses to hinder good writing in their disciplines, a few content-area instructors shared different understandings on writing across disciplines.

Synthesis of conceptual mismatches of composition writing instruction. The literacy instructors had different conceptualizations of writing instruction in composition courses than the content-area instructors had. Largely, the content-area instructors viewed the writing characteristics they thought were taught in composition courses to be hindrances to writing in their respective disciplines. Also, the instructors who stated there were large differences between writing in the content-areas and writing in a composition class focused on writing as having special language characteristics, jargon, and specific processes. Although a very small group of instructors felt there were little to no differences in writing between disciplines, they focused on writing as embodying certain structures and research conventions. This analysis suggests that there is a large gap between what composition instructors and content-areas instructors conceptualize as

writing instruction in composition courses versus writing in specific disciplines. Furthermore, it raises the question of the relationship between composition courses and content-area courses, especially since the different fields have different concerns regarding the influence of composition writing instruction on writing in their respective disciplines.

In my analyses of the conceptualizations on writing that content-area instructors have regarding composition courses, the data suggest that the writing characteristics that content-area instructors feel are not relevant in their disciplines might actually be disciplinary writing characteristics unique to the field of English or to the MLA conventions that are used by the composition instructors. This implication relies upon the writing characteristics that content-area instructors found unfavorable, but the literacy instructors found favorable. The writing characteristics that content-area instructors tended to find unfavorable were writing practices that included high levels of description, use of personal opinion as evidence, attention grabbers and emotive language, and purposeful transitions. Thus, these findings beg the question of whether composition instructors are teaching good writing knowledge to students that are really English disciplinary writing characteristics rather than generalizable academic writing skills.

Conceptual mismatches of communication. Instructors stressed repeatedly that writing serves as a method to communicate information and knowledge within each field. Initially, in the analysis of the discourse data, it appeared that instructors across disciplines shared the view that writing was very important because it enabled instructors to know what content students were retaining, as well as to understand how students were talking about content. At the beginning of my data collection, instructors tended to

describe writing in their disciplines as simply communication whereby students, or other members in a discipline, should simply say what they are thinking.

As I asked instructors additional questions about how writing was used to communicate information in their disciplines, they continued to express views of writing as a means of simply communicating, as several stated: "Just say what you mean." However, when I asked instructors what they wished their students could do better while writing in their respective disciplines, I discovered that what instructors deemed as quality communication had different meanings and definitions across fields. I describe the findings regarding communication by field to explicate the nuances between fields.

Literacy instructors' conceptualization of communication. Literacy instructors found writing to be a very important tool to communicate information. When asking students to communicate information, literacy instructors were generally looking for the ability to demonstrate personal responses to readings or prompts, the ability to explicate inferences, the ability to make connections with content to prior knowledge, and the ability to paraphrase and summarize content. As one reading instructor asserted, "communicating gives [students] an opportunity to be like, 'I really connected with that piece of writing. It was deep and this is why.'" A composition instructor said, "students communicate by modeling different modes of writing and providing evidence of their thoughts and reasons for supporting a position." Essentially, communication in the literacy courses contained a wide range of characteristics that constituted quality communication. A composition instructor said, "they [students] communicate personal experience, persuade others through arguments, and try to interest others through attention grabbers." Thus, as this instructor continued, "students can communicate

anything, using any type of language, any mode of writing, and on any topic as long as they communicate effectively and follow the rules of grammar." Literacy instructors allow students to communicate information using personal opinion and feelings to support their points, evidence from any type of resource, and make a point. As long as students made a point, most literacy instructors were satisfied with students' communicative abilities. However, instructors in the content-areas conceptualized quality communication as having different characteristics.

Math and science instructors' conceptualizations of communication. Math and science instructors stated that writing was important to their disciplines because it was the main mode of communication. These instructors explicitly claimed communication was as simple as just talking, but their descriptions of communication indicated otherwise. After probing the math and science instructors for the type of writing they wished students had in their class, it became apparent that there were very specific ways by which a person should communicate in the math and sciences. As a biology instructor stated, "one cannot be vague about anything. They have to be very specific. They have to be correct. And they have to know the jargon." Another biology instructor asserted, "it is very important to be very concise, be very specific, absolutely accurate. There is no room for vagueness." One of the reasons conciseness, precision, accuracy, and specificity is so important in the math and sciences was to teach students how to make no mistakes and how to replicate experiments, lab work, and mathematical problems exactly. For example, a biology instructor explained, "if a student leaves a biology class and wants to go into the medical field, the student cannot make a mistake on dosage or care descriptions when tending to patients." Likewise, as a chemistry instructor detailed, "if a

student in a chemistry class experiences a unique reaction to an experiment, it is very important for him or her to have recorded steps exactly, even down to the name of the paper towel brand. If the lab says 5 grams and the student put 5.2 grams of powder in, it makes a big difference." One math instructor argued, "Almost everything students write, they write for themselves, and if they don't understand it, then what good is it? If they leave a problem half undone and come back a week later, they don't remember how they got the answer." Another math instructor continued, "Math is communicating theorems. I can't just say here's a theorem, believe it. I go through the mathematical truth very specifically, logically, and precisely so that others can evaluate it for themselves." When communicating in the math and sciences, due to the types of processes embedded in the disciplinary knowledge and how math and science instructors communicate about those processes, communication relies heavily upon conciseness, specificity, and accuracy. Thus, unlike communication in the literacy courses, students cannot use personal connections, opinions, feelings, or emotive language in the math and sciences and have it found to be quality communication when talking about math and science material. In a similar fashion, social science instructors had specific characteristics that factored into what they understood to be good communication.

Social science instructors' conceptualizations of communication. Social science instructors also tended to assert that communication meant that a person should "just say what you mean." However, in the social sciences, communication heavily relies upon sharing personal biases openly, strongly evaluating anything said about knowledge, and reacting to others' interpretations. A sociology instructor said, "sociology is about how society works, whereby a person puts forth ideas about how it works and finds trends to

support the idea." Thus, this instructor continued, "sociology is all about patterns and theories about trends, so our work is constantly reexamined to see if those theories are still applicable as society changes." A psychology instructor said, "it's not worth communicating anything unless you have documentation. If there's no documentation, there is no phenomena [*sic*] to study or share. If there is no evidence to support it, it does not exist." This instructor explained how there is no room for speculation or personal thought when it comes to talking about human behaviors. "Everything we write is critiqued, examined, and pulled apart to see if our interpretations based in evidence hold up." A history instructor said, "history is not about the past, it's about what others said about the past." Therefore, this instructor continued, "when talking about history, it's important to consider who wrote it, what their biases might be, how they interpreted it, and what sources they used." Communicating in the social sciences depended largely upon how knowledge was created, resulting in communicating information through a constant assessment of biases, interpretations, and evidence.

Conceptual mismatches of evidence factor in communication. In addition to instructors conceptualizing disciplinary writing as communication, they also conceptualized writing as evidence. Literacy instructors represent evidence in multiple ways. When discussing writing, literacy instructors describe evidence as a demonstration of personal opinion, thoughts, reactions, or connections to material discussed in class. Actual resources also constitute evidence, if the writing tasks are centered on research writing. On the other hand, math and science instructors heavily value writers having an understanding of processes. They describe evidence as being accurate and precise recordings of lab procedures, biology processes, or mathematical thinking processes.

Unless they are doing research articles, where actual resources are used, math and science instructors accept evidence as being a demonstration of record keeping and logical thought processes. For the social science instructors, evidence is not personal opinions, feelings, thoughts, or emotive responses to texts as in literacy courses, nor is evidence a demonstration of record keeping or thought processes. Instead, social science instructors emphasized evidence as being primary and secondary sources to create a historical claim.

Thus, when instructors across disciplines tell students to provide evidence or support for their ideas or claims, they need to be very explicit as to what constitutes evidence since each field has different ideals as to what evidence looks like. Similarly, instructors do not view communication as simply being a free-flow of thoughts – and again, instructors must specify how they define good communication in their fields.

Synthesis of conceptual mismatches of communication. Although instructors in all disciplines conceptualized writing to be communication such that a person needs to say what he or she is thinking, the ways in which these instructors discussed how others talk within their discipline suggest that there are specific characteristics for communicating within a discipline that contradict the instructors' own conceptualizations of communication ("just say what you mean"). Overall, as instructors spoke about how information is communicated within their respective fields, I become very aware that the nature of a discipline often dictated the ways in which instructors valued communication through writing. For example, a math instructor stated that "math is all about absolute truth," and much of the methods of communication and writing characteristics centered around proving theorems supporting absolute truth. Similarly, a history instructor stated, "history may be the search for truth, but we historians realize we will never actually

know truth in history, since everything written is biased." Therefore, much of writing and communication in history revolves around weighing resources, acknowledging biases, and using primary sources to interpret the truth for themselves. This conceptualization of communication, such that it is understood differently between disciplines and largely depends upon the nature of a discipline, may appear to be obvious to most, but as one instructor mentioned, "Sadly enough, I never really knew what history was all about until graduate school. Once I got the five second run down on what the nature of history was all about, everything made sense down to the activities we did in class. I don't know why I didn't learn that during my first history class." Another instructor also admitted that he approached a composition course in a very fact-based manner based on his scientific background and did not learn the composition writing characteristics until the end of the semester. Many instructors revealed specific ways in which information was communicated within a discipline; however, many of these same instructors did share these specific conceptualizations of what they constituted as communication within their fields until they were asked to discuss the qualities they wished to see in their students' writing.

Synthesis of discourse analysis. These conceptualization categories – mismatching understandings of writing – are not simply a way of stating that everyone has a different opinion. Rather, these mismatching conceptualizations speak to the difficulty students and instructors have in understanding what it means to teach, discuss, and use writing successfully in a discipline.

All instructors who participated in this study asserted that they find writing to be very valuable and important for student success, in academia and in a career path;

however, most instructors also found writing to be difficult for students to do successfully. The content-area instructors, overwhelmingly appreciative of good disciplinary writing, stated that the composition instructors were not teaching good writing knowledge applicable across disciplines, yet they stated that it was not their role or duty to teach those disciplinary writing differences.

Metaphor Analysis. After conducting a content analysis and discourse analysis on the open-response survey questions and on the transcribed focus groups and interviews, I then employed metaphor analysis on the MLEs instructors constructed in the survey. The analyses of the MLEs are disaggregated to check for differences in disciplinary writing conceptualizations between fields.

Conceptual metaphors. Earlier, the CMs were discussed in terms of the general conceptualizations instructors had regarding disciplinary writing across the various disciplines. However, these forthcoming CMs were formed after I disaggregated the MLE data by field. For each field, I provide a table presenting the range in conceptualizations held by instructors within each field, after which I present the findings of the CMs that emerged within each field. Again, the CMs are comprised of the MLE utterances that make up the CM categories.

Literacy instructors' conceptual metaphors. Literacy instructors held wide-ranging views of disciplinary writing (Table 17). One viewed disciplinary writing as a dammed river, which represented a "conditioned and structured thought process expressed in writing." Another instructor viewed it as icing on a cake, which embodied the idea that disciplinary writing "adds sweetness to something already wholesome." To another, disciplinary writing was a cookbook, which stood for the "recipes" that students

followed (formats, templates) to "improve writing and organization of ideas." Although

these MLEs appear to be wide-ranging , several CMs emerged from the data.

Table 17

Range in MLEs: Literacy

MLE	Explanation
Disciplinary writing is like a dammed river.	It is a conditioned and structured thought process expressed in writing.
Disciplinary writing is like a cookbook to improved communication.	Students follow recipes to improve their writing and organization of ideas.
Disciplinary writing is like icing on the cake.	It adds sweetness to something already wholesome.
Disciplinary writing is like a root canal.	To students, disciplinary writing often seems like an unnecessary evil (much like scary dental work) but to the practitioners of writing, it is a necessary blessing than can better the individual who obtains (or conquers) it.
Disciplinary writing is like a dark, foggy night.	Often, novice writers fear the unknown. When they first start writing, they don't understand how to use words to express themselves and first attempts leave them confused and in the dark.

Literacy instructors had several views about disciplinary writing; however, many

of their views of writing in their own field centered on constructs of access, templates,

and sustainment, as I presented in Table 18. Literacy instructors created MLEs resulting

in the CM, disciplinary writing is access, where writing served as a positive portal to

future academic and career success. They also constructed MLEs resulting in the CM,

disciplinary writing is a template, which represented their constructs of disciplinary

writing being taught through following templates and modeling good essays. They also

viewed disciplinary writing as sustainment, where they felt that good disciplinary writing

results in the continuation of knowledge within each discipline.

Table 18

Most Frequent CMs: Literacy

CM	MLEs
DISCIPLINARY WRITING IS ACCESS.	*Disciplinary writing is like opening a locked box.* *Disciplinary writing is like opening a box of keys.* *Disciplinary writing is like unlocking a treasure chest.*
DISCIPLINARY WRITING IS A TEMPLATE.	*Disciplinary writing is like teaching a pharmacist how to fill out a prescription correctly.* *Disciplinary writing is like filling out a form or application.* *Disciplinary writing is like sewing from a pattern.*
DISCIPLINARY WRITING IS SUSTAINMENT.	*Disciplinary writing is like oxygen to a human's lungs.* *Disciplinary writing is like respiration.* *Disciplinary writing is like the blood in my veins.*

Unlike the literacy instructors, math and science instructors were not as concerned with writing as creating access, as being learned through modeling, and as serving to continue knowledge in a field.

Math and science instructors' conceptual metaphors. As I presented in Table 19, math and science instructors conceptualized writing in several ways, ranging from torture to mining precious gems.

Table 19

Range in MLEs: Math and Sciences

MLEs	Explanation
Disciplinary writing is like torture.	I have to restrict my writing to the ability of the audience to understand.
Disciplinary writing is like the cat in the hat book.	It is very terse and concise in order to remove confusion.
Disciplinary writing is like the final payment.	You start a project. At first it is great, then it can get tedious for a while, but when it is finished, there is a powerful sense of accomplishment.
Disciplinary writing is like a smoke screen.	In the worse cases, writing obscures the idea rather than elucidating it.
Disciplinary writing is like mining precious gems.	The untrained don't know what you have, and some of what you have is too precious to share right away. To share too soon is to give away the mine.

One instructor felt that disciplinary writing was like torture because it "restrict[s] my writing to the ability of the audience to understand." Another instructor saw disciplinary writing as a positive construct: "Disciplinary writing is like mining precious gems. The untrained don't know what you have, and some of what you have is too precious to share right away. To share too soon is to give away the mine." As a result of mapping these math and science instructors' MLEs, three main CMs formed.

During discussions, math and science instructors described how knowledge was produced through understanding processes, creating and replicating experiments, and being accurate (see Table 20).

Table 20

Most Frequent CMs: Math and Sciences

CM	MLEs
DISCIPLINARY WRITING IS ILLUMINATION.	*Disciplinary writing is like turning on a light.* *Disciplinary writing is like sun breaking through the fog.* *Disciplinary writing is like a light bulb to go off in someone's head.*
DISCILPINARY WRITING IS PRECISION.	*Disciplinary writing is like a mirror of how the body works.* *Disciplinary writing is like walking a tightrope.* *Disciplinary writing is like a user manual.*
DISCIPLINARY WRITING IS A PUZZLE.	*Disciplinary writing is like a perfectly solved puzzle.* *Disciplinary writing is like solving a puzzle.* *Disciplinary writing is like a challenging puzzle.*

Math and science instructors predominately created MLEs of illumination, whereby disciplinary writing was a place where students and instructors were able to have moments of insight, discovery, and breakthroughs of knowledge, which appears fitting for all of the experiments, labs, and math problems that occur in the math and sciences. They also viewed disciplinary writing as precision, such that there is no room for error or extra details in writing. They described this precision as a mirror, such that "you must exactly replicate your findings, and there is absolutely no room for error or extras." Similarly, writing is like walking a tightrope, where "only precision counts, not style." Another instructor also defined this precision as a user manual, where everything is written to the point, is concise, and is brief. Finally, they also viewed writing as a puzzle, such that a person has information and new findings that have to be synthesized

together and must fit well to make a bigger picture. These math and science conceptualizations appear to support the nature of knowledge in this field, highly centered on discovery, accuracy, and logical sequencing.

Social science instructors' conceptual metaphors. Individually, social science instructors held wide-ranging conceptualizations of disciplinary writing (Table 23). Some of their conceptualizations ranged from viewing disciplinary writing as oxygen, such that is a necessary element of life. Another suggested that a person had to live the experience of disciplinary writing in order to understand it, similar to knowing how to ride a horse. These MLEs of disciplinary writing reveal contextualized understandings and the influence of personal, cultural, social, and situational experiences on the development of instructors' conceptualizations. Table 21 presents the range of conceptualizations social science instructors hold about disciplinary writing.

Table 21

Range in MLEs: Social Science

MLE	Explanation
Disciplinary writing is like oxygen.	Writing is crucial for all areas of life.
Disciplinary writing is like a roadmap.	Data can be interpreted in many ways, a good writer must explain how they came to the conclusions that they did.
Disciplinary writing is like talking.	Just way what you mean.
Disciplinary writing is like riding a horse.	You have to live the experience to understand it.
Disciplinary writing is like elastic.	It stretches your mind and thinking process and provides opportunity for expansion.

The MLEs constructed by the social science instructors provide evidence for the nature of disciplines within this field, with their emphasis on observation, interpretation,

and evidence (Table 22).

Table 22

Most Frequent CMs: Social Science

CM	MLEs
DISCIPLINARY WRITING IS A PICTURE.	*Disciplinary writing is like painting a picture.* *Disciplinary writing is like a photograph.* *Disciplinary writing is like painting a picture of what the world looks like to the author.*
DISCIPLINARY WRITING IS PROOF.	*Disciplinary writing is like a judge.* *Disciplinary writing is like reporting.* *Disciplinary writing is like detective work.*
DISCIPLINARY WRITING IS A CURRENT.	*Disciplinary writing is like a river.* *Disciplinary writing is like water.* *Disciplinary writing is like an ocean.*

When these instructors described writing as a picture, they are representing the idea that self-interpretation, observation, and perspective goes into creating knowledge. They constructed many picture MLEs as providing perspectives of knowledge for others to evaluate. Furthermore, they described writing as proof, such that anything that is created as knowledge through writing requires resources, evaluation of sources, and weighing of evidence. And, finally, they described writing as a current, representing the idea that in the social sciences, new interpretations of events in history, and new perspectives on theories of social and human behavior in sociology and psychology, cause knowledge to constantly change, like an ebb and flow of a current or tide. All of these social science CMs relate to the nature of the social science disciplines and ways of knowing in this field.

   Synthesis of metaphor analysis. These CMs, across disciplines and within fields,

not only provide the range of conceptualizations instructors have regarding disciplinary writing, but also attest to the complexity of writing. Disciplinary writing is heavily multifaceted and complex, containing many characteristics that overlap, occasionally supplementing and even hindering understandings. Most of all, because disciplinary writing contains so many nuances and unique characteristics, it is very important to uncover how instructors' conceptualizations might hinder or support students' developing conceptualizations of disciplinary writing, and to also help instructors understand how to modify their personal conceptualizations if they should hinder student learning.

Summary of Chapter Four

This chapter presents the findings of the research questions that guided this dissertation study. In this study, instructors, on the surface, appeared to share similar understandings, attitudes, values, and views of writing across their respective disciplines. When asked directly to discuss writing in their disciplines, instructors readily agreed that writing was important for their students, was an important tool to use to demonstrate and develop knowledge and critical thinking skills, and was an important method in which to communicate and support findings. However, most content-area instructors, despite the difficulty students had with writing, denied any role or duty in teaching students how to write more effectively with their disciplines – yet, they were willing to give advice, which often came off as very ambiguous and unclear. Thus, it is unclear if content-area instructors do not know how to advise students on writing, if they do not realize their advice is ambiguous, if they do not give more explicit advice since it takes up content time, or if they themselves are unclear on what to ask for in student writing tasks.

When I asked instructors what they wished students were able to do when it came

to writing in their respective disciplines, much of their comments highlighted what students could not do. "Students can't write." "Students can't think." "Students are lazy." In prodding instructors to explain what they meant by these inabilities, instructors made comments such as "They can't think sociologically." and "They don't know how to critically think in history." These comments suggested that instructors' understandings about students' inabilities in writing were largely not general writing concerns, but comments about students' not knowing a discipline well enough to make disciplinary knowledge claims, not knowing how disciplinary knowledge is constructed, and not knowing how members within a discipline discussed disciplinary topics. Overall, the findings suggest that a stalemate exists surrounding the teaching of writing. Content-area instructors do not think it is their job to teach writing; they also think that literacy instructors are not able to teach students to write for the various fields. And, content-area instructors are dismayed when students cannot write.

The data suggest that general conceptualizations of writing held widely across academia may simply be that – a general understanding of what writing should, could, or is supposed to do or look like. However, once disaggregating the data by field, the findings suggest that instructors, by field and within each discipline, have different understandings of what writing should do or look like, and those understandings appear to be influenced by the nature of each discipline.

CHAPTER V

Conclusion

Chapter Five presents a short summary of the purpose of this study, the research questions, and methods used. This summary is followed by a discussion of the findings, a conclusion, and pedagogical and research implications of the study.

Summary of the Study

The purpose of this grounded theory study was to understand how Texas community college instructors conceptualize disciplinary writing and to investigate whether those conceptualizations differ across the fields of literacy, social science, and math and science. The conclusions address two areas: (a) conceptualizations Texas community college instructors have regarding disciplinary writing; (b) differences of conceptualizations Texas community college instructors have regarding disciplinary writing between fields.

Research question one: How do Texas community college instructors conceptualize disciplinary writing? The purpose of the first research question was to illuminate the perspectives, beliefs, attitudes, and understandings instructors have regarding disciplinary writing. Since many content-area instructors see themselves strictly as content specialists, it was important to bring to the surface their conceptualizations about disciplinary writing in order to understand how their beliefs may assist or hinder students' writing success.

Research question two: How do Texas community college instructors' conceptualizations of disciplinary writing differ across the fields of literacy, math and science, and social science? The purpose of the second research question was to

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investigate whether instructors' conceptualizations of disciplinary writing differed between the fields of literacy, social science, and math and science. The purpose of this question was not to determine if there were differences, but to examine what those differences were.

Summary of Data Procedures

I collected data in two phases and with a deliberate variety of methods. First, for phase one, I deployed a survey to garner general perspectives and to request that participants construct specific analogies about their disciplinary writing conceptualizations. I then implemented a series of focus groups and interviews with key informants to capture their understandings about the use of writing within their respective disciplines. For phase two, I sent out another survey, with fine-tuned wording to elicit more specific responses, after which I again conducted a series of interviews. In total, the study contained open-response questions and elicited analogies from the survey, and transcribed focus groups and interviews.

Data were analyzed in three separate ways – content, discourse, and metaphor – in order to triangulate the data between data collection tools and to build on the findings from research method to another. The following is a discussion of the major findings and conclusions drawn from this dissertation research study. The discussion is followed by pedagogical and research implications.

Discussion of the Findings

These findings provide empirical evidence of Texas community college instructors' conceptualizations of disciplinary writing. The findings from the analyses suggest that instructors, in general, hold overlapping, conflicting, and varying

conceptualizations of disciplinary writing. This broad finding may not be unexpected to instructors, but an interesting aspect of this analysis is that many instructors do not realize what conceptualizations they themselves hold, especially since some instructors individually hold conflicting, and often competing, conceptualizations about disciplinary writing.

Instructors exhibit a large range of disciplinary writing conceptualizations. In addition, deeper inspection of these conceptualizations thematically and by field reveals that there are some shared, and also unique, conceptualizations of disciplinary writing help by participants in the study. The instructors' conceptualizations prove to be multifaceted and complex.

Contexts surrounding conceptualizations of disciplinary writing. Instructors identified several constructs important to their understandings of disciplinary writing. When instructors discussed disciplinary writing, they frequently contextualized disciplinary writing within the frameworks of student learning, knowledge, writing uses, and critical thinking.

Student learning. Participants indicated that there were disassociations between the difficulty levels students experienced in writing in the disciplines and those responsible for teaching students writing characteristics unique to different disciplines. One of the biology participants reflected this view when she stated how difficult it was for students to learn that writing in her class required brevity, conciseness, and accuracy, and how it was not her role to teach students writing. However, it is likely students heard about or even learned about how to write concisely and accurately in their composition courses, and that students in this biology course merely needed explicit instructions from

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the instructor verifying that this is the course where those types of writing characteristics should be implemented. Many scholars have written on the transfer of academic writing knowledge (DePalma & Ringer, 2011; James, 2010) indicating that few writing concepts transfer from general composition courses to disciplinary courses; however, in this present study, instructors in the various disciplines mentioned how the writing modes taught in composition courses – such as narrative, descriptive, comparative, and argumentative styles – are also used in their disciplines. Thus, the findings of this study indicate that casting the onus for writing knowledge not transferring from composition courses to content-area courses may be partially misplaced, for example, especially if literacy instructors say they teach narrative writing and content-area instructors acknowledge that narrative writing is used in their respective fields. Such an assertion might be necessary because a number of participants across disciplines shared the use of similar modes of writing, but suggested that students simply needed to know when and where those modes applied within the different disciplines.

The common perspective that writing should transfer from composition to content area courses can affect students in multiple ways (Bartholomae, 1985; Rose, 1998; Shaughnessy, 1977). When students directly apply their writing knowledge from a composition course to a content area course and find it unsuccessful, students may believe that they either cannot write or that the composition course was useless. Students need clarification where their composition knowledge applies and does not apply when they write within other disciplines. This is not to say that other disciplines need to know what happens in a composition course, but rather that each discipline needs to be aware of what defines good writing in its own discipline. Thus, if each discipline informs

students of the characteristics of good writing as it applies to the respective discipline, students will learn what writing characteristics from the repertoire of knowledge they learned in composition courses applies to each discipline. It can be argued that the primary purpose of composition courses may indeed be to provide students with a repertoire of writing knowledge; however, the definitions and assertions of favorable writing should be left up to the content-area instructors to share with their students (Linton, Madigan, & Johnson, 1994).

Knowledge. Instructors also suggested that knowledge and the way information is known defines disciplinary writing. The conceptualizations of the overwhelming majority of content-area participants in this study that what defines writing can be demonstrated through the written content rather than what writing looks like may explain why instructors become frustrated with students' lack of good writing skills. Students in their undergraduate programs are at the thresholds of their disciplines and often do not have enough disciplinary knowledge yet to make contextualized knowledge claims, nor do they fully understand disciplinary ways of knowing, thinking, and doing. I can argue that instructors should provide explicit instructions regarding the ways in which they expect students to construct knowledge, as well as how to they want students to evaluate and criticize knowledge claims.

When students are led to believe that they simply need to write down what they know and find themselves receiving adverse feedback, they may believe that they do not know enough or are incapable of learning a subject. Furthermore, telling students to write down what they know may send the message that knowledge is regurgatory, or fact-based, rather than a process. Thus, this finding implies that an understanding of the nature

of a discipline may affect writing practices – the more aware a person knows how knowledge claims work within a discipline, the more likely it is those knowledge claim processes will show up in their writing.

Thinking. Many of the instructors described disciplinary writing as being a demonstration of students' critical thinking. In general, across all disciplines, instructors stated that writing was simply a process of sharing one's thoughts or thinking process. Yet, findings from the disaggregated analyses indicated that instructors hold a specific assumption that students should have disciplinary ways of thinking. As one sociology instructor pointed out, "Students need to be able to think sociologically." A history instructor paralleled that perspective, "They need to think like a historian." However, many instructors did not provide this disciplinary way of thinking perspective until they were asked what they wished students could do well when it came to writing in their respective disciplines. Instructors wanted to be able to have evidence of students' thinking, not only to evaluate the content that students had, but also to understand how students were grappling with the content.

Many instructors stated that students should merely share their thoughts. However, the findings in this study suggest that the mere sharing of thoughts is not sufficient enough for instructors. This finding suggests that instructors have conceptualizations of writing that they are not explicitly describing for students. Thus, explicit descriptions of what are meant by thinking, as it pertains to a discipline, should be clearly delineated for students. This conceptualization of writing as a product of how one thinks in a discipline also suggests that the nature of a discipline affects how instructors describe favorable writing practices.

Uses. Instructors often spoke about writing in terms of how it is used. Some of the instructors were concerned with writing being used to demonstrate processes, analyses, and thinking; other instructors were more concerned with writing being learned through the use of formats, models, and templates. As a result of these different focuses on the uses of writing, some instructors were more likely to evaluate writing based on technical characteristics whereas other instructors were more likely to evaluate writing based on what it could demonstrate. These differences also represent the binary understandings of writing: writing-to-learn and learning-to-write. Depending on how instructors understand disciplinary writing, students could potentially be evaluated on completely different aspects as they go from class-to-class and from discipline-to-discipline.

Many instructors stated that what they personally struggled with in writing became an aspect that they did not grade students on. As one instructor said, "I'm a horrible speller. So, I don't mark off for it. I just tell them that it is important. But I don't grade down for bad spelling." Thus, many instructors often teach, grade, and describe writing based upon their own experiences, abilities, and knowledge of writing. Therefore, according to this finding, students may experience a plethora of personal perspectives from instructors who are going to tell them in one class that spelling is important, and in another class, that it is not as important. Other instructors will present opposing perspectives of good writing by telling students that structure is more important than content, and others will say content is more important than structure. Thus, as students go from course-to-course, they may believe they write well, simply because one instructor accepted their form of writing, only to discover that another instructor deems

their writing as unacceptable.

The important point to mention here is that instructors are often viewed as the holder of knowledge within the classroom. Therefore, when they share their personally constructed conceptualizations of writing, students experience differing (Chanock, 2000; Wineburg, 1991), opposing, and occasionally disruptive instruction (Bartholomae, 1985; Hull & Rose, 1990) regarding writing success. The implication here is that what instructors tell students impacts the students directly; however, the unsaid assumptions or beliefs that instructors hold regarding disciplinary writing also affects students. Without explicit instruction regarding quality writing within each class, from each instructor, from class-to-class, and across disciplines, students experience disciplinary writing as a mysterious and often unattainable construct.

Conceptual mismatches. Nearly all instructors had an assumption regarding composition instruction. The mismatches that instructors held suggest that each discipline and field has a different idea of not only what constitutes good writing, but also what they determine to be the purpose of a composition course.

Conceptual mismatches of composition writing instruction. The understandings of composition instructors in this study were that they teach writing applicable across disciplines and contexts. The understandings of content-area instructors were that the composition course writing instruction did not provide favorable writing practices in their disciplines. Compositions instructors noted that the varying writing modes – narrative, descriptive, explanatory, and argumentative – are found across all disciplines, thus providing evidence that they are teaching writing across disciplines. Content-area instructors note that writing modes are less important to identify than how writing

demonstrates the way the writer is thinking and grappling with knowledge.

Literacy instructors used language indicating that they believed that what they taught in composition courses was transferrable to all other disciplinary and career paths. As one instructor said, "My job is to teach writing across discipline lines. When a student leaves me, he/she must be prepared to write in every discipline." These instructors then describe writing to be a modeling of modes, templates, and formats as a foundation upon which a student can learn to write.

On the other hand, math and science instructors understood writing instruction in composition courses to be comprised of fluff, "b.s.," unnecessary attention grabbers, and unneeded transitions. One instructor said, "Scientific writing is very concise and precise. It seems that Introductory English writing is more about fluff." The math and science instructors shared the perspective that students were taught certain characteristics in composition courses that were supposed to be considered good writing qualities across disciplines, but that those specific characteristics were actually unfavorable writing qualities in the math and science courses.

The social science instructor similarly described writing instruction in composition courses not to be useful in their disciplines. Their conceptualizations of the instructional focus of composition courses were that students were taught that personal opinion and emotive language are good writing qualities across disciplines. One instructor asserted, "English writing courses focus on how students 'feel.'" Historians do not care what you 'feel' but what you have evidence for." Thus, among the fields of literacy, math and science, and social science, instructors had differing understandings regarding the focus of instruction in composition courses.

The implication of these composition course instructional mismatches is that composition instructors are teaching a repertoire of writing characteristics and knowledge they understand to be good writing qualities, which may actually be writing characteristics specific to the field of English rather than good writing qualities in other disciplines. Furthermore, it is also possible that the good writing qualities that composition courses highlight are more descriptive of the MLA conventions found in the English field, rather than descriptive of good writing across all disciplines. Regardless of what is the reason composition instructors assert certain characteristics to be good writing qualities for all disciplines, the content-area instructors disagree with what composition instructors deem to be good writing.

This finding suggests that from the day students begin learning to write in college, they will face different, opposing, and potentially hindering descriptions of what constitutes good writing. If instructors are not explicit in what is considered good writing in their respective disciplines, they may be forgoing an opportunity to provide meaningful guidance to students as they work towards writing success.

Conceptual mismatches of communication. Instructors in both the composition and content-area courses talked about writing in a similar fashion. For example, all instructors said writing was communication. Based on initial responses by instructors from all disciplines, instructors felt that writing was simply communication during which a person should say what is on his or her mind. However, it was not until instructors were asked to state what they wished students did better when it came to communication that this seemingly shared perspective of communication revealed nuances across disciplines.

For the literacy instructors, communication represented students' ability to respond to readings or prompts, to identify inferences, to connect to prior knowledge, and to paraphrase or summarize information. Through this view of communication, these instructors were interested in how students communicated their understandings and connections to material, whether it was through prior knowledge, opinions, or personal thoughts. As long as students could articulate their thoughts clearly, their communication was considered acceptable.

On the other hand, math and science instructors tended to represent communication as the ability to be precise, concise, accurate, and logical in describing processes. Since many processes, such as experiments, labs, and tests, are dependent upon someone writing down the process exactly, with no room for error, the construct of communication holds a specific meaning. If a student used any type of opinion, interpretation, feeling, or emotive language, their communicative skills were not considered good. In this view of communication, these instructors were interested in specificity, brevity, and accuracy.

Similarly, since social scientists rely heavily upon making claims about the past or social or personal behaviors, everything is highly speculative requiring a writer to be critical of biases, interpretation, and evidence. Thus, these instructors did not accept personal opinion, feelings, or personal thoughts to be acceptable in any form of communication. These instructors were more interested in research, evidence, criticism, and interpretation. Therefore, what are acceptable characteristics in written communication in composition courses are not necessarily acceptable characteristics in communication in content-areas.

Hence, when instructors tell students to simply communicate their thoughts when writing in their respective disciplines, they are doing a disservice by not explaining *how* knowledge should be talked about within their disciplines. The implication of this finding is that students are expected to communicate without realizing that instructors' hold specific perspectives as what factors constitute good communication in writing; thus, students will only face confusion when factors of written communication are not shared across disciplines.

Vague writing advice. The fact that some instructors did not realize the nuances of writing in their discipline suggests that these disciplinary writing characteristics may be invisible to them. Carter (2007) and Russell (1991) suggested that instructors may not see that the form of writing or the uses of discourses in their disciplines are specific to their discipline because they often learn to write in their disciplines through slow observation and apprenticeship. And, in this study, these disciplinary conceptualizations of writing are not clearly delineated by the instructors themselves, and may perhaps be more unconscious conceptualizations held within each discipline. Even in their attempts to describe what disciplinary writing should look like, many instructors tended to provide vague descriptors – for example, writing needs to be clear, writing should be simply thoughts, and writing is saying what happened. The results of this analysis indicate a significant relationship between individual instructor knowledge and pedagogical practices – the more an instructor is unaware of the different writing demands within his or her discipline, the more likely it is that he or she will also be unable to explain to students the differences and expectations of writing within their discipline.

Analogical conceptualizations. The analogies and the emergence of conceptual

metaphors contribute to the overall discovery of how instructors in community colleges conceptualize disciplinary writing. These instructors conceptualized disciplinary writing widely, representing a variety of constructs. Overall, the analogies provided evidence of conceptualizations held by community college instructors across disciplines, influenced by individual, social, cultural, and situational experiences.

The most prevalent conceptual metaphor that emerged when examining conceptualizations across disciplines was disciplinary writing as a unique identifier. An interesting point to make is that when instructors were asked explicitly to construct an analogy, this specific construct of disciplinary writing as being unique between various disciplines emerged; however, when asked in the form of a survey or interview question, instructors provided more universal conceptualizations of disciplinary writing. Thus, it is unknown whether the target "disciplinary writing" in the fill-in-the-blank analogy stem acted as a leading question or not or if the different research tools elicited different findings. However, this conceptualization suggests that the general community of instructors understands writing to be different and unique among disciplines. The implication of this finding is that if writing differs between disciplines to such an extent that content-area instructors disapprove of the writing characteristics students are bringing to class, there is a need to redefine the process by which students are taught formal writing in order to become successful writers in college. The questions become: how are composition instructors identifying characteristics described as good writing? What type of writing are composition instructors responsible for? Who is responsible for teaching good writing characteristics for each discipline, especially if they are depending upon the nature of each discipline? If writing results in learning, and if writing is

dependent upon the nature and content of a discipline, what is the role of content-area instructors with writing?

The conceptual metaphor of disciplinary writing as language also provides evidence that instructors themselves find language, writing, words, and discourse to differ between disciplines to the extent that a person can feel as if he or she has to learn a new language as he or she goes between disciplines. The implication of this finding is that students require support in navigating the new discourses they encounter, because until they learn the discourse, they will likely feel as outsiders to the knowledge, communication, ways of thinking, and doing within each discipline. These two conceptual metaphors, unique identifier and language, attest to the writing conceptualization differences between disciplines.

The conceptual metaphors of exploration, building, and court of law illustrate the conceptualizations where writing can serve as a place for a person to explore material resulting in new discoveries or findings; writing should be a foundation upon which students can build and grow into successful writers by following models, formats, and modes; writing should be good if the writer provides evidence of his or her claims. The implication of these conceptualizations of disciplinary writing imply that instructors have a general understanding of disciplinary writing or an idea of what it should be; however, in their individual perspectives, they occasionally strayed away from those general understandings based upon their own experiences with writing.

Some instructors tended to view disciplinary writing a negative construct, such that disciplinary conventions restricted what could be said, were difficult for students to learn, or consuming of classroom time when there was a large amount of disciplinary

content to be covered. More instructors viewed disciplinary writing to have positive

constructs, such that good writing provided access to jobs and to academic success and

supplemented students' learning of disciplinary content. Other instructors viewed writing

as prescriptive, such that disciplinary writing brings access to future success or jobs, and

others viewed it as descriptive, such that disciplinary writing is like exploration.

Other constructs of disciplinary writing illuminated writing practices along a

continuum. Instructors' conceptualizations of disciplinary writing ranged from learning

from models and templates, learning to write as a product or process construct, learning

to write through exploration or navigation, and learning to write through thinking. Much

of the model constructs came from literacy instructors, and the exploratory constructs

came from content-area instructors. However, this continuum does not necessary

represent the scaffolding of writing instruction as students advance through their

academic career; rather, it is the range of writing constructs that exist, usually randomly,

across disciplines and across instructors.

The implication of the conceptualizations of disciplinary writing is that much of

an instructors' discourses surrounding disciplinary writing are embedded in situational,

cultural, personal, or educational contexts. Thus, many instructors may present

disciplinary writing constructs that oppose, support, or hinder students'

conceptualizations of writing and their path to writing success.

Implications

This dissertation study was designed to illuminate and make explicit instructors'

conceptualizations of disciplinary writing, including their beliefs, attitudes, and values, in

community colleges across Texas. This research elicited valuable insight about

instructors' conceptualizations of disciplinary writing. However, this study has also

unearthed further questions needed to develop a more comprehensive awareness of how

instructors develop their conceptualizations for the benefit of students.

Pedagogical implications. The findings of this study have several pedagogical

implications for instruction. Because the findings indicate that instructors across

disciplines, and even within an individual discipline, hold a wide variety of beliefs,

views, and attitudes regarding writing, educators need to provide explicit instructions to

clearly delineate writing expectations that elicit disciplinary writing characteristics

favorable to each discipline and to each instructor, as suggested by Carter (2007) and

Linton, Madigan, and Johnson (1994). Gee (2001) recommended tactics illustrating

social language at work because, as Woodward-Krong (2008) suggested learning

specialist demands and language use is intrinsic to students' learning of disciplinary

knowledge. Carter (2007) asserted that making distinctions between writing in general

and writing in the disciplines is the difference between knowledge and knowing, and the

difference between viewing disciplines as mere repositories and delivery systems of static

content knowledge versus viewing disciplines as active ways of knowing. Furthermore,

if instructors provide more explicit instructions regarding specific writing demands

within the disciplines, students may experience less confusion in their understandings of

quality writing across courses.

A second implication that can be drawn from this study is that a clearer distinction

needs to be made between what composition and content-area instructors understand to

be good writing. The findings of this study suggest that favorable writing practices in

composition courses are not valued as favorable in content-area courses; thus, there is the

need to examine what is actually being taught to students as being good writing across disciplines. It may be that what is considered good writing in a composition course may actually be writing characteristics unique to the field of English or representative of MLA conventions used by the English field, rather than good writing characteristics shared across disciplines.

Russell (1990) warned of the dangers of instructors not knowing how to be explicit in describing disciplinary characteristics because it leaves unintended assumptions with students, such as students believing that attention grabbers are required in all disciplinary writing tasks. Thus, as suggested by North (2005b), the most important thing a faculty member can do is to explicitly explain to students the demands, requirements, strategies, beliefs, and functions of his or her discipline, whether teaching a composition course or content-area course. This is not to say that all instructors share the same conceptualizations, but rather to say that students may experience more success with writing if instructors were to deliberately and explicitly explain to students what is expected of them when completing written tasks in their courses.

A third implication from this study suggests that all instructors need to determine where they stand in their conceptualizations on writing in their discipline and to determine whether or not their conceptualizations are supporting or hindering students on their writing endeavors in college. In this study's findings, one instructor held the perspective that composition instructors were not teaching students transferrable writing skills, but also admitted that she did not know what was taught in a composition course – creating two opposing perspectives. She also mentioned that she provides shorthand feedback comments on her students' written work, such as "S.F.," but does not explain

her comments because she thinks she is providing the same feedback that English instructors provide students, implying that she thinks her students should inherently know her feedback methods. Thus, if students do not know that "S.F." refers to sentence fragments and may find it hard to seek out support, their learning is hindered. It may be that by questioning their own conceptualizations – attitudes, beliefs, and values – of disciplinary writing, instructors may be able to help students move toward more supportive conceptualizations of writing.

Finally, many composition instructors in this study relayed their use of formats, models, and templates to teach students to write. And, many content-area instructors in this study mentioned how students continue to apply a template to a writing task, despite any hindrances of the template on answering the prompt, rather than assessing the writing task before considering types of modes required to successfully answer the written prompts. Although some composition instructors in this study mentioned teaching rhetorical situations, more instructors would benefit from presenting written texts from which students examine the rhetorical structures and characteristics of text across disciplines. With this method, students come to view one written task as containing more than one mode of writing, such as narrative, compare and contrast, and argument all in one task, rather than learning modes in isolation.

Research implications. Additional research is needed on the effects of instructors' conceptualizations on student learning. First, more research is needed on the direct effects of instructors' conceptualizations of disciplinary writing on their own pedagogical practices and on students' learning. The present study provides empirical evidence of the variety of conceptualizations held by instructors and implications can be

made regarding how those conceptualizations affect students' learning; however, it would be beneficial to examine the relation between instructors' conceptualizations of disciplinary writing in comparison to students'. Examining an individual instructor's and his or her students' conceptualizations at the beginning and the end of a course may help explore the direct effects of an instructor's attitudes, beliefs, values, and views of disciplinary writing on a class of students. Also, further examination of students' general conceptualizations in comparison to instructors' conceptualizations may also reveal the shared and mismatched perspectives between instructors and students. Understanding the effects and/or mismatches of disciplinary writing conceptualizations might help reveal the need and explicit instruction students require in becoming successful writers in college.

Second, after decades of research, there is still no solitary definition of competent writing. Instructors in the content-areas do not view writing to belong to their list of teaching duties, yet they acknowledge that writing differs between disciplines, especially from composition courses to content-area courses. Thus, it is important to study if the conceptualizations of writing as a skill or as a discipline affect instructors' understandings of the teaching of writing in their fields. And, if writing is being generally viewed as a discipline, it is important to the field of English to examine whether the formal instruction of writing should extend beyond the two semesters of general composition courses to lengthen students' learning time with writing. However, if content-area instructors conceptualize writing to differ between fields and state that it is impossible for a composition instructor to know, much less teach, writing specific to every discipline, it becomes important to understand to whom the teaching of disciplinary

nuances of writing belongs.

Third, spontaneous communication, such as un-elicited comments via email, from participants in this study revealed that a few content-area instructors valued the teaching and use of disciplinary writing in their fields, but were prevented from spending time on writing activities or assignments by administrative policy at certain institutions. Thus, it would be useful to examine how administrative policies affect the teaching and the conceptualizations instructors have regarding writing and the support of writing.

Fourth, this research was conducted at community colleges, where many participants identified their roles more as instructors than as researchers. It would be beneficial to see if similar conceptualizations exist at universities, where more instructors view themselves as researchers rather than as instructors.

Overall, disciplinary writing research should continue investigating issues related to who is responsible for the formal instruction of writing through a student's entire academic career, how instructors' conceptualizations directly affect student learning, how students and instructors' general conceptualizations of disciplinary writing differ, and what affects instructors' conceptualizations of disciplinary writing.

Summary of Chapter Five

This chapter presented a summary of the study, a discussion of findings, and pedagogical and research implications. The goal of this study was to illuminate community college instructors' conceptualizations of disciplinary writing and understand how those conceptualizations may support or hinder student learning. The most important implication of this study for instructors is not to only reflect and examine their own conceptualizations and modify them if necessary to support student learning, but

also to provide students explicit instructions on what is expected of them regarding writing in their disciplines.

Phase I Survey for Texas community college instructors

1. What is your gender? [Radio button]
    a. Female
    b. Male

2. Please describe your education. [Open text]
    a. Highest earned degree
    b. Major field of study
    c. Minor field of study

3. Describe your institution. [Radio button]
    a. 2-year
    b. 4-year

4. Describe your institution. You may select more than one option and/or add information in the "other" section. [Radio buttons and open text]
    a. Private
    b. Public
    c. Military
    d. Technical
    e. If other, please specify.

5. Describe your employment status. [Radio buttons and open text]
    a. Tenured
    b. Tenure-track
    c. Full-time (non-tenure track)
    d. Part-time (non-tenure track)
    e. If other, please describe.

6. What is your role in your department? You may add additional roles in the "other" box. [Radio buttons and open text]
    a. Administrator
    b. Teaching
    c. Both
    d. If other, please describe.

7. How many years have you been teaching? (If this is your first year, choose "1 year.") [Radio buttons]
    a. 1 year
    b. 2 years
    c. 3-4 years

d. 5-7 years
e. 8-10 years
f. 11-15 years
g. 16-20 years
h. 21 or more years

8. In which department(s) do you teach courses? [Open text]

9. Once you locate the subject you teach, in the space provided please list the courses you teach. (For example, History: HS 101, HS 273.) You may select more than one subject to represent the different subjects you teach. [Open text]
   a. Developmental Reading
   b. Developmental Writing
   c. Biology
   d. Chemistry
   e. Mathematics
   f. History
   g. Psychology
   h. Sociology
   i. Other

10. On average, how many classes do you teach per semester? [Radio buttons]
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5
    g. 6 or more

11. Describe the typical class size you teach. You may select more than one option to represent the variety of classes you teach and/or describe more options in the "other" section. [Radio buttons and open text]
    a. 0-15 students
    b. 16-30 students
    c. 31-50 students
    d. 51-200 students
    e. 101-150 students
    f. 151-200 students
    g. 201 or more students
    h. If other, please describe.

12. On average, what types of students do you teach? You may select more than one option and/or include other types of students in the "other" section. [Radio buttons and open text]
    a. Students in developmental courses

    b. Students in courses for their majors/minors

    c. Students taking general core curriculum courses

    d. If other, please describe.

13. What type(s) of academic writing do you do? You may select more than one option and/or add more types of academic writing in the "other" section. [Radio buttons and open text]

    a. Article reviews

    b. Books

    c. Creative writing

    d. Grant writing

    e. Monographs

    f. Research articles

    g. Research reports

    h. Other academic publications

    i. If other, please describe.

14. How many hours per week do you typically spend on academic writing? [Radio buttons]

    a. 0-1 hour

    b. 2-4 hours

    c. 5-7 hours

    d. 8-10 hours

    e. 11-15 hours

    f. 16-20 hours

    g. 21 or more hours

15. Tell me about how you and others **perceive** the function of writing to be in your discipline. For example, some subject areas use writing to explain processes, focus on patterns, or describe arguments in context. [Open text]

16. Tell me about how writing is uniquely crafted in your discipline. In other words, what disciplinary writing conventions do you teach students in order for them to learn how to write as a member within your field? [Open text]

17. An analogy is an implied relationship between two things and is often used by people to explain what they mean or feel about something. As an example, let us look at how one might view music.

Analogy: Music is like a cure.
Explain: No matter what I'm feeling, I can find music to fit my mood or cheer me up. It uplifts my spirits and makes me happy, as if it's a cure to a bad mood.

Analogy: Music is like poetry of the soul.
Explain: Sometimes a person cannot find the right words to say to someone

or to express his or her thoughts, but somehow music seems to always have the right lyrics or tone for those words. So music can sometimes be the vehicle for the words of our hearts.

For this study, I would like you create analogies of how you view (1) your writing in your field and (2) disciplinary writing. Please form two analogies by completing the sentences provided and then explain what you mean by your response. The explanation ensures that I correctly understand your analogy.

"My writing in my field is like _____. Explain what you mean. _____."

"Disciplinary writing is like _____. Explain what you mean. _____."

[Open text]

Phase II Survey for Texas community college instructors

1. What is your gender? [Radio button]
    a. Female
    b. Male

2. Describe your institution. [Radio button]
    a. 2-year
    b. 4-year

3. Describe your institution. You may select more than one option and/or add information in the "other" section. [Radio buttons and open text]
    a. Private
    b. Public
    c. Military
    d. Technical
    e. If other, please specify.

4. Describe your employment status. [Radio buttons and open text]
    a. Tenured
    b. Tenure-track
    c. Full-time (non-tenure track)
    d. Part-time (non-tenure track)
    e. If other, please describe.

5. What courses(s) do you teach? You may select all that apply. [Radio buttons and open text]
    a. Developmental Reading
    b. Developmental Writing
    c. Composition
    d. Biology
    e. Chemistry
    f. Mathematics
    g. History
    h. Psychology
    i. Sociology
    j. If other, please describe. [*If they select this, they will end the survey.*]

6. Which of these best describes your primary teaching responsibility? [Radio buttons – their selection on this question begins the survey logic]
    a. Developmental Reading
    b. Developmental Writing
    c. Composition
    d. Biology

e. Chemistry
f. Mathematics
g. History
h. Psychology
i. Sociology

7. Please describe your education. [Open text]
    a. Highest earned degree
    b. Major field of study
    c. Minor field of study

8. What is your role in your department? You may add additional roles in the
   "other" box. [Radio buttons and open text]
    a. Administrator
    b. Teaching
    c. Both
    d. If other, please describe.

9. How many years have you been teaching? (If this is your first year, choose "1
   year.") [Radio buttons]
    a. 1 year
    b. 2 years
    c. 3-4 years
    d. 5-7 years
    e. 8-10 years
    f. 11-15 years
    g. 16-20 years
    h. 21 or more years

10. On average, how many classes do you teach per semester? [Radio buttons]
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5
    g. 6 or more

11. Describe the typical class size you teach. You may select more than one option to
    represent the variety of classes you teach and/or describe more options in the
    "other" section. [Radio buttons and open text]
    a. 0-15 students
    b. 16-30 students
    c. 31-50 students
    d. 51-200 students
    e. 101-150 students

      f. 151-200 students
      g. 201 or more students
      h. If other, please describe.

12. What type(s) of academic writing do you do? You may select more than one
    option and/or add more types of academic writing in the "other" section. [Radio
    buttons and open text]
      a. Article reviews
      b. Books
      c. Creative writing
      d. Grant writing
      e. Monographs
      f. Research articles
      g. Research reports
      h. Other academic publications
      i. If other, please describe.

13. How many hours per week do you typically spend on academic writing? [Radio
    buttons]
      a. 0-1 hour
      b. 2-4 hours
      c. 5-7 hours
      d. 8-10 hours
      e. 11-15 hours
      f. 16-20 hours
      g. 21 or more hours

14. Describe what writing looks like in (insert discipline). For example, historians
    may describe writing as telling a story. Historians' goal is not to prove facts, but
    to weave events together into a convincing narrative while considering biases and
    corroborating the details. [Open text]

15. What is important for students to know about writing in (insert discipline) in
    order for them to learn how to write as a practicing member in your field? [Open
    text]

16. How is writing in (insert discipline) different from what is taught in general
    composition in an introductory English writing course? [Open text]

17. An analogy is an implied relationship between two things and is often used by
    people to explain what they mean or feel about something. As an example, let us
    look at how one might view music.

    Analogy: Music is like a cure.
    Explain: No matter what I'm feeling, I can find music to fit my mood or cheer
    me up. It uplifts my spirits and makes me happy, as if it's a cure to a bad   mood.

Analogy: Music is like poetry of the soul.
Explain: Sometimes a person cannot find the right words to say to someone or to express his or her thoughts, but somehow music seems to always have the right lyrics or tone for those words. So music can sometimes be the vehicle for the words of our hearts.

For this study, I would like you create analogies of how you view (1) writing in (insert discipline) and (2) academic writing in general. Please form two analogies by completing the sentences provided and then explain what you mean by your response. The explanation ensures that I correctly understand your analogy.

"Writing in (insert discipline) is like _____. Explain what you mean. _____."

"Academic writing in general is like _____. Explain what you mean. _____."

[Open text]

Focus group and interview protocol for Texas community college instructors

1. Tell me a little about yourself, your roles, the department you work in, and the courses you teach.

2. Tell me about your discipline. How do you define it?

3. Describe what writing looks like in your discipline.

4. How do you **perceive** the function of writing to be in your discipline?
   a. In other words, what purposes does it serve?

5. What is really important to know when writing in your discipline?
   a. What types of writing advice or feedback do you give to students?

6. Describe how writing in your discipline differs and/or compares to general composition in an introductory English writing course.

Metaphorical linguistic expressions (MLEs) constructed by participants

My writing in my field is like:	Explanation:
exploring the deepest depths of the deepest ocean.	You never know what new discoveries you'll make.
a professor professing.	New research findings, new theories, or even worthwhile historical research is presented to audiences anxious for the new and unexplored corners of the social world.
Macaroni and cheese	Each is a separate taste, but together they build a whole different dish.
a melting pot of good gumbo.	You have all of these ideas that you have read about and now when you write about them you integrate them to help make sense of what you've read and develop a new thought or understanding that wasn't there before.
a record of logic and reasoning to support a conclusion.	Critical thinking is correct and complete communication of the development of a solution.
symbols of what the mind process is for mathematical thinking	Logical thinking requires exact expression
ambling through an endless forest.	there are always new discoveries to be made.
a flower blossoming	the ingredients come through the stem to open in the answer to the original questions
a judge	A judge should be fai and impartial, but still must follow the rules of protocol.
coreographing a complex interpretive dance	scientific writing can be boring, but with hard work it becomes interesting, creative, and informative
a kite string	Many of the problems faced in science are very lofty or complex for most people. The ideas only become useful if they can be shared with others. Writing, like the string of the kite can be used to link others to those ideas and make them soar.
building a brick wall	each sentence sets up the thought process until the whole idea is revealed
a splash of color on an off-white canvas.	Writing in psychology tends to be rather bland and boring. I am more creative, even when writing in my discipline.
a room of invisible walls with many thin doors.	Students find it hard to express, in words, the thinking/reasoning process in

	Mathematics because they want to get to the final answer. So, the walls is the thinking/reasoning process and the thin doors represents the answers.
an itch that needs to be scratched.	I feel compelled to write because I enjoy doing it. I feel I have important information that I want to share.
respiration	It is the foundation for everything, and the one thing without which nothing else may exist.
a sexual climax	During the scientific process, one must immerse in the project, spending countless days and sleepless nights trying to understand, then designing the elegant experiments necessary to solve the problem. When success has been achieved, the satisfaction is palpable. To sit down and write the work is a wondrous release to be enjoyed even in the struggle to get it just right.
two sides of the same coin.	cannot be separated from the subject
onion	keep pulling away layers
talking ?	Just say what you mean
Math is like a recipe	A step by step process must be used to solve a problem/equation
assembling a puzzle.	I gather various data and other information and must put the pieces together to form a meaningful, complete picture.
snapshot of what goes inside your brain.	I use writing to get a sense of how well the student is processing what he has read and how well he can communicate his understanding of what he read.
Comparing tap to bottled water	is water just water in all cases-what are your thoughts
putting together puzzle pieces in order to see the picture.	Sociological writing sees to explore and explain connections in society that shape our values, behavior and culture in general.
peeling an onion	As we explore the past, we uncover more questions at each discovery, leading us further back as we seek to understand the world around us
a machine.	Living things are extremely complex. made up of parts that must function correctly and interact with other parts like in a machine. A malfunction in any part will affect the workings of the entire structure.

Psychology is like a roadmap.	When issues arise in relationships, job situations, & life decisions, I can reference my understanding of human nature & find a pathway to the desired outcome. Sometimes that pathway leads me away, sometimes it leads me toward, and sometimes it keeps me stationary because I'm in the right place.
a perfectly solved puzzle.	You must gather all the facts and determine which order those facts help you come to a valid conclusion.
a mirror.	A reflection of what I teach.
diagraming sentences.	Most of my writing is student-oriented. I focus on complex processes, like photosynthesis, and break it down into manageable units that students can focus on one at a time. It requires pulling out key facts and presenting them clearly so they are understood before looking at the entire process. Students have to understand the pieces before they understand how all the pieces fit together.
a story that unravels slowly.	When you write lectures you are telling a story step-by-step0
Psychology is like a mirror.	Studying psychology can help a person better understand their experiences and the people in their lives. I always hope students gain more compassion for other people and animals as a result of taking introductory psychology.
My mathematical writing is like a tether.	In my writings, I try to connect advanced mathematical ideas to real-world situations to assist students in learning the many application of mathematics and possibly help them develp an appreciate for mathematics.
building a bridge	words need to guide the student through the information
pulling teeth	students do not see the importance of it and always are more worried about the answer than how to get the answer and what it means.
It is like a dammed river	It is a conditioned and structured thought process expressed in writing
giving someone the tools they need for success.	Critical thinking and communication are necessary for every field.

a photograph.	Writing should describe a behavior, thought, research technique in very clear language, so there is no guessing as to what the writer means.
detective work	evidence (data, facts) need to be evaluated and weighed, decisions need to be made about what is important and what is not, what is relevent, and what it means in connection with other facts
Writing is like building	I'm struggling with this analogy question, but this is a simile I have used recently in my own thinking about the writing process and how I both engage in the process and teach it to my students. Writing is a complex process of construction, and particularly it has a series of modules (parts) and activities that are sequenced and embedded and returned to repeatedly. But is a process of putting something together that ends up in some structure.
selling	in engineering you must be able to communicate your ideas and make convincing arguments
providing insight into the natural world	scientific writing provides data in contect to explain the natural world
writing a research based novel.	Field observations are typically related to gossip.
a chameleon.	Highly distinctive and the purposes' changes from text to text
a luxury vehicle.	My readers are like passengers who can ride comfortably into understanding despite difficult terrain..
a paycheck.	The quality of what I produce determines in many cases whether I or theh college will receive funds.
a bike with training wheels.	We walk you through each steps but within a confined context of English rules.
life is like a box of chocolates	you don't know what you get until you run the experiment What do you expect from a scientist?
a road map	Data can be interpreted in many ways, a good writer in my field must explain how they came to the conclusions that they did.
My writing in my field is like physical fitness activity for many (most?) Americans.	Just as Americans know they should be more active, both for the joy of participation and the benefits to be gained

	personally and to those in our spheres of influcence, my writing activity in my discipline is woefully inadequate, to my detriment, and to those in my sphere of influence. As with physical activity, writing requires time, effort, focus, and is too easily put off, especially for a job that requires a minimal amount from me on a yearly basis.
building a house	First, start with a plan (prewrite); lay the foundation (thesis statement) put up the support beams (topic sentences and paragraphs) adjust plans as necessary (revise) complete the structure (conclusion) review for possible problems (walk through) move in (publish)
translating from one language to another.	Once a word problem is read for understanding, it is rewritten in simpler form, then translated word for word to an algebraic equation.
a picture of the relavence	why, when, where is it going to apply
a livinng story within the mind coming out to the open.	There is so much creativity wrapped up in the brain just waiting to come out; therefore, writing creatively explodes the brain with ideas and takes the writer to places they have never gone before by using a burst of imagination; hence, a living story in the mind while sharing with others.
Writing is like oxygen.	Writing is crucial for all areas of life.
Analogy: Writing is like Pilates for the brain	Explain: When I'm writing, I spend a lot of time working to find just the right word or phrase to show exactly what I want to say. This feels like I'm exercising and disciplining my mind the way Pilates does for my body.
a pair of prescriptive glasses.	Students can more clearly see the world around them by looking through the rhetorical lenses of comparing and contrasting, process analysis ...
a mirror of how the body works.	When writing to explain concepts in human physiology, it is important that an anology be an exact mirror of what is actually happening in the body. There is no room for 'close enough' or 'that almost explains the concept'.

a moving target.	Everytime I write something a new discovery changes it.
torture.	I have to restrict my writing to the ability of the audience to understand.
sun breaking though the fog.	My writing helps to illuminate my student's understanding of the subject matter.
Biology is like life.	period
having clean air to breath.	Dirty air will do the trick, you will live. However; clean air will allow you to run and jump and fully experience psychology, I mean life.
a cookbook to improved communication or a ladder or bridge	Students follow recipes to improve their writing and organization of ideas. A ladder or bridge refers to helping students move from one level of skills into higher levels.
a river	ideas flow in from different tributaries, adding to the richness of the whole
arguing a case in a court of law.	The point of historical writing is to prove a particular perspective concerning how we understand the past.
an answer to a problem.	We can use psychology to understand other people's behaviors.
taking a stand.	No wishy-washy responses.
a necessary evil	Scientific writing is not fun and can be very tedious, but it is the only way for other people to learn about your own research.
painting a picture with words.	Often the details in our life are over looked because of how busy we are. When given the opportunity to journal and reflect about what is going on in our thought one can find that the details paint a bigger picture for our thoughts and feelings.
Training for a marathon.	At first, it is very difficult to see progress with developmental adults. But after a few weeks and very explicit hands-on work, students begin to be On my way! Better and better at understanding basic sentence structures and punctuation. After more practice, students build writing stamina and can craft paragraphs. But even though they usually leave class at semester being able to write a very basic essay, the writing training is not complete - it takes a lot of practice and ongoing work. It's like training for a marathon, not a sprint.

oxygen to a human's lungs.	"MY" discipline is creative wiriting (at least this is the discipline I most relate to) and it allows me a means to express myself, work through numerous emotions, and flex my creative muscles. Much like oxygen, I don't think I could survive without my creative writing.
Historical writing is like telling a story	Every good historian is, at heart, a good story teller. If you lose the story, the narrative becomes boring and few people will finish it.
Lit. analysis is like showing a gemstone with a magnifying glass	Revealing several facets on the whole composition / stone
Writing essays is like an open door.	When students learn how to write proficiently, they can open doors to academic success and professional competencies in other fields.
a journey into infinite knowledge.	History is people. People make events happens in the course of history. Gathering knowledge about people who assisted in such events in what makes history seem far more alive--especially when it is acquiring knowledge about some of the more minor characters who were a part of a major event.
validating the personal experience	evidence based explanation for common personal concerns or issues found across socio-economic strata.
opening a box of keys.	The box contains keys which unlock the mystery of a student's problems with learning and using the process of writing.
Love and Marriage	You can't have one without the other
cat in the hat book	Scientific writing is very terse and concise in order to remove confusion.
thought visualization and clear recipe writing	Describing experiments so that students can do them
the core of the students' future.	If students can professionally express themselves in writing, they can be successful in any career.
opening a locked box.	I feel I have a knack of explaining complex issues in such a way every human being can understand. Too much time and, I feel, wasted effort goes into academimic writing all for "one upsmanship." Simplicity and clarity are my watchwords. Most of my colleagues disagree.

icing on the cake.	It adds sweetness to something already wholesome.
mother bird collecting worms for other birds' babies.	my assigned duty is to feed the information gained by others in my field to my students. Any time spent despensing new or accumulated information to others would deminish my designated duty.
exploring and new and exciting area.	It should help to open ones eyes to new ways of thinking and learning.
building a house	teaching students about building the foundation of literacy
Being a movie or shopping critic.	I address topics that I sutmble upon or that catch my students' interest.
a retread tire.	same subjects again and again
the blood in my veins	Writing is a moving current of thoughts and ideas that keeps ideas alive
an explorer visiting new vistas	present new ways of thinking of what is current in the field and how we can better the field through critical thinking.
a light bulb to go off in someone's head	My scientific writing needs to clearly and succinctly articulate new ideas.
directing traffic.	When I create classroom handouts or answer student questions, I'm directing traffic. I understand the student will take some sort of action based on what I write, so I pay careful attention to write clear, communicative sentences. Also, I think a lot about how a student will feel when she reads my writing. Am I encouraging? Sympathetic? I have so many students, so I am constantly directing students in some way or another.
shining a light.	Lecture presentations must be designed to highlight the important topics, as well as to clarify and elucidate them.
formulating logical sequences.	We often start with a list of assumptions and then derive conclusions based on them.
a light whose illumination shows a path to the future.	History can provide some insights to the future by showing the successes and failures of the past. Its light helps us understand ourselves and others better.
teaching a pharmacist how to fill a prescription correctly.	If a student cannot write well or express themselves correctly, their message may get jumbled and the implications of a confused message can be catastrophic to their careers.

turning on a light	Writing in science is a way to share and explain natural phenomena in a way that makes sense of phenomena in the natural world.
a visual pathway to understanding	being able to describe activities and the need for accuracy
Disciplinary writing is like:	**Explanation:**
eating sushi.	It is an acquired taste that is not for everyone.
genres in literature.	Each discipline has its own style, audience, and prupose, and thus each discipline offers its audience a different genre of style and form.
Is as important as a shower before a job interview.	You cannot shine if you don't know the basics.
different chefs in the kitchen.	Each discipline is pure and specific. It reads differently and the writer must write about it differently based on the rules that this discipline has created for writing.
an exact science but the assumptions differ from discipline to discipline	Mathematics has traditional symbols in most cases while art can be more elusive.
a pig in its own filth.	Individuals caught up in their own interests
pixilated art.	You look at individual dots that placed together bring the picture into view.
a fruit basket	You can't compare apples and oranges and you can't cross disciplines in writing conventions. Each discipline has its own style and "flavor" for citations and thos conventions need to be learned.
public speaking to divergent audiences	It requires knowledge of what the people want to hear about and a different tone to each assignment.
opening Russian stackiking dolls	Just as you open one larger doll to reveal the next in Russian stacking dolls. Writing in chemistry is used primarily to take a larger problem or concept and break it down into its component parts to allow the reader a better understanding of the problem. As each part is revealed, the complexity of the problem gets smaller.
seeing a shadow	if they can at least parrot the words, perhaps they actually understand the words
a grab-bag.	Some disciplines (such as English) allow for more creativity and innovation as opposed to other more structured disciplines.

a fork.	Writing is a tool that is used to express thoughts, actions, process. The prongs are the disciplines and the handle represents the communication tool.
Pig Latin	Only those who share the same language will understand it completely.
looking through a lens.	It is the tool we use to see the field we're studying.
the final payment	You start a project. At first it is great, then it can get tedious for a while, but when it is finished, there is a powerful sense of accomplishment.
shades of grey	they are all similar to a degree
the little engine that could	just got to keep plugging along
talking	a story is shared
snowflake	No two snowflakes are the same. That holds true for disciplinary writing. It differs from discipline to discipline.
painting a picture.	Like different artistic expressions influence how artists paint a picture, so do different disciplines use different points of view in expressing their information.
a tool.	Once you learn the language or habits required for that discipline, you can then use writing to both communicate in your discipline as well as process information in that discipline.
painting a picture of what the world looks like to the author.	Disciplinary writing seeks to convey the paradigm of the discpline through a description of paradigmatic problems, methods, topics of interest and solutions.
using a prism with sunlight	Each discipline seeks to understand the world about us using its specific tools, assumptions, principles, etc. Thus it breaks reality into subcomponents in a effort to shine a bright, yet narrowly focused light on the world. Howard Gardner suggested that this might be among the most important advances we've made, yet he also recognized that it comes at the cost of losing the sense of the cohesiveness of the world around us.
a recipe for a certain type of food.	Recipes are used to cook all different types of foods from vegetables to desserts Each discipline is like a different food type. Even though each type is different, they all

	have a comonality such as the measurements and instructions found in recipes.
Writings in psychology are like poprocks.	Everytime I read something in the field of psychology, I feel sparks of energy that motivate me to action or charge me to express some emotion.
cooking.	You take all your skils and have to modify them depending on the recipe you choose to follow.
disciplinary reading.	Each requires a different tool set.
furnishing your first apartment on a tight budget.	Writing in biology, and science in general, requires a person to take large amounts of information, decide what is pertinent, and condense it into a form that is logical for another person to read and be able to repeat. Experiments are not just outlined, they are described in exacting detail so any one any where in the world can repeat them. Likewise, results of experiments are clearly presented so they become part of the collective knowledge of the scientific community. It is thorough and detailed, yet not elaborate. Likewise, to furnish an apartment you have to decide what is really important and necessary and get rid of everything else.
the telling of a great story	in biology you tell a story about a specific aspect of a living organism and it is amazing how living organisms function, just like a great story
writing is used as a tool	It has to be clear and precise
Disciplinary writing is like bringing the lens into focus.	Writing forces a person to think clearly, to organize facts and concepts, and to see connections they might not see otherwise. It also stimulates reflection and forces you to draw conclusions.
Mathematical writing is like the language of the universe.	Our world is so complex, we often cannot find words to describe it. Through matheamtical symbols we are able to make predictions and analyze patterns that would otherwise gone unseen.
creating a hybrid plant	one bean variety will survive better in certain conditions
colors of the rainbow	across the curriculum writing has different distinct purposes. Mathematics just

	happens to be one place where it is hard for the students to see the worth of it.
like different flowers blooming in different shapes, colors, and frangrance	Some disciplines requires factual writing whereas some require thought provoking ideas, whereas some other require debate
a photograph.	In all social sciences (with emphasis on the word science) writing must clearing describe the observation or theoretical perspective of the writer.
a fingerprint	unique goals and objectives, as well as styles and methodologies for each discipline
The heart of science	Can you imagine discovery without documentation?
Sorry. I can't think of anything. I've just spent the morning reading a scholarly book in my discipline (Rhetoric and Composition), and I would say that the writing I have my students do is quite different than what I consider my disciplines discourse. My students are not ready for the level of scholarship that goes into these texts. If I had to squeeze an analogy, I would say that "Writing is a map"	because when I read scholarship in my field I want to discover and learn something as well as get something out of what I read. Maybe a poor analogy.
taking a test	you have to understand the subject
Geography is a study of the effects on places.	Places change over time through various means such as change in climate (i.e. ice age, global warming) or human interaction (i.e. agriculture, desertification).
the great diversity of life; all things are different.	different disciplines have different writing requirements to fullfill different purposes.
writing the ten commandments on rock.	Different disciplines may get boring unless your majoring in it.
your shadow.	Sometimes the writing is very prominent and sometimes it is subtle, but it is always there.
unlocking a treasure chest.	When students learn and apply their writing skills, they become empowered to communicate with authority, power, and passion.
walking a tightrope.	Students must learn to balance competing elements, know what is appropriate for each discipline, and apply specific conventions to demonstrate competency. If they fail in any of these tasks, their writing

	will cause them to slip and fall, resulting in injurious poor grades.
riding the bike on different terrains and environments.	Disciplary writing is under the rules of that specific instructor and how they want the essay to appear. Depending on the discipline, there are many different rules and ways for the department to assign essays and papers outside of what the instructor wants.
the examination of vital signs and blood work during a physical at the doctor's office.	student reflections of the intended topic can be used to determine the extent to which the student has been captured and intellectually afflicted by intellectual pathologies (like Marxism, and other philosophical pathologies)
a car sales person	The evidence has to be persuasive
a secret language	Every discipline has buzzwords and writing methods that are particular to it. My students often struggle with writing in my class because I ask them to avoid flowery language and generalizations that may be acceptable in other disciplines.
Disciplinary writing is like gardening.	Disciplinary writing, like gardening, requires planning, focus, time, effort, and in some cases, group effort. The effects (fruits) are beneficial to those who wish to make the effort to look, taste, and consider, and the fruits are often enjoyed by many others beyond those making the effort.
filling out a form or application	Required information must be given in the format used by the discipline.
a bridge that connects the ideas between 2 minds.	Because I'm thinking of an educational setting, I consider writing a tool for building trust and understanding. Anything I write must have an audience. If I don't consider what the reader is thinking or how he is responding, them my words have serve no purpose.
driving to your destination	On a map you have many ways to reach the goal and some roads are less traveled than others.
self-discipline for self-control.	Without the basic writing skills, it is impossible to take writing to the next level. It is imperative to be disciplined with self-control to achieve the untouched boundaries that have not been

	accomplished yet. There will always be a boundary to overcome. Self-discipline for self-control.
Writing is like language.	Different languages are required by different groups of people for best communication.
wearing sun glasses.	The world is seen through the lense of history, a pink lense, through biology, a green lense, mathematics, a yellow lense ...
a guided tour through a maze of difficult concepts.	Effective writing in a specific discipline serves to guide the student towarads an understanding of complicated concepts. It does this by taking the student step by step through a concept via comparison to familiar real life experiences.
looking through a telescope.	It tends to be very focused on one small area.
a smoke screen.	First, it is impossible to generalize about the writing of thousands of people. But in the worst cases, writing obscures the idea rather than elicudating it.
using the correct shoe for a particular type of exercise.	In biology we use informative writing and persuasive writing.
being fluent in a foreign language.	If you are not fluent you may know enough words to pick up on what people are kind of saying. If you are fluent then you not only fully understand what is being said, but you can participate in the conversation yourself.
a science lab or invention	Students research and explore ideas and then respond to results or create new concepts associated with other writings.
constructing a jigsaw puzzle	if we think of why people think and act the way they do as a puzzle to be constructed, sociologists draw on the pieces that other researchers have suggested and try to add more of their own
putting evidence together to make a point.	Using primary and secondary sources gained through reasearch, history writing is about proving a point of view for understanding the past.
personality.	Everyone has one, but they can be so different, just like the different disciplanary writings.
a household chore	It's not fun to read lots of scientific journal articles, but you can get a lot of knowledge

	from them, and afterwards, it can be very rewarding.
a box that houses many different tools for guidance and solutions.	Writing gives an opportunity to express oneself and seek answers
Riding in a hot air balloon	Writing in different disciplines allow students to explore the content and see the bigger picture . When a student writes about something, they lean to make connections
a root canal.	To students, disciplinary writing often seems like an unneccassry evil (much like scary dental work) but to the practitioners of writing, it is a neccessary blessing that can better the individual who obtains (or conquers) it.
Disciplinary writing is like a field of mixed wildflowers.	Each field is different, yet together they can make a beautiful blend of colors and textures which help to educate society.
A student writing essays in education classes is like an artist drawing a picture.	When students are able to proficiently express themselves it creates a picture of their understanding of a subject.
Working in a recycling center	Massive amounts of content comes in. You must pick the items you need from the flow. If you pick the wrong items, your work won't be useful. If you pick the right items, you proceed to put them together in new ways that are useful to others. If you are lucky, you put items together in such a way that you generate a new goal (question), step out into the world to gather fresh items to combine with the recycled items, then create something never before seen.
a magical mystical tour through relevancy.	If the writing assignments in my class are not relative to what I am teaching, then they are just a big waste of time for my students.
a tool kit.	Writing is useful to all disciplines. However, one must fit the style, the vocabulary, and the arrangement of ideas to fit the given audience or discipline.
addition and subtraction	In writing you put words together to make meaning and in reading it is like subtraction in that you take sentences apart to gain meaning
an apple compared to an orange.	While all writing serves the purpose of

	disemminating the current views of that discipline. The means however differ greatly.
the reinforcement students need to achieve mastery in any discipline.	If students can explain what they know in writing, they have successfully mastered the content.
Sheldon shouting "BAZINGA.!!!	Discipline writing is filled with pomposity, arrogance,and true wordiness. One needs to write what one means elequontly but simply. We want others to read and understand NOT scratch their heads and say HUH!!!
icing on the cake.(Same answer as above.)	It adds sweetness to something already wholesome. (Same answer as above.)
garden	properly prepared, it can produce a harvest of knowledge which not only feeds the intellectual curiosity of the present, but also provides the seeds necessary to perpetuate the intellectual persuits of the next generation of knowledge.
learning the difference between venomous and harmless reptiles.	A person should be able to differentiate the specific requirements that are necessary for success in each discipline. If they cannot, then there will definitely be adverse consequences.
walking up a steep hill	students, in developmental education, struggle greatly with this task
putting on a smaller pair of shoes.	You have to force your conscepts to fit within a framework no matter how uncomfortable.
heart surgery	only an expert can do it
arranging items in alphabetical order	Learning to order one's thoughts and put them into words makes sense of those thoughts
going to a gymnasium	the more you do, the more fit you become.
a sophisticated explanation of life on the edge.	Scientific writing pushes new frontiers. Individual studies need to be connected to the knowledge that is already available.
a t-shirt.	One size doesn't fit all, so the rhetorical considerations of each field will be different. There may be field-specific jargon and other conventions. However, it's still a t-shirt, if I can continue this rather limited analogy. Good writing is good writing--it should be clear. It should communicate effectively to different

	audience groups.
finding your way out of a maze.	All of that data must lead somewhere, but where?
pruning a tree.	We try to eliminate anything that is not essential.
speaking a different language.	You can write well in one discipline, but if you can't write well in another, the professor may not understand what you are trying to say.
composing music or art	Writing is a creative process that adds substantially and meaningfully to the artefacts of a shared culture.
opening a door to a new world.	well written reports allow the reader to understand what is otherwise vague.
Writing in ___ is like:	**Explanation:**
a user manual.	A user manual is very precise, concise and detailed.
using a recipe to make a cake	There are standard ingredients and measurements in a recipe, and expected ways to combine them for the desired result.
tweet.	In biology, it is important to get to the point and limit wordiness.
music in the military.	It's not flowery, it may not be the most interesting, but it gets the job done in an efficient manner.
having to build a model of a domed church with only wooden blocks of one size.	Biologist may never assume, assert or overinterpret data. These ethical guidelines can impose a clumsiness on writing about data that might seem to support a hypthesis, but for which there is not enough supporting framework. Presenting data in a technical report, is like adding a block to a tower, it may fit but it may not make the tower any stronger.
A composed salad instead of a casserole	Each biological paper must be presented clearly and concisely, without adding all the ingredients together.
creating order in my head	Scientific writing allows me to organize the natural world so that it makes sense to me.
leading horses to water (unless you are Stephen J Gould)	Difficult to get students to take the time to read carefully and learn new words.
doing math	In biology we get set of numerical data and analyze it.
making a plain peanut butter sandwhich.	Research articles require the basics with no extra frills.

swimming in a river.	It should be fun and easy and carry you someplace new and beautiful.
a clear calm river.	The writing should be clearly written in a straightforward manner. All parts (background, hypotheses, experimental design, experimental results, analysis) should be written in a manner that is transparent to the reader. Nothing should be hidden or covered up by obscure language or any attempt to misdirect.
a clean room.	It is sterile, no fluff, no extra words and usuall to the point.
a SurveyMonkey Survey.	There is a particular form and style that is expected and even demanded by publishers. All of the requirements must be satisfied for publication.
giving directions in Paris to a blind man.	The complexity of ideas and concepts in the field of biology is hard to explain in the absence of landmarks, and fails when the landmarks are not shared between you and your reader.
filtering muddy water.	Writing should be clear and consice, without superfluous information.
keeping a journal.	It details materials and methods that have been used.
simple like the Gordian Knot.	Grab your swords, boys! Time to go to work!
the icing on the cake.	Doing chemistry, mixing chemicals to make new things or increase the value and usefulness of raw materials is fun but writing it down and sharing with others is what truely makes something really "tasty".
a language of its own.	There is a large vocabulary of math terms that when learned can assist students in understanding concepts.
a caterpillar fighting to emerge from its cocoon	Learning to do it at the early stages of study is difficult, ugly, and fraught with peril…..but if you succeed what you create in later years….
morse code.	To the person who does not understand (or know Morse Code), it is nonsense, but to the person with knowledge it is communication.
solving a puzzle.	Extracting specifics from a general scenario
trying to describe the taste of wine.	Mathematical writing can be abstract and

	like describing how wine tastes it may sometimes be difficult to find the right wording to describe a concept.
Writing in a foreign language.	An important part of being successful in mathematics is understanding the termonology, language, and symbology of mathematics. Doing that is very much like learning a foreign language, and that language is used when communicating mathematics.
a picture	A formula is worth a thousand words
a floating feather in the wind.	You never know where the writing will take you. For some, it provides a summary of learning with a specified approach to solving problems. For others, it may describe a deep conceptual understanding or lack there of.
breathing	It comes natural even I have an asthmatic event, breathing continues, a bit rough at times; but, usually smooth.
solving a puzzle.	Our prior knowledge of many different topics is the catalyst behind solving/proving a current hypothesis.
an expression of human thought process.	Mathematics is a way a mathematician can express how they found they thought about the statement and the way they thought about how to prove the statement.
building.	The concepts have to be built on top of other strong foundations and themselves be solid. They can have beauty and elegance, but must be supported.
opening a door.	Writing clarifies the math concept. By opening a door it creates a path to clear understanding.
a challenging puzzle.	Pieces of information have to be put together to form a meaningful whole.
like speaking two languages at once.	One must be able to think and articulate ideas, not only in an abstract format, but also in a colloquial setting.
reconciliation	Writing in mathematics brings together the abstract and the concrete. When someone writes about mathematics, they explain the abstract in a concrete form.
walking a tightrope.	Precision counts -- not style.
solving a mathematical exercise.	Steps are followed. Additional information could be interjected (as a lemma would be).

	The beauty is found in its brevity and density.
baking.	It is a science and you must get every part right for it to be good.
solving a puzzle	The pieces are there; we just have to decide where they belong
looking through glass.	Mathematics is very clear on it's meaning. You may not understand the terminology or definitions, but if you took the time to learn them the meaning would be clear.
mining precious gems.	The untrained don't know what you have, and some of what you have is too precious to share right away. To share too soon is to give away the mine.
a light bulb turning on	writing the process = understanding the process
Wearing a straight-jacket to confine bias	to confine bias we have a set structure with limited room for creativity other than titles!
Carl Sagan's Cosmos.	It can be difficult to understand writing in psychology and how to write in psychology, but you find yourself more and more intrigued by it the more you delve into it just like it can be difficult to understand the complexity of the universe. However, as you listen to Carl Sagan explain the complexities and it gets even more complex, you discover more interesting things about the universe from which you can't turn your attention away.
giving a voice to numbers	Writing for psychology helps demonstrate ideas and explain results that are usually confined to numbers and stats that can be intimidating
riding a horse.	you have to live the experience to understand it.
reporting.	factually based
a scavenger hunt.	In order to write in psychology, you must seek out research sources and understand how it relates to the overall topic of choice.
elastic.	It stretches your mind and thinking process and provides opportunity for expansion.
water.	Society is not stagnate, the social forces are constantly reshaping and adjusting as a result of our interaction.
Developing and becomming aware of yourself in society.	Developing an acute awareness of who you are as a human being and your

	responsibilities in society.
an ocean.	It ebbs and flows with the tides of social media, politics, and general interests (e.g., technology). It is vast, deep, intimidating, and, both, life-bearing as well as life-stifling.
marrying philosophy and engineering	Human beings and human society are extremely complex and require a capacity for intricacy in order to examine them. At the same time, we live in an empirically oriented culture that limits itself to observation and measurement of behaviors and material life. We over emphasize quantitative approaches. Yet, we can only form a complete picture by accounting for everything underneath that physical, quantifiable world. It's quite a trick.
a demonstration of comprehension, analysis, synthesis and best of all creativity.	The most interesting writing includes all of the above.
telling a friend what happened.	Students will learn to read for meaning and comprehension if they are asked to paraphrase and explain to another person.
practice for students' thinking processes.	It is difficult for some students to understand how to extend their thinking and to formulate it into cohesive writing.
sewing from a pattern	Students learn the basics about essay organization and development. I give them formulas and models
leading a blind person across a river using stepping stones.	The person must be motivated to make the trip, so in your introduction you let them know where you are headed, why it matters (Can you smell the picnic waiting for us?), and suggest the nature of the stepping stones. Main ideas in the body of the essay are like the stepping stones. You may make many easy steps (supporting details) to get across one, but you have to prepare the person to make the jump from stone to stone using effective transitional devices. The stones also need to be laid out in a sequence that gets you efficiently and directly to the other side (conclusion). Once you are safely on the other bank, you look back on how far you have come and celebrate reaching the goal with an

	emphatic close. (Let's eat!)
baking a Duncan Hines yellow cake	It's not the most exciting flavor and uses some pre-fabricated ingredients, but it can be delicious. I don't see it as a bad thing that students experiment with ready-made templates and models, especially in dev writing.
Writing is like a dark, foggy night.	Often, novice writers fear the unknown. When they first start writing, they don't understand how to use words to express themselves and first attempts leave them confused and in the dark.
a buffet.	Students should have a variety of tools from which they can pick for their purposes.
Star Trek.	Composition's core mission is to boldly go where many students have never gone before, the world of producing rigorous academic writing.
driving a car	Most people who drive a car do not always pay attention to their surroundings on the road or maintain the condition of the vehicle.
A Lawyer defending or prosecuting a case.	There are hundreds of facts but only a select group can actually be evidence.
discovering how to navigate on a foggy day.	There are lots of facts in history. Writing in history demands that students sift through the facts to find the information that is pertinent to the topic of the writing assignment.
constructing a safe and structurally-sound bridge	When asked "How long should an essay be?" I tell students that a good essay is long enough to get you safely from here to there, like a bridge. Plus it is sound in terms of evidence and arguments
studying science	As much as possible, the historian should try to put aside cultural biases and examine the facts to reach a conclusion.
a legal case	I can use the evidence to prove the progession and cauastion of a historical event(s)
connecting the dots.	history is about cause and effect. If you are doing it correctly, you everything that comes "next" should make sense.
exploration	explaining why something occurred the way it did

working a puzzle	sometimes hard to figure out where they want the pieces to go.
cooking.	One must know the recipe to be able to break the established methods.
exploring the whole universe by looking within one heart.	close observation of the minutae of everyday life is is the instrument that gives insight to the profundity of our existence.tool to
Exposing yourself	You are putting your ideas and work out for others to try to expose the flaws in.
constructing a bridge or building.	Students construct arguments; premises are the foundation.
Academic writing is like:	**Explanation:**
reading a map.	There are many ways to get to the same spot on a map.
Completing a connect-the-dots puzzle	The goal of most academic writing is to take what is already known about a subject (the literature/reserach) and connect it in a unique way to make a new picture or point of view on that subject.
blog.	choose a subject and spill all of your thoughts about it, while trying to fill space and appear to be an expert.
arts and crafts time in elementary school.	When writing for students there are opportunities to talk about interesting tangents, add in images for a variety of reasons (help explain the information, capture their interest, or get a laugh and lighten the mood), and use it as a creative outlet.
exercise, best if done everyday with great vigor during a dedicated time.	Academic writing can be intense, and requires consistant practice to condition you to be productive.
soft science	The data aren't as stringently gathered and analyzed in reference to the perspective presented.
allowing people to see the inside of your head	academic writing should allow me to clearly explain my thoughts and ideas.
speaking to a higher intellect.	The writing is meant to appeal to the educated or to those getting educated post public school education.
Eating seitan (a vegetable substitute for meat)	It is supposed to taste really good but it is a poor substitute for the real thing.
walking through a maize.	Look at the possibilities and find the best option.
doing the dishes.	It's a pain, but you have to do it! Also, it is

	a representation of the blessings in life (lots of dishes means lots of food; lots of papers means lots of opportunities!)
following rules.	There are certain patterns that you must follow.
training students how to organize thoughts.	Academic writing is often intended to show students how to organize their thoughts about a complex subject. If done properly, students should achieve a clearer understanding of a complex subject. It teaches students to do proper research, organize their thoughts into a more scientific framework, and to look for deeper meanings in material they are trying to master.
a reflection.	It can be different depending on which academic dicipline you are in.
creating stuff	often to practical goal
Selling a car.	There is a particular conclusion (positive or negative) that you want to demonstrate that will convince others. The authors job is to provide the evidence that favors their interpretation of the "facts." Just like a car salesman needs to convince others that he is trustworthy, so the scientist must convince others that his conclusions are trustworthy by examining every possible explanation and reporting accurately what the tests reveal.
speaking to an auditorium of listeners.	Academic writing must speak to many people having different perspectives and requiring different levels of elaboration, yet you are always running the risk of putting your audience to sleep with too much information.
playing a role in a scene.	Academic writing needs to be truthful and balanced, yet it is written in more of a response mode.
trying to impress your boss.	It involves using a vocabulary that most students aren't used to, and writing reports to impress other researchers.
fuel for the intellect.	Proper writing drives me to consider possibilities.
sharing good ties with friends.	Having great ideas or discosveries in a

	vacuum is not really much fun. Sharing with friends not only lets them in on the secret but as we listen to their response we can improve our ideas and make them better.
an educator's window to his mind.	Through academic writing, the thought process is exposed.
a dolphin flying a kite	I never do it.
putting on make up.	Both academic writing and make up put on the face you want the public/peers to see. Sometimes it can be said/or you look somewhat differently.
reinforcing critical thinking skills	able to convey complex ideas to a non technical audience
Map	It guides us through isolated points to get to our destination.
a puzzle	You have certain criteria that you have to follow and fit together like a puzzle.
discovering a cure for failure.	The cure is the solution, success is there, obtainable and possible for everyone. Some may need additional medication "educational resources" to succeed.
collaboration.	You need to be able to collaborate to succeed.
describing a culture.	Academic writing is an expression of the current times and cultural norms. It is a reflection of what culturally people believe in. The times influence the thought process of the writer.
cooking.	There are a lot of ingredients needed and much time and preparation goes into the product. But at the end, if it tastes good, it worked.
classical music.	While it can be enjoyable to read and to write, it doesn't have the seduction and pleasure that other types of music/writing can have. Like a good novel or short story.
an interesting journey.	Often one sets out with one **perception** but as the writing task develops greater knowledge of and understanding of the topic lead to new viewpoints and perspectives.
going to a formal dinner.	You must dress things up and be on your best behavior.
food	The author compiles their knowledge (the ingredients) and produces a product for

	others to feast upon (learn from).
giving instructions.	Clarity is everything.
outlining a story.	We care about the main points and highlights within the main points, but we don't necessarily care for flowery speech or unnecessary hyperboles.
winning a race.	your hard work is rewarded and acknowledged by your peers.
creating a wedding cake	Not only should it be attractive on the outside (i.e., have the appearance of good construction), but it should also have good texture and flavor on the inside (something worth reading!)
looking through murky water.	There seems to be a lot of dirt in the water, but hopefully we can sieve through it and find something worthwhile.
chatting with members of a club.	Those outside the club are either uninterested or wouldn't understand you anyway. Those in the club can appreciate the insight of a peer and share common interests.
Climbing a mountain	Students do not want to use words just numbers in mathematics. It is like pulling teeth to have them explain in words how to work the problem.
a mosaic	of opportunity and dviersity
a roller coaster.	Academic writing is filled with its ups and downs which we just have to take as part of our careers just like roller coasters have their climbs that we enjoy and their falls that we can't control and just have to roll with until the next climb.
trying to please an angry customer	Peer review in academic writing requires many edits and sometimes those edits feel artificial
disecting frogs.	you have to be aware of various factors that you have no control over
journey.	Academic writing takes you through a journey of experience and leaves you with a new found perspective.
a mirror.	The writer sees his/her own reflection but thinks everyone sees the same reflection. The mirror only reflects the one looking at the mirror.
Masturbation	Academic writing is about an imaginary idea that you want to believe.

Opening a window into one's thoughts and life's occurrences.	Putting your thoughts into written words provides reflection into what and who you really are.
magic.	It is an illusory formulae of misdirection and pomp to explain a phenomenon in a manner both (a) accepted by the community and (b) to befuddle those not in the "clique."
taking bad medicine.	Academic involves dedication to getting better every day through diligent practice and dedication.
objectification of human beings and human life.	We remove ourselves as far as possible in order to avoid being labeled as biased or narrow minded and in so doing we lose large pieces of the essence of what it means to be human and live in society. (Clearly, I see this as a short coming of my own and most academic disciplines)
a more extensive demonstration of comprehension, analysis, synthesis and creativity.	Students need to work toward a more advanced understanding of the characteristics listed above.
sharpening a pencil.	It must be as sharp and accurate, and clearly understood by the reader, as possible.
an extension of how students should/could be thinking about the content area of study.	If students are comprehending what they are learning/ reading, then they should be able to express it through writing.
sewing, using a pattern as a start but adding, embellishing, changing.	students in freshmen comp expand upon the formula. Now that they know how introductions, body paragraphs and conclusions focus, they need to be able to figure out for themselves where the paragraphs lie and how they function within the essay
baking an angel food cake from scratch	It's difficult to do and often falls flat! (I'm not very creative and may be hungry.)
Writing is like an open road.	Writing allows one to explore any topic limitlessly without barrier. If a writer can think it, he or she can create it. The more composition students learn to express their ideas in writing, the more options (roads) they have from which to choose.
detective work.	Academic writing at its best investigates a topic to discover either a solution or a unique approach.
lighting a candle and instead of cursing the	It might not do much but shed a little light,

darkness.	and at least, in world of negative energy, spreading a little knowledge is positive energy.
driving a car is a process	Before driving a car, one needs to consider the many responsibilities that one must abide by before driving.
Joe Friday on Dragnet	"Nothing but the facts Ms."
opening a door to find unexpected surprises beyond it.	Academic writing should direct students to think deeper to discover hidden treasures not immediately obvious among the facts and details.
making a case to a jury in court	Marshaling solid evidence (facts) and then making your sound, persuasive and closing argument to the jury
planning a menu	you need to have balance.
a laboratory	Academia allows me to present new data and ideas in my field that can be tested among my peers.
a surgeon making a cut.	It needs to be precise and focused. When done correctly, it does amazing things.
work	After the fun of research and analysis (exploring) you have to compose a persuasive argument to present your interpretation
a rose blooming	starts closed but opens into something enjoyable.
learning.	To be able to write well academically, one should be able to explain concepts to another person simply, directly, and easily so there are no gaps in understanding
psychoanalysis in a criminal investigation.	closely analyze for understanding on many levels.
A song	It can express feelings, mood. It can go on and on and on.
art.	it can be rigidly constructed or freely expressed without boundaries.

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