The Effects of Writing Centers Upon the Engagement and Retention of Developmental Composition Students in One Missouri Community College

by

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A Dissertation submitted to the Education Faculty of Lindenwood University in partial fulfillment of the requirements for the degree of

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Dr. Sherry DeVore, Dissertation Chair	Date
Dr. Rhonda Bishop, Committee Member	Date
Dr. Steve Bishop, Committee Member	Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree.

David Elton Ball

Signature: David Elton Ball Date: 8/1/14

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Abstract

Student retention poses a major challenge to higher education in America. Research has demonstrated colleges that foster student engagement have higher retention rates than colleges that fail to do so. Writing centers are student services that improve student engagement and retention. This study focused upon the Fall 2013 cohort of developmental composition students in one Missouri community college, to determine if students' use of the writing center made a positive difference upon student engagement or successful completion of their course. The study was designed with a two-pronged approach to answer four questions. The first question was posed to determine a statistical difference existed between the retention rates of developmental composition students who visited the writing center and students who did not. A Chi-square Goodness of Fit statistical analysis determined with 95% accuracy that a difference did exist. The remaining questions were posed to obtain student perceptions regarding prospects for persisting in school, level of engagement with the college, and effects the writing center made upon engagement and persistence. These questions were answered with an online survey employing 19 Likert-scale statements to which the student could express level of agreement; responses were subjected to descriptive analysis. Student respondents expressed nearly 100% belief they would persist in school; expressed a high degree of engagement while claiming they were not engaged with the college; and expressed over 75% belief that the writing center had improved their engagement and persistence in school. These findings suggest writing centers do offer a valuable tool for improving student engagement and persistence. Future studies should be designed to provide a more global assessment of what writing centers do and how they might improve their services.

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Chapter One: Introduction

Administrators and faculty of most institutions of higher learning in America agree this nation faces a serious challenge with student retention and success, or the lack thereof. Numerous scholars and studies, coast to coast, covering the past several decades have detailed the unsatisfactory levels of student persistence and success. Among those are Habley, Bloom, and Robbins (2012), who pointed out:

> Sadly, one out of every three students who enters higher education in a given fall term will not return for a second year (ACT, 2010e) and approximately 40% (Tinto, 1993) of all college students will never earn a degree anywhere, at anytime in their lives. Those percentages have not changed appreciably since the middle of the twentieth century. (Preface, xiii)

As Farnsworth (2010) demonstrated, the situation bodes worse for community colleges than for four-year universities. Mortenson (2012) pointed out, "Persistence rates have declined most in the least selective institutions" (p. 46). Most community colleges, being open admissions institutions, have very few restrictions on who can enroll.

The economic hardships of the past several decades have compounded workplace demand for more applicants with at least an Associate of Arts degree. These challenges now increasingly influence not only enrollment in this nation's higher education institutions but also the financial viability of colleges and the economic viability of the United States's position in a twenty-first century global information-based economy (Carnevale, Smith, & Strohl, 2010). Carnevale et al. (2010) further stated, "by 2018 there will be 46.8 million job openings and nearly two-thirds of these 46.8 million jobs—some 63 percent—will require workers with at least some college education" (p. 110).

Therefore, "with current college completion rates there will be a shortfall of 3 million individuals with postsecondary degrees" (Carnavale et al., 2010, p. 109).

In response to this challenge, educators from coast to coast, from Ivy League universities to rural community colleges, are scrambling to improve student engagement, retention, and success (Barkley, 2010; Kuh, Kinzie, Schuh, Whitt, & Associates, 2005; Tinto, 2012). For instance, one Missouri college instituted a strategic plan, which identified the institution's strengths, weaknesses, opportunities, and threats, thus listing numerous concerns falling under the auspices of engagement, retention, and/or success. Among those items, the plan's analysis listed specifically student success rates, developmental education issues, low performing students, loss of the "small college feel," retention, lack of basic skills, low graduation rates, and loss of distinction as a provider of individual attention (Office of Research and Strategic Planning, 2011). Institutional responses nationwide to such challenges as these have been legion, but this study limited the focus exclusively to the role one Missouri community college's writing center played in improving the engagement and retention of developmental composition students.

Background of the Study

As indicated above, one of the issues aggravating the retention and success challenge to higher education institutions has been the relatively low level of preparation a significant percentage of the nation's high school graduates possess as they enter college. According to Farnsworth (2010), "Forty percent of all new college freshmen require remediation in reading, English, communication, or mathematics. About half of our undergraduates are now enrolled in community colleges, and 60 percent of this group requires remediation" (p. 9). Habley et al. (2012) concurred when they stated, "Data

from ACT suggest that those who are prepared to succeed in college constitute only about one-fourth of the high school graduates who intend to go to college" (p. 235). During any given school year, "the majority of student departures occur between the beginning of the first year and the beginning of the second year" (Habley et al., 2012, p. 386). Studies showed, if developmental students can persevere to the end of their first semester, their odds of completing their course of study rise to about the same as the odds of non-developmental students (Habley et al., 2012; Tinto, 2012). Retaining developmental education students constitutes arguably the single biggest concern for community colleges today because of the sheer numbers involved and their place in the nation's economy. Gonzales (2010) cited Melinda Gates, Co-chairperson for the Bill & Melinda Gates Foundation, as saying, "Our research indicates that improving remediation is the single most important thing community colleges can do to increase the number of students who graduate" (para. 4).

The National Survey of Student Engagement (NSSE) study (Kuh et al., 2005) and a spin-off study of Documenting Effective Educational Practices (DEEP) schools identified student engagement as one of the primary predictors of whether students will stay in school and succeed. Kuh et al., (2005) stated:

> DEEP schools do two things very well. First, they teach students what the institution values, what successful students do in their context, and how to take advantage of the institutional resources for their learning. We refer to this as acculturation. Second, they make available what students need when they need it, and have response systems in place to support teaching, learning, and student success. We call this alignment—making certain that resources match the

> institution's mission and educational purposes and students' abilities and needs. (p. 110)

These schools considered tutoring in general and writing centers in particular among the best resources available to address acculturation and alignment (Habley et al., 2012; Kuh et al., 2005). The What Works in Student Retention (WWISR) survey listed tutoring as the only measure "with incidence rates of 90% or more across institutional types (public, private, and two-year) and was the only learning assistance program listed in the top three in terms of perceived effectiveness across institutional types" (Habley et al., 2012, p. 270). Referring to writing centers and their place in school culture, Kuh et al. (2005) stated:

> The importance that DEEP schools place on developing students' writing skills is illustrated by the fact that all but one has a writing center or organized writing support program. The presence of such centers and programs highlights the importance these colleges and universities place on developing and enhancing students' written communication skills. . . . According to students and tutors, the centers are "relaxed environments" where students can get both in-person assistance and online writing consultation. (pp.185-186)

These *relaxed environments* may well have provided ties to the college which contributed to retention independent of actual academic improvement. Tinto (2012) said, "The absence of such ties proved to be a predictor of leaving" (p. 64). Most tutoring services of any sort would provide such intangible benefits in some students' opinions (Kostecki & Bers, 2008; Tinto, 2012), but rather than discussing tutoring in general across the

nation, this study limited its focus specifically to one Missouri community college writing center.

According to Habley et al., (2012), "Fewer than half of all students who earn bachelor's degrees do so within six years of high school graduation" (p. 231). Schuh et al. (2011) partially attributed this failure to graduate in a timely fashion, or failure to graduate at all, to an institutional failure to adequately encourage student engagement and sense of community: "We define *campus climate* as the overall ethos or atmosphere of a college campus, mediated by the extent to which individuals feel a sense of safety, belonging, engagement within the environment, and value as members of a community" (p. 248). Kuh et al. (2005) examined a wide variety of colleges, looked at the various ways they address the issue of campus climate, evaluated their various success rates, and found, when colleges get students actively engaged with the school and their own educations, they derive better retention rates than colleges that simply hope for the best. Furthermore, Kuh et al. (2005) concluded colleges must take deliberate, concrete actions to make retention central to the institutional mission, as opposed to leaving it at the periphery. Schuh et al. (2011) went so far as to say schools should "induce or in some instances require students to participate in activities associated with various dimensions of student success" (p. 260).

According to Liggett, Jordan, and Price (2011), taking deliberate, concrete action alone will not suffice. Action must not only lead to desirable outcomes but also be demonstrable. Liggett et al. (2011) addressed a problem caused by the business model of education presently trending in the United States, demanding the sorts of quantitative outcomes-based data that qualitative services, such as writing centers, find extremely

difficult to provide. Liggett et al. (2011) and others challenged writing centers to take stock of the full range of methodologies available and find the ones which will best serve the interests of writing centers (Babcock & Thonus, 2012; Liggett et al., 2011; Schendel & Macauley, 2012). They provided a large sample of traditional taxonomies, discussed their relative strengths and weaknesses for use in the writing center field, and asserted qualitative assessments of writing centers simply do not suffice for present demands of administrators and politicians. Finally, Liggett et al. (2011) concluded, if writing centers do not find a way to provide such outcomes-based data, they are going to "lose control of [their] teaching and curriculum" (p. 72).

Conceptual Framework

The conceptual framework for this study revolved around the question of the effects, if any, writing centers have upon student retention, with a particular emphasis upon what effect writing centers have upon student engagement. Leaders in the field of student success, including Kuh et al. (2010) and Tinto (2012), have researched the connection between engagement and retention from numerous perspectives during the past 40 years. Primarily, they have identified conditions schools can create to enhance students' chances of persisting and flourishing in their educations, and they have determined the more engaged a student is, the more likely he will persist (Kuh et al., 2010; Tinto, 2012). By using the ideas proposed by Kuh et al. (2010), the overarching question became, "Will the presence of a writing center improve student retention?"

Studies have used student engagement theory predicated upon the assumption that students engaged with the culture of their respective schools and their own activities, both academic and extracurricular, persist to complete their degrees more often than students

not engaged (Kuh et al., 2010). Student engagement also matters from an institutional perspective because schools which create campus environments and services conducive to student engagement will more likely achieve high performance (Tinto, 2012). As Kuh et al. (2010) explained:

> The conditions characterizing a supportive campus environment represented . . . include (1) an institutional emphasis on providing students the support they need for academic and social success, (2) positive working and social relationships among different groups, (3) help for students in coping with their nonacademic responsibilities, and (4) high-quality student relationships with other students, faculty, and the institution's administrative personnel. (p. 241)

Fitzgerald (2014) went a step further to point out the additional value of student tutors as a valuable and heretofore untapped source of future research regarding more effective pedagogies. The link between student engagement and student retention comprised one of the linchpins of this entire study. Given that student engagement influences student retention, this study sought to explore specifically the role writing center usage may play in increasing student engagement and by extension increasing student retention.

Tinto (2012) specifically listed writing centers among the support services which promote student engagement. Moreover, Kuh et al. (2010) believed strongly in the importance of student support services, which can include writing centers as catalysts for student engagement. Kuh et al. (2010) recommended instituting policy, "encouraging and even requiring students to participate in experiential activities such as internships, practica, and field placements so that students gain experience in applying what they are learning to real-life situations" (p. 240). Kuh et al. (2010) specifically referred to

academic support, personal support, and the importance of writing skills as influences upon students' prospects for success (pp. 185-86). These scholars suggested that writing centers not only help students with one of the basic academic skills requisite for success but also provide a social context which encourages persistence (Kuh et al., 2010; Tinto, 2012). Finally, Lerner (2009) discussed at length the value of writing centers as labs in which to develop hands on student-centered pedagogies that both improve learning and promote engagement.

Statement of the Problem

Babcock and Thonus (2012), Gofine (2012), and Schendel and Macauley (2012) pointed out writing center research for the past several decades has relied too heavily upon anecdote and personal testimony to account for what writing centers do. However, the present climate of accountability and assessment demands the sort of hard research that more scientific disciplines have traditionally used, even though such methods do not readily lend themselves to a valid assessment of the post-structuralist orientation of composition, rhetoric, and writing center pedagogy. For instance, Babcock and Thonus (2012) noted the relative dearth of hard research in the field: "In the few evidence-based studies we uncovered in the writing center literature, tutorial success has been assessed through tutor and/or writer satisfaction, good interaction, writing development, writer development, good revisions, or better grades and course completion" (p. 152).

However, this approach no longer satisfies, and Babcock and Thonus (2012) called for new research methods more suitable for the second decade of the twenty-first century:

> Our goal is that research will become so much a part of the fabric of writing center work that all administrative and pedagogical decisions will be founded upon it. While publishing "how we do things in my/our writing center" may make sense locally, investigating a single research question like this one across many writing centers will yield more comparable and, thus, more trustworthy results. This evidence, while never incontrovertible, can inform our administrative and tutoring practice in ways that anecdote and lore simply cannot. (p. 169)

Briefly stated, writing centers have not effectively communicated what they believe they do in terms the people who hold the purse strings understand or care about. Therefore, Babcock and Thonus (2012) challenged writing center professionals to "take our time, narrowing our topics and selecting our methodologies carefully so that our work is RAD—replicable, applicable, and data driven—and therefore generalizable beyond 'our' writing centers" (p. 179). In response to this challenge by a growing number of writing center professionals (Babcock & Thonus, 2012; Gofine, 2012; Schendel & Macauley, 2012), this research examined the extent to which the writing center of a selected community college in Missouri influenced the engagement and retention of its developmental students.

Purpose of the Study

The purpose of this study was to examine the ways in which a writing center at one Missouri community college addressed the issues of student engagement and, by extension, student retention. Moreover, this study surveyed students enrolled in

developmental composition to obtain their perceptions of the role their writing center played in their engagement and retention.

Research questions and hypotheses. The following questions guided this study:

1. What difference, if any, is there between the number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class?

Ho. There is no difference between number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class.

Ha. There is a difference between number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class.

2. What factors related to retention do developmental education composition students most often report as being influential in their college experiences?

3. What factors related to engagement do developmental education composition students most often report as being influential in their college experiences?

4. What factors regarding the community college writing center do developmental education composition students most often report as being beneficial in their college experiences?

Definitions of Key Terms. The following key terms are defined:

Developmental English composition student. For the purpose of this study, any student who has signed up for or been placed into a developmental composition course for any reason.

Engagement. Essentially, engagement is a state of being motivated; emotionally, intellectually, and socially involved in the culture of one's college; integrated into the community of one's college and its values. Barkley (2010) defined it thus: "the frequency with which students participate in activities that represent effective educational practices, and conceive of it as a pattern of involvement in a variety of activities and interactions both in and out of the classroom and throughout a student's college career" (p. 4).

Retention. Habley, Bloom, and Robbins (2012), in a book dedicated specifically to the subject of retention, could offer no consensus definition of term. Therefore, to have a meaningful assessment, for the purposes of this study, retention will be defined as having occurred when a developmental composition student completes the current semester without dropping out of or failing his or her developmental composition course. Although scholars who wish to address the nuances of retention can contest this definition as too simplistic, it is sufficiently specific to allow this study to measure whether it has occurred.

Success. Habley et al. (2012) included "retention, progress, and persistence" (p. 52) in their definition of student success. Kostecki and Bers (2008) also included "persistence to the spring semester" (p. 8) in their definition.

Tutoring. This study focused specifically upon face-to-face, one-on-one tutoring of the process of writing.

Writing centers. Free standing tutoring services set up for the specific purpose of tutoring students face-to-face, one-on-one in the process of writing.

Limitations and Assumptions

The limitations of this study involved the sample demographic of students surveyed, the reliability and validity of the survey constructed, and the reliability of the responses. Also, concerning percentage of those contacted who took time to respond, some developmental composition students may not have had internet access at home and/or not been savvy to the use of computers. If so, this factor could have possibly diminished the number of potential respondents for the online survey. Furthermore, in a wider context, this study surveyed only the developmental composition cohort of one open admissions two-year community college in Missouri and, therefore, may not merit any conclusions which would accurately apply to any other types of schools, regions of the country, or other demographic cohorts.

Assumptions were choosing the entire cohort of developmental composition students at one college would provide a better sample than a mere random sample, enough students would respond to the survey to give a representative sample, and the students who responded would provide reliable responses. Also, this study assumed human nature is consistent enough in all times and places and assumed the study itself was replicable enough that applying whatever conclusions reached regarding the group surveyed in the study would justifiably call for similar studies at other colleges.

Summary

Two of the biggest challenges in American higher education are student retention and student success. Numerous scholars (Barkley, 2010; Habley et al., 2012; Kuh et al., 2005; Tinto, 2012) have linked student engagement with student retention, and they have included writing centers among student service programs deemed to be effectively

engaging their students. However, little quantitative research has been done regarding whether writing centers demonstrably relate to student engagement (Babcock & Thonus, 2012). Operating on the logical conclusion that, if writing centers do relate to engagement, then they *de facto* relate to student retention, this study was designed to determine if any links existed between student use of a writing center and student engagement, and therefore between writing centers and student retention.

Chapter Two will present some of the relevant research addressing the issues raised in this study. Primarily the research presented will address the issues of student retention, student engagement, and writing centers. The chapter will also discuss ways in which the three interact with one another as a prelude to the actual research to be discussed afterwards.

Chapter Two: Review of Literature

The literature reviewed in this chapter reflects the theoretical framework for this study, which revolved around the question of what effect, if any, writing centers have upon student retention. Particular emphasis was given to what effect writing centers have upon student engagement, which in turn affects student retention. Leaders in the field of student success have researched the connection between student engagement and student retention voluminously from numerous perspectives during the past forty years (Barkley, 2010; Habley et al., 2012; Kuh et al., 2005; Tinto, 2012). Primarily, these scholars have identified what conditions schools can create to enhance students' chances of persisting and flourishing in their educations and have determined that, the more engaged a student is, the more likely he or she will be to persist (Kuh et al., 2005; Tinto, 2012). Researchers have not, however, given more than passing mention to how writing centers at higher education institutions fit into their theory. By simple logic, if writing center visits bear some relation to student engagement and student engagement improves student retention, then it follows that writing center visits have some relation to student retention. The purpose of this study was to determine if writing centers did have any demonstrable effect upon engagement and/or retention. Therefore, the three areas of literature reviewed for this study involve Retention, Engagement, and Writing Centers. One section of this chapter will discuss each.

From a global perspective, one of the greatest challenges facing American higher education is finding a way to retain the unacceptably large number of students enrolling in college who are ill-prepared to succeed and consequently drop out, usually within the first year. The literature in the Retention section was selected to illuminate this

challenge. Studies from previous decades have demonstrated schools that effectively promote and increase student engagement consequently retain larger numbers of their students, as is demonstrated in the literature reviewed in the Engagement section. Finally, some scholars have suggested writing centers are among the most effective engagement and retention tools in higher education (Boroch, Hope, Smith, Gabriner, Mery, Johnstone, & Asera, 2010; Griswold, 2003; Perin, 2004; Reinheimer, & McKenzie, 2011). However, writing center researchers have pointed out that a disproportional amount of writing center research has been qualitative and the field demands more quantitative assessment to remain viable in the present academic climate. Some of that research, including research on suggested links between writing center usage, student engagement, and student retention, is reviewed in the Writing Centers section, along with some discussion of basic writing center pedagogical best practices.

This study was not directly modeled upon any of the writing center research discussed in the literature review because that research is mostly qualitative, and there is not enough suitable quantitative research available. Rather, the Writing Centers section contains literature suggesting the value of writing centers and demonstrating the need for such research as this study did implement, including some of the research which has already been published. Some overlap among these three sections could not be avoided, but for the purposes of this literature review, they were kept as discrete from one another as possible until the Summary and Conclusions in Chapter Five.

Retention

The first challenge for anyone wishing to study retention was to determine what the term means. Habley et al. (2012), in a book specifically discussing retention, could

not offer a definition everyone would accept. The first problem was that most institutional definitions "discount the educational achievement of students who pursued and perhaps achieved their educational goals at other institutions" (Habley et al., 2012, Preface, xvii), and simple enrollment numbers may not fairly represent such retention as is being achieved. Defining attrition, an antonym of retention, as "the condition of being worn down or ground down by friction," Habley et al. (2012) offered this definition: "Retention, then, is a measure of the rate at which institutions reduce friction that stands in the way of a student's continued enrollment" (p. 9). While the definition of retention used in the present study may not be ideal, it does offer a concrete outcome which could be measured.

The driving force behind the furor over retention in post-secondary education is the increasing demand by the public sector for more accountability in America's schools. Berger, Ramirez, and Lyons (2012) pointed out, "retention rates have been mandated as a core indicator by accrediting agencies for some time, but most states now review the retention rates of public institutions, and some states even tie resource allocations to such indicators" (p. 30). Three different administrators interviewed at one Missouri community college stated improved student retention was one of the two most important issues they faced and they wanted quantitative data demonstrating improved retention (Bishop, S., personal communication, June 27, 2012; Lawler, S., personal communication, November 30, 2012; Perkins, K., personal communication, June 28, 2012). The reasons for this concern were not hard to find.

In a disturbing and widely read book entitled *Academically Adrift*, Arum and Roksa (2011) concluded the United States needs major school reform if it wishes to

remain viable in the global marketplace. Farnsworth (2010) agreed with this assessment, attributing the challenge to ”a growing skills gap between what the workforce needs and our level of preparation, . . . changes in the world’s economy, . . . and shifting demographics” (p. 10). Yet no school can educate any student who cannot persist to the completion of his or her course work, and approximately 40% of all students enrolling in college for the first time will never earn a degree of any sort (Tinto, 2012).

The retention problem is discouraging enough across the spectrum in higher education, but the numbers for community colleges fare even worse than the overall norm. Mortenson (2012) pointed out, “institutions that practice more selective admissions tend to have higher freshman-to-sophomore persistence rates than do colleges that practice less selective admissions” (p. 41), and “persistence rates have declined most at the least selective institutions” (p. 46). Most community colleges are open admissions, meaning they are not selective at all. Anyone who can borrow the tuition money can attend, leading to populations of ill-prepared students who must be brought up-to-speed on basic skills such as reading, writing, and math at the same time as they are enrolled in courses which require those skills, in order to have a chance of passing. Tinto (2012) also stated, “As regards academic support, it is unfortunately the case that more than a few students enter the university insufficiently prepared for the rigors of university study” (p. 256). Many students find this challenge insurmountable, and attrition rates are often nearly 90% (Boroch et al., 2010, p. 26).

The lack of preparedness for postsecondary studies is not the only challenge facing many community college students. Boroch et al. (2010) added, “This [lack of preparedness] is further exacerbated by the fact that most community college students are

commuters, contributing to an overall sense of disconnection and isolation" (p. 83). Astin and Oseguera (2012) agreed: "Having a lot of commuting students detracts from the institution's ability to create a climate that encourages student engagement with campus resources, facilities, and personnel" (p. 123). Community colleges often have no dormitories, no sports teams, little space on campus for simply relaxing, and few extracurricular activities, essentially none of the social amenities found on university campuses that give students a modicum of social ties to the campus community. Therefore, "intentional efforts by colleges to overcome this isolation and to encourage students to identify with the college are important vehicles for enhancing students' intrinsic motivations to persist and succeed" (Boroch et al., 2010, p. 83). As a remedy, referencing the work of Oseguera (2006), Pascarella (1980) and Titus (2006a), Astin and Oseguera (2012) suggested, "Student retention is also enhanced in institutions that have relatively large expenditures on instruction and academic support services and a lower student faculty ratio and thus more faculty involvement" (p. 123).

Research has demonstrated the importance of the first semester to community college students' prospects of long-term success (Boroch et al., 2010). Moreover, a number of initiatives have been listed as effective in helping students stay enrolled until they can be integrated into the college culture. Tinto (2012) listed such academic support measures as developmental education courses, tutoring, study groups, academic support programs, and supplemental instruction, as well as social support in the form of counseling, mentoring, and ethnic student centers, which "provide much-needed support for individual students and a safe haven for groups of students who might otherwise find themselves out of place in a setting where they are a distinct minority" (p. 256).

Amaury and Crisp (2012) added, “The integration of students in classroom discussions, collaborative learning experiences, and study groups are all part of an underlying process affecting the adjustment of students to college, their academic performance, and their decisions to remain enrolled to graduation” (p. 243). Any measure which can keep students enrolled for at least one semester is worth providing, because, if they can make it through that first semester, their chances of persisting rise considerably. For instance, Boroch et al. (2010) cited the following information from the Lumina Foundation (2006):

> In a study of credential-seeking students at 58 national community colleges who entered as freshmen in 2002, 86% of students who were placed in and completed developmental courses in their first term persisted to the second term, whereas only 57% of those who were placed but elected not to enroll in developmental courses persisted to the second term. (p. 41)

This view was supported by the Achieving the Dream Initiative (Community College Survey of Student Engagement, 2007) which reported, “This study of 27 colleges found that students who successfully completed any developmental course in their first term of enrollment were most likely to persist and succeed from that point forward than those in any other student group” (as cited in Boroch et al., 2010, p. 26). Therefore, finding a way to hold this particular demographic in place is a priority with most community colleges in America.

Colleges have instituted a plethora of programs designed to integrate developmental students into their school communities. Habley et al. (2012) classified those programs into three clusters: “first-year transition programs, academic advising,

and learning support informed by assessment" (p. 228). The study focused upon the third cluster mentioned by Habley et al. (2012), namely learning support, under which category writing centers fall. Griswold (2003) expanded upon this third cluster in a manner that linked directly with the writing center component: "Retention research demonstrates that positive interaction with instructors, academic advisors, learning resource specialists, librarians, tutors (peer or otherwise) can be associated with student retention" (p. 278). The positive interaction factor will be covered in more detail in a later section, but for now, suffice it to say, retention has been demonstrated as a major priority in community colleges, and peer tutors may well factor into the equation. This review will now move on to a discussion of the purported link between student engagement and improved retention.

Engagement

This study hypothesized that repeated visits to a writing center may influence student engagement and such visits may therefore improve the likelihood students will persist in school. In this section the literature regarding engagement as relating to retention is presented, segueing into the topic of engagement related to learning communities, of which writing centers are one type. Citing the National Survey on Student Engagement (NSSE) and the Community College Survey on Student Engagement (CCSSE), which attempt to assess student engagement, Barkley (2010) defined "*engagement* as the frequency with which students participate in activities that represent effective educational practices, and conceive of it as a pattern of involvement in a variety of activities and interactions both in and out of the classroom" (p. 4).

The Documenting Effective Educational Practices (DEEP) study (Tinto, 2012) of high performance schools repeatedly referenced the National Survey of Student Engagement, which was predicated upon the assumption that students who are engaged with the culture of their respective schools and their own activities, both academic and extracurricular, are more likely to persist to completion of their degrees than students who are not engaged. Kuh et al. (2005) characterized a supportive campus environment as including the following:

> an institutional emphasis on providing students the support they need, . . . positive working and social relationships among different groups, . . . help for students in coping with their nonacademic responsibilities, and high-quality student relationships with other students, faculty, and...administrative personnel. (p. 241)

This study sought to determine whether writing centers support such engagement criteria as those mentioned in the NSSE study and, consequently, improve retention. Therefore, a discussion of literature addressing student engagement and general institutional programs to foster engagement now follows.

Because of the demonstrated link between student engagement and student retention, scholars have called for institutional support of student engagement. Discussing the tenets of student engagement, Habley et. al. (2012) claimed, “Student success is more likely to occur when the institution focuses resources on organizing learning opportunities and services and encourages students to participate in and benefit from such services” (p. 12). Schuh, et.al. (2011) mentioned engagement measures as an “obligation of student affairs−providing intrusive, success-oriented advice and feedback to steer students toward activities that will enrich their college experiences and increase

the odds that they will persist in and benefit in the desired ways from college" (p. 261). Tinto (2012) agreed that students' chances to persist increase "when they find themselves in settings that are committed to their success; hold high expectations for their success; provide needed academic, social, and financial support; provide frequent feedback; and actively involve students with other students and faculty" (p. 260).

Such communities, some scholars have suggested, may help motivate students to accept the values of their college, see themselves within the context of the institutional mission, and thus participate more actively in their own education. For instance, Morrison and Silverman (2012) (citing Meyer, 1970) argued:

> If students were integrated into a peer structure that reinforced the values of the school and if they were involved in high rates of interaction structured around the appropriate values and act in ways that exemplify such values, students would take on the values of the school. (p. 70)

These comments emphasized the social aspects of acclimatizing students to the culture of their respective schools, but other benefits have been suggested as well.

Jacobs and Archie (2008) evaluated not only the social aspect of student engagement but also a pedagogical aspect: "The learner's active engagement, which is part of the experiential learning process, as well as the relationships developed and nurtured through experiential education are likely to positively and significantly influence a learner's sense of community" (p. 284). Pomerantz (2006) supported this view:

> The connections between student learning and student engagement are crucial: learning requires the learner to be engaged actively in the process of learning. In adopting this concept of learning, student affairs professionals need to plan and

> design out-of-classroom experiences that directly relate to identified learning outcomes. (p. 181)

Boroch et al. (2010) added the following specific pedagogical applications of student engagement principles to instruction: "individualization, learning styles, collaboration, critical thinking, and classroom assessment" (p. 70). Barkley (2010) summarized the pedagogical value of engagement, postulating that collaborative learning aligns with the idea "that knowledge is socially constructed rather than discovered" (p. 26). Educators from the social science areas have frequently refused to accept this holistic model of learning, considering it too unscientific, which makes quantitative studies such as this one critically important in the current climate of test-driven, outcomes-based education (Babcock & Thonus, 2012; Schendel & Macauley, 2012).

Pomerantz (2006) provided an itemized list of engagement concerns as they pertain to a more holistic instruction, which will be discussed in light of writing center pedagogy in the next section:

> (a) learning is preeminent; (b) learning requires action on the part of the learner and results in change to that learner; (c) similar types of learning occur throughout campus, both inside and outside the classroom; (d) these types of learning can be identified and articulated as learning outcomes; (f) students engage in a series of behaviors in the process of achieving those learning outcomes; and (g) student affairs interventions can be crafted to optimize the opportunities for students to engage in these behaviors. (p. 181)

Thus far, this review has focused mostly upon general engagement and pedagogical issues. The review will now shift to a more specific discussion of learning communities

as engagement practices, which will then lead to a review of the research on writing centers as learning communities.

Communities of any sort, including learning communities, are intricate webs of relationships, and any discussion of learning communities must consider interpersonal relationships. For instance, Gallagher (2011) asserted that teaching and learning are "acts and arts of engagement, and they succeed or fail on the strength of *relationships*" (p. 463). Wenger, McDermott, and Snyder (2002) emphasized the value to contemporary society, which has devolved away from traditional neighborhood experience of instituting communities, both in the workplace and in the schools, which prepare students for the workplace and allow such relationships to flourish: "Perhaps some of the appeal of communities of practice is that they are an avenue through which we can recover some of our lost sense of community" (p. 74). Barkley (2010) opined, "Building learning communities that help students feel connected to rather than isolated or alienated from the teacher and their classmates addresses a basic, motivational human need to be a part of a social community" (p. 25). In summary, this study considered the influence of writing centers upon engagement from both a social perspective and a pedagogical perspective.

The scholarship reviewed has postulated that engaged students perform and persist in school better than non-engaged students. Moreover, researchers have presented learning communities of various sorts as effective means of promoting student engagement. This review will now shift toward the next section, which discusses writing centers as potential agents for engagement. Schuh et al. (2011) advocated replacing an instructional paradigm with a learning paradigm in which "educators encourage students

to become active, engaged, reflective partners in learning and codesign with students active learning environments that they will use to achieve specific learning outcomes" (p. 390-91). This brings the review to a discussion of the use of peers within proposed learning communities.

Boroch et al. (2010) maintained, "Collaborative learning is based on social cognitive theories suggesting that students' learning can be facilitated and enhanced by connectivity to peers" (p. 74). Kuh et al. (2005) went so far as to claim the benefits accrue to all parties involved:

> Using talented students in paraprofessional roles has been encouraged for decades but we have not seen such widespread effective use of them as we did at DEEP institutions. Not only do paraprofessionals stretch precious institutional resources further to reach more students, but paraprofessionals themselves typically benefit in numerous ways from the experience. (p. 280)

Peer tutors in writing centers fit under the rubric of "peers" and "students in paraprofessional roles." Therefore, discussion of some of the research on writing centers regarding student retention and student engagement is presented.

Writing Centers

Recommending measures to promote student engagement, Tinto (2012) said, "Institutions should ensure that all first-year students have the experience of learning in community with others" (p. 123). Writing centers provide one option for those seeking a learning community. The literature reviewed in this section is organized into three general subgroups, though there was a good deal of overlap between those groups, as has occurred between this section and the previous sections on retention and engagement.

The three subgroups discussed next, all of which factored into this study, are tutoring centers in general, the importance of writing as a core competency for all college students, and writing center pedagogy.

Tutoring centers. Referring to the National Survey of Student Engagement, Kuh et al. (2010) asserted that it identifies the following:

> clusters [of] broad categories that represent important student behaviors and institutional factors. . . . the clusters are (1) level of academic challenge, (2) active and collaborative learning, (3) student-faculty interaction, (4) supportive campus environment, and (5) enriching educational experiences. (pp. 173-74)

Educators have long claimed writing centers address such requirements, and research should more accurately determine whether these more holistic desired benefits have accrued from the presence of writing centers. The literature reviewed next focuses upon writing centers which employ best practices in their profession by addressing the clusters identified by Kuh et al. (2010).

Barkley (2010) mentioned three engagement measures which match the pedagogy of many writing centers offering one-on-one tutoring: "Providing students with high-quality assessment and feedback, helping students to develop metacognitive skills, and empowering students as partners in the learning process are three approaches to helping students work in their optimal challenge zone" (p. 32). In a properly performed tutorial, the assessment is immediate, the Socratic questioning posed by the tutor to the student demands a metacognitive response, and the student is an active participant in the instruction (Boroch, 2010). Moreover, many students consider the one-on-one arrangement of tutorials more user-friendly than group classroom instruction. Rossini

(2002), as cited in Boroch, (2010), added, "Writing and reading centers can promote literacy skills by providing opportunities to practice skills in a safe and supportive environment, promoting community and social learning models, emphasizing process development, and supporting instruction" (p. 60).

Furthermore, Perin (2004) pointed out an additional benefit: "In their scope and variety of services, college learning centers conform to one of O'Banion's (1997) six principles of the ideal 'learning college,' the availability of a variety of learning options" (p. 560). Classroom instruction is designed for the entire class, and even when small group work is used, classroom logistics demand that everyone stay on essentially the same schedule and the same skills set, which may or may not fit the needs of any given individual student (Perin, 2004). In a one-on-one tutorial, the task and pace of work can be custom designed to the student's needs and can be changed whenever it is deemed not to be working effectively (Perin, 2004).

Also of importance, Tinto (2012) made the connection specifically concerning the student demographic that largely composes the developmental composition cohort in community colleges: "Students who were mentored became better integrated both socially and academically, and more committed to earning their degree. Mentoring is especially important for low-income, first-generation college students…as well as for academically underprepared entrants…" (p. 28). Amplifying upon this, Tinto (2012) postulated writing centers can "serve as secure, knowable ports of entry, enabling them to develop cognitive maps of the academic and social geography of the campus…. They also provide a place where students can 'let their hair down' and restore their emotional energy…." (p. 29). Referencing voluminous previous research, Griswold (2003) came to

the same conclusion regarding the importance of tutoring to developmental education students: “Similarly, data from the National Study of Developmental Education demonstrate that the presence of well-trained tutors is among the most significant elements related to student success in remedial programs)” (p. 279). This remedial student profile is most likely to appear in the demographic makeup of community colleges, giving added importance to the research carried out in this study.

One public relations problem that writing center directors sometimes face with faculty suggests an already perceived link between writing center usage and student retention. Research conducted by Perin (2004) found, “The center provided assistance to students who enrolled in remedial courses. A developmental education instructor noted that students who used the learning center had better persistence rates but sometimes received an inappropriate amount of help with course assignments” (pp. 576-77). Faculties commonly make this charge, and some instructors even discourage students from using the writing center because instructors want the students to “do their own work.” This criticism may confirm that instructors believe students who use the writing center do better than students would without the tutorials. With proper training, tutors help students improve students’ writing skills without doing their work for them.

Student retention and student engagement have already been discussed in the first two sections of this chapter. Now, this review will focus upon the literature dealing specifically with the influence of tutoring upon those two critical areas of interest. It will focus first upon retention and then upon engagement.

Very little research exists statistically demonstrating that tutoring significantly improves grades of large populations of students. However, tutoring does seem to

improve retention. Reinheimer and McKenzie (2011) claimed, "tutoring had a significant impact on retention, but not on GPA or on time to select a major" (p. 22). Griswold (2003) reached the same conclusion: "In an extensive examination of survey data supplied by more than 900 institutions, Beal and Noel (1980) found that peer tutoring is considered to be one of the most effective retention efforts reported" (p. 279). Not only have researchers noted a connection between tutoring and retention, but they have also suggested that at least one of the reasons for this effect is the increased level of student engagement, possibly resulting from the student's relationship with a tutor (Reinheimer & McKenzie, 2011).

Discussing the poor retention prospects of students who have no declared major, Reinheimer and McKenzie (2011) mentioned the value of tutoring in providing those students with a connection to the school in the absence of any departmental links that a student with a declared major would have: "Since undeclared students lack a major, this type of environment provides the undeclared student with the opportunity to engage in substantive peer interactions, which might not otherwise occur" (p. 25). Kostecki and Bers (2008) also noted the interpersonal, social value in addition to subject knowledge gained: "tutoring may also link a student with someone who cares. This feeling of connection can be a crucial factor affecting students' experiences at a college, making them feel at home and encouraging persistence" (p. 12).

Because of the critical importance of promoting student engagement until students can establish a feeling of being a part of their college, Reinheimer and McKenzie (2011) recommended that faculty should promote tutoring specifically for that reason:

> Tutoring has been shown to enhance the undeclared students' possibility of becoming more academically and socially integrated. Professors and administrators working with undeclared students should encourage students to seek tutoring, thereby assisting students to become more academically and socially integrated into the fabric of higher education. Tutoring should be one of the key programs utilized to help change the future of retention rates, and by making the most of tutoring programs, we may soon realize significant changes in retention rates across more college and university campuses. (p. 34)

Thus far, this review has focused upon literature discussing the importance of tutoring in all disciplines. It will now shift to a discussion of literature emphasizing the particular importance of writing skills in a student's prospects of persisting in school and then continue to the part writing centers play in that specific field of study.

Writing as a core competency. Even in the second decade of the 21st century, reading, writing, and math remain three of the basic skills required to succeed in college, and the lack of any one of those skills jeopardizes a student's chances of persisting. Many students fail in college directly because of poor writing skills. Cleary (2012) pointed out, "more adults could be retained through their first year if they received writing instruction that responded to their individual needs" (p. 373). There are limits to how much individualized instruction and one-on-one time a classroom instructor can give a student, and perhaps the most obvious benefit of any sort of tutoring is this individualized approach.

Referencing several researchers in the field of composition and rhetoric, Cleary (2012) addressed several of the problems faced by community college students and developmental education students in particular:

> Anna Zajacova, Scott Lynch, and Thomas Espenshade found that nontraditional students at CUNY ranked "writing term papers" as the most stressful of twenty-seven tasks…, where [s]tress has generally been found to have a negative influence on GPA and on staying enrolled…. Adults just returning to school have substantially higher anxiety about school in general and writing in particular than younger students…. Gretchen Starks showed that adult women at a rural community college "felt writing was a barrier to their ability to continue in college…. (p. 365)

These are precisely the students most likely to drop out of a community college, often because of a sense of being inadequate to the challenge of acquiring the knowledge needed to persist. Discussing this aspect of retention, Schmidt and Alexander (2012) concluded, "Writing centers are increasing student-writers' beliefs about what and how they can perform as writers, which is being introduced in this study as writerly self-efficacy" (p. 1). Schendel and Macauley (2012) made the same point: "Research has shown that students' writing success is affected by their self-confidence (self-efficacy)" (p. 149). Among other items of inquiry, this study sought to answer these scholars' question about the potential effects of tutoring upon self-efficacy.

Kuh et al. (2010) believed strongly enough in student support services, which include writing centers, that they recommended, as a matter of policy, "encouraging and even requiring students to participate in experiential activities such as internships,

practica, and field placements so that students gain experience in applying what they are learning to real-life situations" (p. 240). The authors referred not only to academic support and personal support but also specifically to the importance of writing skills in a student's prospects for success:

> The presence of such centers and programs highlights the importance these colleges and universities place on developing and enhancing students' written communication skills . . . . The centers are 'relaxed environments' where students can get both in-person assistance and online writing consultation. (Kuh et al., 2010, p. 185-86).

Bergmann (2010) has also written about writing centers specifically as sites of engagement. Briefly stated, these authors suggested that writing centers not only help students with one of the basic academic skills requisite for success but also provide a social context that encourages persistence.

Writing center pedagogy. Writing center pedagogy is experiential and process based. According to Bird (2012), educators need to "rethink our view of learning" (p. 2) regarding writing center practice. Bird (2012) hypothesized that, "If we view learning strictly in the sense of gaining a product (a writing skill or concept), we limit the learning potential almost as much as we did when we focused on non-directive strategies" (p. 2). Bird (2012) found that writing center best practices of Socratic hands-on learning promote deep learning, as opposed to mere assimilation of some certain sets of discrete skills, and concluded that educators need to facilitate better writing skills, better essays, and better general thinking processes. This study asked whether such pedagogy relates in

any way to student engagement and, by extension, student retention among developmental composition students in one Missouri community college.

Student engagement and retention are influenced from different perspectives, many of which writing centers address. Referencing numerous scholars discussing the various benefits of writing centers, Griswold (2003) stated:

> Such programs integrate best practices for retention: writing centers contribute to making their campuses 'involving' by providing accessible learning experiences outside the classroom; they are firmly grounded in the academic discipline of composition…; they enhance the campus environment for students by providing interaction with campus representatives, that, while being less formal and evaluative than the classroom…, nonetheless focus on academics. (pp. 279-80)

Moreover, the benefits of a writing center are not limited to composition courses, at least concerning retention. Referring to a writing center that had previously served only the English Department, Perin (2004) observed, "This service appeared to improve the retention rate for these classes, in which dropout occurred as the work became harder" (pp. 576-77). A significant part of the value of writing centers, besides the instruction, appears to be the human connection. Thonus (2002) observed, "Student A reasoned that the differences between her tutors and her instructor created 'a comfort zone' in tutorials. The relaxed atmosphere was 'not unprofessional, but it's less professional [than talking to a professor], more on a friendship basis'" (p. 126).

Several researchers used the term motivation interchangeably with the term engagement, one of the key ideas dealt with in this study. Referencing one of the top motivational theorists in the world in relation to writing centers, Robinson (2009) said,

"Rather, our goal in writing centers instead could be to move students towards being more intrinsically motivated…; to have them write and make knowledge through their writing however they can, in order to achieve this intrinsic motivation" (p. 71). This entails a dual concept central to writing center pedagogy, that of Higher Order Concerns (HOCs) versus Lower Order Concerns (LOCs) (Robinson, 2009). HOCs are the more global issues involved in writing: thesis, organization, content development, logic, coherence (Robinson, 2009). Composition theorists agree that these issues should be dealt with first, and then, once the basic structure of the piece of writing is in place, the writer can deal with the LOCs: spelling, grammar, punctuation, word choice, style (Robinson, 2009). Ironically, most students, and some instructors, focus upon the LOCs first, one of the most common mistakes inexperienced writers make (Robinson, 2009). This brings the review to the metacognitive value of writing center tutorials.

One of the greatest benefits both to students' writing skills acquisition and to the overall educational prospects offered by writing centers is the process-based approach to composition, as opposed to the product-based approach that many first time visitors enter with. Referring to this, Robinson (2009) stated:

> Writing centers will be more effective, then, if we can help students integrate their desire to undertake a task with their own self-conceptions. Encouraging this shift is particularly important in helping students move from a focus on surface concerns to one on invention and textual engagement, which is what instructors generally reward in writing classes. Writing centers, therefore, are useful spaces for…basic writers in particular, if they can provide a venue where students can ask for help with those areas of the writing process that might be more identified

> with the self—finding something to write about, engaging with and developing upon someone else's ideas, and, importantly, seeing grammar and language as something more integrated with a student's sense of identity as a writer, an academic…. (p. 78)

Given the emphasis upon LOCs at the expense of HOCs in K-12 education, many postsecondary students come in with excessive concern for sentence level issues, to the detriment of the critical thought exhibited in their writing (Robinson, 2009). This issue cannot be resolved in a single one-hour tutorial, which leads to one of the key issues of this study. The real benefits of visiting the writing center do not begin to accrue until a student has attended multiple times (Robinson, 2009). Therefore, this review will now move on to the literature discussing multiple visits.

Research has shown that the engagement, retention, and skills acquisition benefits increase after the student has been tutored three or more times. Robinson (2009) observed, "Helping students to move towards intrinsic motivation brings them closer to admission to the mainstream academic culture, but to make that kind of progress, they must come to the writing center multiple times" (p. 89). Reinheimer and McKenzie (2011) added, "The interpretation of this statistic is that student who requests tutoring is more than 2.7 times as likely to be retained as a student who does not request tutoring" (p. 32).

A major aspect of a student's sense of self-efficacy revolves around being engaged with the actual content of his or her work, specifically with the higher order concerns, as opposed to mere surface level correctness. Robinson (2009) made the point thus:

> The single-session students confirm the impression that when students first come to York's Writing Center, they are seeking help with fulfilling the demands that we would associate with an external LOC: . . . The data from the other end of the spectrum, however, show that when students return to the Writing Center for multiple sessions, they shift from the left- to the right-hand side of the intrinsic motivation spectrum, from low to high. (p. 84)

The goal is to motivate students to make this shift on their own by employing a non-directive Socratic method, and it does not happen in one visit. Therefore, it is critically important to promote an ongoing relationship with the student, which not only yields the desired academic results but also provides the student with a human connection which may make the difference in whether he or she persists in school.

One final observation in this section leads directly to one of the key questions of this study, namely whether any statistically demonstrable relationship exists among number of tutorials and student engagement and retention. Speaking of multiple visits to the writing center, Robinson (2009) maintained:

> After repeated sessions at the writing center, students expand their definition of what successful writing means, and, moreover, they have the skills to take advantage of their tutor's help with the types of writing task that this expanded view entails....the threshold for students to start asking to work on those areas of their writing that we have identified as being intrinsically motivated, with an internal LOC, is three sessions. (p. 85)

In summary, the literature reviewed in this chapter has focused upon three basic components of this study: student retention, student engagement, and writing centers.

Much of the research in those three areas overlaps, and rightfully so, given the purpose of this study, which sought to determine whether they were as integrally related as some of the aforementioned scholars have suggested. For the purposes of coherence, this review has attempted to separate the three as much as possible and to consider each separately before re-synthesizing them in the research and the analysis of that research. However, decades of research, as illustrated by this sample, supports the contention that there may be a link between student use of a writing center, student engagement, and student retention, certainly enough to merit the study carried out herein.

The remainder of this chapter is focused upon past literature regarding research in the writing center profession to provide a sample of previous research and, by contrast, suggest some of the future needs in writing center research. This portion of the review surveys literature regarding previous research and postulating what sort of evidence might satisfactorily demonstrate a writing center's value to its various constituencies, such as administrators, faculty, students, and the community at large. These are hard questions, and Altbach, Gumport, and Berdahl (2011) addressed the difficulty thus:

> Complex learning outcomes are extremely difficult to identify, to agree on and then assign priorities, and to communicate to government officials and the public. . . . First, it is essential to translate goals into relevant and agreed-upon outcomes. An even more complicated task is to devise means of determining the extent to which students have attained these outcomes. (p. 79)

Even Farnsworth (2010), calling for more rigorous assessment of teaching and learning across the educational spectrum, conceded, "Quantitative (statistical) studies are often quite good at telling us what is happening, but not too successful at telling us why" (p.

160). For this reason, methodology was one of the most crucial components of this study.

Discussing the need for more cohesion in the research literature, Gofine (2012) provided general parameters for how this might be done: "While investigators currently develop isolated lines of research, a more effective approach might be for researchers to collectively focus on a small number of issues that are of common concern to the majority of writing centers" (p. 47). Then she addressed the "limited validity" of "most assessments employed by writing center administrators" and suggested:

> The collective focus of scholars might address this problem by concentrating on developing assessments of high validity. . . . Use of mixed methods for these assessments might respond to scholars' calls for increased use of quantitative methods within this field. (Gofine, 2012, p. 47)

Altbach et al. (2011) stated colleges need to implement "processes that are compatible not only with the character of colleges and universities, but also with the complex political and professional judgments faculty and institutional administrators must make to maintain and achieve a quality academic program" (p. 85). This emphasizes the importance of choosing assessment methods specifically tailored to the institution a writing center serves and leads directly to one of the key challenges with conducting accurate, pragmatic research.

Writing centers, academically speaking, deal with composition skills, and the field of composition teaching as a whole has had difficulty over the years assessing whether instruction was taking place because writing is a holistic skill as opposed to a set of memory items that can be measured by a standardized test. Jones (2001) pointed out:

> Although hard, concrete evidence for its efficacy may be minimal, the testimony of students who report more ease and self-confidence with the process of writing, who ask more concise and more pointed questions; the peer tutors and editors whose work shows greater refinement; and the professors who find it easier to focus on the content of students' work when it is more focused and better organized, serve to validate the importance of the writing center on campuses and online. (p. 18)

As has been pointed out previously, some anecdotal evidence exists from qualitative surveys of students claiming they have benefitted from being tutored; however, the few quantitative studies which have attempted to demonstrate the truth of those claims have generally been unsatisfactory by current accepted research standards.

In a much-quoted essay, entitled "Choosing Beans Wisely" (2001), Lerner discussed a previous quantitative analysis research project demonstrating that tutorials did improve student writing, only to retract the claim four years later with an essay admitting that his research methodology had rendered inaccurate results. Bredtmann, Crede, and Otten, (2011) addressed the issue thus:

> In contrast to qualitative findings of WcR [writing center] participation, which were based on students' course evaluations attesting it to be very effective, our quantitative analyses could not find a significant effect of WcR visitation on students' writing ability, as measured by their written examination grades. . . . This finding underlines the need of educational institutions to also rely on quantitative methods for evaluation purposes, as qualitative methods may be biased by unobserved and unconsidered factors. (pp.20-21)

These quantitative methods being called for, if they are to have value, will demand some sort of quantifiable skills sets to be measured in students' writing and then compared and contrasted in the writing of students before and after tutoring takes place. Thus, the key question becomes what to measure in a skill, such as writing, which would readily lend itself to quantitative analysis. Bredtmann et al. (2011) pointed out the biggest challenge for researchers seeking to design meaningful research in this field: "The main problem of evaluation of policies is the differentiation of correlation and causality" (p. 8).

Addressing this challenge, Babcock and Thonus (2012) offered one suggestion for quantifying the value of writing center tutorials which applied to this study:

> Smith compared two sections of a basic writing course taught by one private-college instructor. One of her research questions was 'Do mandatory writing center visits in developmental college writing courses improve retention rates?' (p. 26). Data collection included quantitative measures (pass/fail rates, one-semester and one-year retention rates). (p. 88)

While this approach did not measure the actual writing, it did at least measure whether students' academic careers were being influenced.

In a study similar to that of Babcock and Thonus (2012), Kostecki and Bers (2008) found that tutoring does influence retention: "The results indicate that tutoring does matter: a student who obtained tutoring was 1.8 times as likely to successfully complete a course after controlling for the effects of race/ethnicity, gender, or course placements" (p. 10). They also found that tutoring has a positive effect upon whether students will return the following semester: "Again, the results indicate that tutoring does matter. A student who obtained tutoring was 2.3 times as likely to persist to the spring

semester after controlling for the effects of race/ethnicity or course placements" (Kostecki & Bers, 2008, pp. 10-11). These examples illustrate there have been quantifiable studies done in the field, but more are needed, and this present study proposed to add to the scholarship.

Schmidt and Alexander (2012) offered yet another perspective for seeking quantitative data regarding writing centers, one that keys directly into the student engagement issue: "Self-efficacy offers a quantitative assessment avenue that is replicable, causal, and sustainable in writing centers and, as a longitudinal measure, is exclusive to writing centers" (p. 2). The student engagement questions in the survey designed for this study were deliberately composed to measure precisely this aspect of tutorials' effects upon students.

Addressing the difficulty of quantifying results in students' writing, Gofine (2012) offered the following suggestion taken from previous research in the field: "Some investigators examine the development of a client's writing by quantifying the quality of the writing before and after writing center tutoring and then using statistics to analyze the data…" (p. 44). This sort of research would involve looking at student writing samples, which would entail an additional and highly complex component in the research. While the present study addressed writing improvement in the descriptive analysis, it did so in terms of students' perceptions about their improvement as opposed to any quantifiable improvement in their writing. This leads to a possible problem, pointed out by Gofine (2012): "Bredtman, Crede, and Otten's Quantitative data (the grades that students received on assignments that were discussed during writing center tutorials) indicated that tutorials had no effect on student outcomes" (pp. 18-19). Then, she immediately

followed, “However, the findings from these data contradict their findings from the qualitative data, which indicated strong student satisfaction with writing center tutorials” (Gofine, 2012, p. 44). Yet the students’ perceptions may nonetheless have value insofar as a perception of progress might encourage a student to persist, even when there is no statistically demonstrable improvement in the writing.

This review concludes with two pieces of literature discussing the importance of finding a way to do meaningful, useful research about the efficacy of writing centers. Barkley (2010) observed:

> Authentic assessment aims to be realistic, which means the task reproduces the ways and the contexts in which a person’s knowledge and abilities are “tested” in real-world situations. This typically involves the student “doing” the subject. Instead of reciting, restating, or replicating through demonstration what he or she was taught or what is already known, the student has to carry out the kind of exploration and work that constitutes “doing” the discipline. (p. 29)

Carrying out acceptable quantitative research on such skills as Barkley discussed in terms administrators, politicians, and business leaders will accept has proven prohibitively difficult over the decades, and this study attempted to measure factors which are valued, namely retention and engagement, in a manner that could be quantitatively demonstrated.

World-renowned learning organization scholar Peter Senge (1990), in his classic book, *The Fifth Discipline*, noted the danger of oversimplifying assessment criteria in the name of appearing scientific:

> Because service quality is intangible, there is a strong tendency to manage service businesses by focusing on what is most tangible: such as numbers of customers

> served, costs of providing the service, and revenues generated. But focusing on what's easily measured leads to "looking good without being good"--to having measurable performance indicators that are acceptable yet not providing quality service. Work gets done but at a steadily poorer standard of quality, by servers who are increasingly overworked, underpaid, and under-appreciated. (p. 333)

Therefore, studies, ideally, should provide plenty of quantitative data which truly measures whether writing centers provide the holistic benefits they claim to provide as well as providing means to improve those benefits.

In the next chapter is a discussion of the methodology designed for this study. The purpose of this study, as well as the research questions and hypotheses are presented. Instrumentation, the data collection procedures, and steps to analyze the data are explained.

Chapter Three: Methodology

Community college administrators often cite student retention as one of the two most important issues they face, and they want quantitative data demonstrating improved retention. Research in higher education across the nation reflects the same concern and has shown student engagement to be one of the major influences upon retention (Barkley, 2010; Habley et al., 2012; Kuh et al. 2005; Tinto 2012). Therefore, experiential influences, such as writing centers which can possibly improve student engagement, should interest higher education institutions. Supporting this proposition, Jacobs and Archie (2008) pointed out:

> If experiential education methods and programs can assist universities with their retention efforts, this may help to bring positive recognition and regard to experiential education. The learner's active engagement, which is part of the experiential learning process, as well as the relationships developed and nurtured through experiential education are likely to positively and significantly influence a learner's sense of community. (p. 284)

Numerous studies have shown, when students are engaged with their education and integrated into the culture of their school, they tend to be more motivated to succeed and more likely to stay in school and pass their courses (Barkley, 2010; Habley et al., 2012; Kuh et al., 2005; Tinto 2012).

This study was designed to determine whether the writing center serving one community college in Missouri was influencing students' engagement with the academic culture of their school and consequently improving its students' retention rates. Driscoll and Perdue (2012) pointed out, "Most of what has been published as research in WCJ

[*The Writing Center Journal*] is not replicable, aggregable, and data supported; in other words, it does not meet the test of what other disciplines define as evidence-based research" (p. 35). Therefore, to address this perceived deficiency in quantitative research, the present study employed a quantitative method for its research design. This chapter describes the study's general overall method.

Problem and Purpose Overview

The purpose of this study was to learn if writing centers have an impact on supporting student retention and engagement. Bredtmann, Crede, and Otten (2011) stated, "Evaluation design for educational programs should rely both on quantitative methods, which allow the measurement of effectiveness, and qualitative feedback providing valuable insights into student attitudes and explanations for possible ineffectiveness" (p. 21). Writing center researchers, Babcock and Thonus (2012), Driscoll and Perdue (2012), and Schendel and Macauley (2012), have also called for more quantitative methods in writing center scholarship. Retention, engagement, and writing center usage data from one college participating in this study were included.

Research Questions and Hypotheses

This study proposed to address the following questions and hypotheses in hopes of determining whether student usage of a college writing center influenced engagement and/or retention.

1. What difference, if any, is there between the number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class?

Ho. There is no difference between number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class.

Ha. There is a difference between number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class.

2. What factors related to retention do developmental education composition students most often report as being influential in their college experiences?

3. What factors related to engagement do developmental education composition students most often report as being influential in their college experiences?

4. What factors regarding the community college writing center do developmental education composition students most often report as being beneficial in their college experiences?

Research Design

Much of the research on composition and writing centers carried out during the past four decades has been qualitative research, mostly anecdotal testimonials, ethnographic studies, and case histories (Babcock & Thonus, 2012; Driscoll & Perdue, 2012; Schendel & Macauley, 2012). Given the current climate in higher education and the resulting demand for more accountability and quantitative research in all fields, many of the constituencies to whom writing center directors must answer are refusing to accept those qualitative studies of the past and are demanding more quantifiable methodologies. Such demands have been noted by researchers in the fields of composition, rhetoric, and writing centers, and this study attempted to respond to those demands. Employing

research methodologies discussed by Bluman (2010), Creswell (2009), Fink (2009), and Fraenkel, Wallen, and Hyun (2012), this study used quantitative methods, reflecting current research and practice in the field of higher education, targeting an entire cohort of developmental composition students at one community college. Quantitative methods used here responded to the critique of such writing center scholars as Babcock and Thonus (2012), Driscoll and Perdue (2012), and Schendel and Macauley (2012), who have called for replicable, aggregable, and data-driven quantitative research. Specifically, this study collected, presented, and analyzed quantitative retention data collected from the campus Institutional Research (IR) Office, quantitative writing center usage data, and quantitative survey data from an online survey (see Appendix A).

In current academic circles, retention is defined in various ways. For this study's purposes, retention was defined as having occurred when a student completes and passes his or her developmental composition course, which allowed retention to be quantifiably measured. This study measured engagement by employing descriptive analysis of quantifiable survey questions designed to indicate a student's perceived self-engagement as suggested by Paine, Gonyea, Anderson, and Anson, (2008). Schendel and Macauley (2012) recommended the following:

> A smart move for writing centers would be to adapt CWPA [Council of Writing Program Administrators] outcomes to our local contexts, then cross-check our assessment results against the data many of our institutions are already collecting via the NSSE more generally, but particularly from the twenty-seven NSSE-WPA consortium questions which you can read about at the Consortium for the Study of Writing in College Website. (p. 97)

However, neither the actual NSSE-WPA exam nor its results would serve the purposes of this study because the exam was administered to a random sample of students from the general student population; therefore, this study used a custom-designed online survey sent to the entire cohort of developmental composition students at one school.

Population and Sample

The population for this study included students in community colleges in Missouri who were enrolled in developmental composition. The sample student population from the two-year community college in the study consisted of all students enrolled in developmental composition classes during the fall 2013 semester, totaling 1,234 individuals. The subject students for this study were not a random sample; instead, the online survey was sent to every developmental composition student at the college during the semester when it was administered. All respondents were surveyed anonymously to protect their privacy and the privacy of their institution. The IR Office compiled the information needed for this study. Moreover, usage data were gathered from the writing center records which logged every visit of every student who used the service. Student population data retrieved were separated into three groups based upon the number of times, if any, the students visited the writing center to observe what patterns appeared.

Instrumentation

The driving rationale behind this study's instrumentation was to learn what Anderson and Krathwohl (2001) described as the "alignment," or lack thereof, between the writing center's desired outcomes and actual outcomes of promoting student engagement and student retention. Data consisted of three basic components: (1) the

college's Institutional Research (IR) data on student retention; (2) the writing center's data which record student use of the service; and (3) data from an online survey instrument sent to all developmental composition students of the college being studied. Each component is briefly described below.

Student retention data. The first component of this study employed student retention data collected from the college's IR Office detailing how many developmental composition students enrolled in and satisfactorily completed their course. As mentioned earlier, 1,234 students were enrolled in developmental composition courses for the Fall 2013 semester. After final grades were assigned and recorded early in the Spring 2014 semester, the IR Office provided a complete and accurate record of all developmental composition students' course grades.

Developmental composition courses were assigned simple pass/fail grades by the college English Department; a 70% or higher total passed, and a 69% or lower total failed. Each grade for each student was recorded by student ID number, which allowed a match to be made with the ID numbers recording number of visits made to the writing center while maintaining each student's anonymity. Once the numbers had been matched for the purposes of the study, the ID numbers were eliminated and were in no way used to identify any individual. The pass/fail totals were compared for each of three groups: students who never visited the writing center, students who visited the writing center one to two times, and students who visited the writing center three or more times. These groups will be discussed in the next section.

Writing center usage data. The second component of this study involved retrieving data detailing which students were tutored in the writing center during the

semester being studied. Writing center data were procured from the online record keeping program used by the writing center at the participating college. Information tracked in this program included every visit made by every student, the date every visit took place, and the duration of every tutorial. Student names were not used; rather, ID numbers were used to match student visitors with their outcomes for their developmental composition courses. Again, student anonymity was strictly protected in every phase of this study. Only data for developmental composition students were collected. Those data were separated into three groups: students who never visited the writing center, students who visited the writing center one to two times, and students who visited the writing center three or more times.

Student survey data. Finally, an online student survey measured student perceptions regarding their chances of persisting in school, their level of engagement, and the effects of being tutored in the writing center upon the previous two factors. As a general summary, the instrument for this quantitative study consisted of an online survey, modeled upon and adapted from the Counsel of Writing Program Administrators (WPA) and the National Survey of Student Engagement (NSSE) Consortium for the Study of Writing in College Survey (Paine et al., 2008), the Community College Survey of Student Engagement (CCSSE) survey, and the Classroom Survey of Student Engagement (CLASSE). The survey consisted of 19 questions, with the first ten questions collecting responses regarding the students' perceived chances of persisting in their courses as well as perceived engagement with the culture of their college. The tenth question in this series asked whether the student had visited the writing center during the semester in question, and if so, how many times.

Specifically, the first part of the survey consisted of nine Likert-scale questions designed to determine students' perceptions of their prospects for persisting in school and engagement with the community of their school. Students were asked whether they expected to complete all of their courses with a passing grade, including their developmental composition course, and expected to enroll in courses at their present college or another college next semester and complete their two-year degree or transfer to a four-year college within the next three years.

Students were also asked whether they were an active member of at least one student organization or activity group affiliated with their college, indicating whether they considered themselves actively engaged with the culture of their college and considered themselves motivated to succeed in college and go on to a successful career. Finally, students were asked whether they were on personal speaking terms with at least one of their professors or college administrators outside of the actual classroom and believed the faculty and administration of their college were sincerely concerned about them as individuals. These Likert-scale questions were answered *strongly agree*, *agree*, *disagree*, or *strongly disagree* to prohibit respondents from taking the neutral middle option in a five-option scale, thus forcing the scale to tip to either the positive or negative side with each individual respondent, an option suggested by Fink (2009).

The tenth question of the first section asked how many times the student had been tutored in the writing center during the current semester. The question had three options for an answer: *zero times*, *one to two times*, and *three or more times*. If the student answered that he or she had never been tutored in the writing center, the survey was finished. If the student answered that he or she had been to the writing center one or

more times, a second series of questions appeared, consisting of nine additional questions.

The second section of the survey was designed to measure students' perceptions of what role the writing center had played in their engagement and retention. These items asked whether being tutored in the writing center had made them feel more connected to and more engaged with the community of their college. Students were also asked whether being tutored in the writing center had improved their chances of persisting in school, raised their overall grade point average, improved their grade in developmental composition, enhanced their general writing skills regardless of course outcomes, or strengthened their general study skills regardless of course outcomes. Finally, students were asked whether being tutored in the writing center had improved their confidence as a student, helped them develop skills which they could apply to their general education, or encouraged them to participate more in class. As with the first section of this survey, this Likert-scale portion offered the following as response options: *strongly agree*, *agree*, *disagree, strongly disagree*.

The survey was field tested in April 2013, at which time it was emailed to 22 students with a cover letter requesting that they answer the questions, write any questions or concerns they might have regarding the clarity of the questions, and leave their responses, unsigned, at a predetermined location within the following week. Based upon respondents' comments, minor revisions were made to the wording and clarity of two questions, after which the survey was determined to be adequate for the purposes for which it was designed.

Data Collection

Following Institutional Review Board (IRB) approval (see Appendix B) of the study by Lindenwood University and the participating college, early during the Fall 2013 semester, data were collected from the college IR Office identifying every developmental composition student at the college. Student engagement and perceptions of the impact of writing center usage were measured by administering a survey to all developmental composition students enrolled in the Fall of 2013. First, near midterm, before midterm grades were released, every cohort member enrolled in a developmental composition course at the college received an invitation to participate in the online survey described above. By this time, a number of student respondents had visited their writing center, and a number had not visited the center, which allowed an examination of how those who had received tutoring and those who had not received tutoring compared and/or contrasted. Second, every student on the list was matched with his or her final grade for Fall 2013.

The survey administered, composed by the author of this study, adapted key criteria outlined in current research in the field of composition education for the specific needs of the target test group. The simpler and faster the process of taking a survey, the more likely students would respond. Therefore, the survey instrument was designed to be as thorough and yet concise as possible in the online format discussed previously. If even a modest percentage of students responded, it would provide a large enough data base to provide meaningful results.

Since this study proposed to survey all developmental composition students, many of whom would have never visited the writing center, a few logistical considerations determined the make-up of the test, the time of administration of the test,

and the follow-up research beyond the test. It was determined the survey needed to be conducted before late semester attrition and the final drop date, yet late enough in the semester that students would have had time to choose to visit the writing center and receive tutoring. Therefore, since this survey was conducted only once, it was administered near mid-term.

After the semester ended, the actual retention outcomes were requested from the IR Office to measure in conjunction with the enrollment data collected. Concurrently, writing center usage data were collected from the center's online data- base, and students were grouped by use or non-use of the writing center's tutoring services to measure what, if any, differences between the groups appeared. The IR data and writing center usage data detailing number of student visits and student retention were handled objectively and with anonymity. The final data at the end of the semester indicated whether each developmental composition student successfully completed his or her developmental composition course during the semester.

Data Analysis

Once collected, all data were analyzed in two sets. First, student retention data and student writing center usage data collected from the college IR Office were statistically analyzed. Second, the student perceptions data collected from the online survey were analyzed using descriptive analysis.

Retention and writing center usage data. After all data were collected, the information was coded and placed into three groups: (1) students who never visited the writing center, (2) students who visited the writing center one to two times, and (3) students who visited the writing center three or more times. The actual writing center

usage and retention information was completely and accurately harvested from the writing center's online session tracking program and the retention records available from the school's IR Office. Data analysis of the writing center usage and student retention numbers took the form of an analysis of variance (ANOVA) Chi-square Goodness of Fit test, as elucidated by Bluman, (2010), Creswell, (2009), Fink, (2009), and Fraenkel, Wallen, and Hyun (2012). The test sought a confidence interval of .05, in other words a 95% accuracy regarding any possible differences between number of writing center visits and pass/fail rates in developmental composition courses. The ANOVA Chi-square Goodness of Fit test measured how many students from each group passed their developmental composition course and measured whether there was any statistical difference between the number of visits to the writing center and pass/fail rates. This measure was simplified by the fact that the developmental composition courses at the college being studied were simply pass/fail, pass being 70% or higher and fail being 69% or lower.

Student perceptions data. The information gleaned from the online survey measured each group according to student perceptions of their engagement, perceptions of their prospects of persisting, and perceptions of what role the writing center had played in their academic performance. This portion used descriptive analysis employing percentage comparisons. This portion of the analysis was completed after the surveys were collected, while waiting for the end of the semester, at which time the retention data from the IR Office became available.

As with any conceivable survey instrument, the instrument employed for this study contained both limitations and assumptions. After having been field-tested with a

sample group of student tutors and modified accordingly, it may validly and reliably measure the perceived engagement and perceived prospects for retention of those who took the survey, but no one can assume with 100% certainty that students' stated perceptions were accurate. Past research (Gofine, 2012), for instance, has shown that some students believed their visits to the writing center improved their prospects for success when in reality there was no quantifiable evidence that their grades had been influenced in any way by those visits. For the purposes of this study, student perceptions, whether those perceptions matched retention statistics or not, were subjected to descriptive analysis.

The first research question statistically analyzed the total course completion rates of three separate groups: all developmental composition students who never visited the writing center, all developmental composition students who visited the writing center one to two times, and all developmental composition students who visited the writing center three or more times. Collection of these data did not require student participation. The IR Office of the school being studied simply matched those data with the writing center usage data collected through its facility usage software and noted what patterns emerged. These data were not collected until the semester officially ended in order to derive the complete outcomes data and writing center usage data for all developmental composition students.

The next three research questions were answered in a Likert-scale online survey, composed by the author of this study. The information collected therein was subjected not to statistical analysis but rather to descriptive analysis using percentile frequencies of responses to each question. The study measured three components: what the students

perceived regarding their prospects for persisting, what the students perceived regarding their personal engagement with the culture of their college, and whether the students believed the writing center enhanced or otherwise influenced their engagement and prospects of persisting, as opposed to being merely another manifestation of success habits which an already engaged student would develop on his or her own. Those responses were examined, as a supplement, alongside the actual writing center usage and course retention statistics gathered independently of the survey.

Summary

A major concern in writing center research during the past several decades has been that, given the holistic, post-structuralist, qualitative nature of writing center pedagogy, it does not lend itself to the sorts of quantitative research which administrators tend to prefer; and therefore, little satisfactory quantitative research has been done. The purpose of this study was to provide rudimentary quantitative data which would explore whether writing centers bring value to their colleges' mission. Specifically, this study aimed to determine whether a writing center in one community college in Missouri in some way influenced student engagement and, by extension, student retention among developmental composition students.

The research design for this study employed quantitative data regarding engagement and retention among developmental composition students and whether they had ever been tutored in the writing center and, if so, how many times. The retention and writing center usage data were collected by the IR Office and writing center's usage data from the college being studied. These data were subjected to an ANOVA Chi-square Goodness of Fit test seeking a .05 confidence interval. Also, an online Likert-scale

survey sent to all developmental composition students at the target community college gathered information regarding student perceptions of their engagement, perceptions of their prospects of persisting, and perceptions of what influence their usage of the writing center had upon them. These data were subjected to descriptive analysis employing percentages.

Chapter Four: Findings

The purpose of this study was to determine if any measurable difference existed between student usage of a community college writing center and the engagement and/or retention of developmental composition students at one Missouri community college. Numerous scholars and studies during the past several decades have detailed the unsatisfactory levels of student persistence and success. Habley et al. (2012) pointed out, "approximately 40%...of all college students will never earn a degree anywhere, at any time in their lives" (Preface, xiii). Farnsworth (2010) noted the situation bodes worse for community colleges than for four-year universities. Mortenson (2012) asserted, "Persistence rates have declined most in the least selective institutions" (p. 46). Furthermore, Carnevale et al. (2010) stated "by 2018 there will be 46.8 million job openings and nearly two-thirds of these 46.8 million jobs—some 63 percent—will require workers with at least some college education" (p. 110). Therefore, "with current college completion rates there will be a shortfall of 3 million individuals with postsecondary degrees" (Carnavale et al., 2010, p. 109).

In response to this challenge, educators across the nation are working to improve student engagement, retention, and success (Barkley, 2010; Kuh et al., 2005; Tinto, 2012). For instance, one Missouri community college instituted a strategic plan, which identified the institution's strengths, weaknesses, opportunities, and threats, thus listing numerous concerns falling under the auspices of engagement, retention, and/or success (Office of Research Strategic Planning, 2011). Among those items, the plan's analysis listed specifically student success rates, developmental education issues, low performing students, loss of the "small college feel," retention, lack of basic skills, low graduation

rates, and loss of distinction as a provider of individual attention (Office of Research and Strategic Planning, 2011). Institutional responses nationwide to such challenges as these have been numerous, but the focus of this study was limited exclusively to the role one Missouri community college's writing center played in improving the engagement and retention of developmental composition students.

This study was designed to address four questions to determine whether student usage of a college writing center influenced engagement and/or retention by collecting multiple sources of data from different data points during and immediately following one semester. First, the original total enrollment of all developmental composition students for the Fall 2013 semester was collected by the college's Institutional Research office, followed by the tally of those students who dropped the course before completion of the semester. At the end of the term, the pass/fail data were collected for all students who finished the course. In addition, the writing center usage data were collected for all students enrolled in developmental composition in the fall of 2013 in order to statistically measure if writing center usage influenced in any way their course retention rates. At mid-term, an online Likert-scale student survey was sent to all developmental composition students who were still enrolled to solicit their views regarding their perceived prospects for persisting, their level of engagement, and the effects their usage of the writing center may have had upon them.

Respondent Demographics

At the beginning of the Fall 2013 semester at the subject college, 1,234 students were enrolled in one of the 40 developmental composition courses offered. By the final drop date, 987 students remained. The 247 students who withdrew from their

developmental composition course before the final day to drop represented 20% of the total number of students. After final grades were recorded by the college's Institutional Research office, student outcomes were tallied and then matched by student identification number with the number of times each student had visited the writing center during that semester. Data regarding number of visits to the writing center were provided by the TutorTrac program used by the center to record all usage of the service.

Seven hundred forty-four students, or 60%, passed their developmental composition course in the fall of 2013, with 154 of those students (21%) visiting the writing center at least one time. Seventy-one percent of the students who made at least one visit to the writing center passed their developmental composition class. Eighty-eight percent of the total number of students originally enrolled in developmental composition classes never visited the writing center. The 490 students who enrolled for the Fall 2013 semester but did not complete the course and pass included the 247 students who withdrew before the final drop date for the semester. One of the most interesting pieces of information garnered in this process was only 11 of the 247 students who dropped the course by the drop date had visited the writing center. Statistical analysis of the data will be discussed in the next section. Table 1 provides more specific demographic information:

Table 1

Success Rates of Developmental Composition Students

Number of Visits	Pass	Not Pass	Total
Zero	634 (59%)	446 (41%)	1080
1-2	64 (74%)	22 (26%)	86
3+	46 (68%)	22 (32%)	68
Total Students Enrolled	744 (60%)	490 (40%)*	1234

Note. The Not Pass column total includes students who dropped the course before the drop date.

A statistical analysis was conducted on the data for research question one to determine whether a measurable difference existed between the number of visits to the campus writing center and the pass/fail rates of those developmental composition students enrolled in the fall of 2013. The statistical analysis was simplified by the fact that developmental composition classes are designed to collect only a pass or fail score. At this institution, a 70% cumulative average is considered a passing grade and any percentage below 70% is deemed a failing grade, according to college English Department policy.

Developmental composition grades are not used to calculate a student's overall grade point average at the college, but student work earns creditable acknowledgement when feedback is given as follows: NA indicates the student's work was considered an A, NB translates to a B, and NC denotes a grade of C. Any of these grades signifies the student passed the coursework and is eligible to enroll in a credit bearing English composition course. Likewise, grades below the 70% mark are explained in this manner: an ND grade means D, NP means Not Pass (in other words, F), I denotes incomplete, and

W means the student withdrew. If any of these four grades were earned, the student received a failure notice and was not eligible to take a regular English composition course. For the purposes of this study, ND, NP, I, or W also means that the student was not retained.

In regard to the number of visits to the writing center, 154 students visited the writing center at least one time. Of the 154 students who visited, 110 passed developmental composition, representing a 71% retention rate. Eighty-six students visited the writing center 1-2 times during the time they were enrolled in developmental composition. Seventy-four percent of these 86 students passed their developmental composition class. A total of 68 students visited the writing center three or more times, and 46 received a passing grade in developmental composition, representing a 68% retention rate. Over half of the students enrolled in all sections of developmental composition (51%) never visited the writing center but nevertheless passed their coursework. Only 11 students who visited the writing center at least once withdrew from the course, representing less than 1% of the total.

This final number may offer the best argument that visits to the writing center positively influence a student's engagement and prospects for retention. While these percentages taken in tandem suggest a positive influence of writing center visits upon student retention, it was necessary to determine if a statistically significant difference between number of writing center visits and student retention exists. Therefore, the data were subjected to an ANOVA statistical analysis, specifically a Chi-square Goodness of Fit test (Bluman, 2010), which will be discussed in the next section.

Effects of Writing Center Usage upon Retention

The first question (*What relationship, if any, is there between the number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class?*) was analyzed by using an Analysis of Variance (ANOVA) Chi-square Goodness of Fit statistical assessment, according to the principles outlined in Bluman (2010) and Fraenkel, Wallen, and Hyun (2012). The null hypothesis for Research Question One stated no relationship existed between number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class. The alternative hypothesis posited a relationship did exist between number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class.

To determine if the data from the number of visits to the college writing center were statistically significant, the Chi-square Goodness of Fit (Bluman, 2010) was used because two factors were involved: student retention and writing center usage. In this analysis, the comparison of passing grades that were *expected* to be obtained by developmental composition students were compared to passing grades students were *observed* to have obtained. A critical value of 5.991 at 2 degrees of freedom would have to be reached to be considered statistically significant (Bluman, 2010). The result of the analysis, 9.843, was greater than the necessary 5.991 value. The *p*-value obtained, 0.007288, is lower than the .05 level necessary to determine a significant difference between the visits to the college writing center and students enrolled in developmental composition classes.

The analysis suggests a difference exists between the number of visits to a community college writing center and students being retained in developmental composition classes. The confidence interval of .007288 implies, with more than 95% accuracy, that a difference exists between visits to the writing center and students enrolled in developmental education courses. Thus, these visits could be seen as a contributor to successful completion of developmental composition classes and could be an indicator of an intervention to increase retention, because as Habley et al. (2012) discussed in detail, there is no satisfactory concrete measure of what constitutes retention in any long-term sense. However, staying enrolled in and passing a developmental composition course indicates a positive step toward completion of a degree program.

With the results of the analysis being significant, the null hypothesis, stating no relationship exists between the number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class, was rejected. It can safely be concluded that writing center usage did differ from non-usage with regard to student retention in the developmental composition cohort at the participating college during the Fall 2013 semester.

It is important to look at each group collectively and separately from each other. More specifically, the Goodness of Fit test (Bluman, 2010) demonstrated the largest difference in success rates occurred between students who visited the writing center 1-2 times and students who never visited the writing center at all, as illustrated by 2.7692 obtained by the students who visited the writing center 1-2 times, which is higher than the results of 0.4439 obtained by students who did not visit at all. Another large difference occurred between students who visited the writing center 1-2 times and students who

visited three or more times, as illustrated by the same 2.7692 number, which again is higher than the 0.6098 results obtained for students who made three or more visits to the writing center. Finally, the number for those who visited three or more times is slightly more than 25% higher than the number for those who never visited.

Comparison of pass-rate percentages also suggests a positive difference that writing center visits made. The overall expected pass rate was 60%; however, students who never visited the writing center had a 59% pass rate, 1% lower than expected. Students who visited the writing center 1-2 times had a 74% pass rate, 14% higher than the expected pass rate. Finally, students who visited the writing center three or more times had a 68% pass rate, 8% higher than the expected pass rate. Therefore, any way the numbers are compared, the same conclusion appears: a difference did exist between pass rates for developmental composition students who visited the writing center and students who did not visit the writing center. Table 2 provides information from the statistical analysis:

Table 2

Goodness of Fit Test for Developmental Composition Student Success Rates

Pass Rates per Number of Visits

Total	Zero Visits	1-2 Visits	3+ Visits
Observed (O) Pass Rates 744	634 (59%)	64 (74%)	46 (68%)
Expected (E) Pass Rates 741	648 (60%)	52 (60%)	41 (60%)
O-E	-14	12	5
(O-E)^2	196	144	25
(O-E)^2/E 3.6815	196/648=0.3025	144/52=2.7692	25/41=0.6098

Note. $X^2 = 9.843 > 5.991$, $p = 0.007288 < 0.05$, $df = 2$

In order to further compare outcomes of students who visited the writing center with students who did not visit, the failure rates were also compared. As would be expected, the Goodness of Fit test (Bluman, 2010) also demonstrates the largest difference in failure rates occurred between students who visited the writing center 1-2 times and students who never visited the writing center at all, as illustrated by 4.2353 obtained by the students who visited the writing center 1-2 times, which is much higher than the results of 0.6737 obtained by students who did not visit at all. Another difference occurred between students who visited the writing center 1-2 times and students who visited three or more times, as illustrated by the same 4.2353 number, which again is higher than the 0.9259 results obtained for students who made three or more visits to the writing center. Finally, the number for those who visited three or more times is slightly more than 20% higher than the number for those who never visited.

Comparison of pass-rate percentages also demonstrates the positive difference writing center visits made. These percentages are the obverse of the pass rates. The overall expected fail rate was 40%; however, students who never visited the writing center had a 41% fail rate, 1% higher than expected. Students who visited the writing center 1-2 times had a 26% fail rate, 14% lower than the expected fail rate. Finally, students who visited the writing center three or more times had a 32% fail rate, 8% lower than the expected fail rate, again suggesting visits to the writing center did improve pass rates for developmental composition students. Table 3 provides information from that comparison:

Table 3

Goodness of Fit Test for Developmental Composition Student Failure Rates

	Failure Rates per Number of Visits		
Total	Zero Visits	1-2 Visits	3+ Visits
Observed (O) Failure Rates 490	446 (41%)	22 (26%)	22 (32%)
Expected (E) Failure Rates 490	429 (40%)	34 (40%)	27 (40%)
O-E	17	12	5
(O-E)^2	289	144	25
(O-E)^2/E 5.8349	289/429=0.6737	144/34=4.2353	25/27=0.9259

Note. X ^ 2 = 9.843 > 5.991, p = 0.007288 < 0.05, df = 2

The final three research questions regarded the participants' perceptions about their persistence in school, their opinion of their level of engagement with the college community, and if, in their experience, the writing center influenced their retention and engagement. These data were collected by presenting an online Likert-scale survey to 1,167 developmental composition students who were still enrolled after mid-term in the Fall 2013 semester. One reminder email was sent to the students two weeks after the initial survey, and the window was officially closed six weeks before the end of the semester. At this time a total of 36 students had responded, which represents approximately 3% of the target group. While more responses would have been desirable, this is not terribly surprising, considering professionals in the business of surveying note responses to online surveys can run as low as 2% return rate (Petchenik & Watermolen, 2011). Responses to the survey were tallied and analyzed using descriptive analysis

employing percentages (Fraenkel et al. 2012). The results of the analysis will be discussed in the following section.

Student Perceptions Regarding Retention

The second research question, regarding students' perceptions of their prospects for persisting in school (*What factors related to retention do developmental education composition students most often report as being influential in their college experiences?*) was answered by using responses from four of the survey questions to which the students could express their level of agreement with some aspect of their expectations regarding whether they would continue in their education. Strong agreement with all or most of these statements would suggest high expectations of continuing.

The first statement, "I expect to complete all of my courses with a passing grade this semester," generated a positive response of 90% of the respondents marking strongly agree or agree. The next question, "I expect to pass my ENG 040 or ENG 050 course this semester," also collected positive feedback, with 94% of respondents stating they strongly agreed or agreed with expectations of passing their English course during the semester. When offered a third statement, "I expect to be enrolled for courses at my present college or another college next semester," 94% of the respondents strongly agreed, 3% agreed, 3% disagreed, and 0% strongly disagreed with the question. Students who responded to the fourth and final statement of this section were again positive in their responses when presented with the statement, "I expect to complete my two-year degree or transfer to a four-year college within the next three years." Seventy-nine percent strongly agreed, 12% agreed, 3% disagreed, and 6% strongly disagreed. In summary, of the four statements in this section regarding students' perceptions of their

prospects for persisting in school, all statements received higher than 90% positive response. Taken in tandem with one another, these responses suggest that this group of respondents strongly expected to complete their courses of study.

Student Perceptions Regarding Engagement

The third question, regarding students' perceptions of their engagement with the culture of their school (*What factors related to engagement do developmental education composition students most often report as being influential in their college experiences?)* was answered by using responses from five of the survey questions to which the students could express their level of agreement with some aspect of their expectations regarding their personal engagement with the community of their college because of the link Tinto (2012) observed between student engagement and student retention. Strong agreement with all or most of these statements would suggest a high level of engagement.

The first statement, "I am an active member of at least one club, student organization, study group, or activity group affiliated with my college," elicited the following response: 12% strongly agreed, 6% agreed, 36% disagreed, and 45% strongly disagreed. The next survey item was, "I consider myself actively engaged with the community of my college," to which 18% of the 33 respondents strongly agreed, 24% agreed, 24% disagreed, and 33% strongly disagreed. For the third statement, "I consider myself highly motivated to succeed in college and go on to a successful career," 88% strongly agreed, 12% agreed, 0% disagreed, and 0% strongly disagreed. To the fourth statement, "I am on personal speaking terms with at least one professor or college administrator not involving a class I am taking," 38% strongly agreed, 12% agreed, 21% disagreed, and 29% strongly disagreed. Finally, respondents were shown a fifth

statement: “I believe the faculty and administration of my college are sincerely concerned about me as an individual,” to which 52% strongly agreed, 21% agreed, 24% disagreed, and 3% strongly disagreed.

In summary, most of the students who responded to the survey did not consider themselves actively engaged with the community of their college. However, at the same time, 100% of respondents rated themselves as highly motivated to succeed in their studies, 50% were on speaking terms with at least one faculty member or administrator outside of classroom interaction, and 73% believed that the faculty and administration of their college were sincerely concerned about them as individuals. These findings taken together present contradictions: namely, they suggest that the respondents considered themselves un-engaged with the community of their college, while at the same time revealing themselves to be self-motivated and engaged with other members of the college community. These findings will be discussed more fully in the next chapter.

Student Perceptions Regarding Effects of Writing Center Visits

The fourth and final question (*What factors regarding the community college writing center do developmental education composition students most often report as being beneficial in their college experiences?)* regarded students’ perceptions of their college writing center and its effects upon their engagement with the culture of their school and prospects for persisting. This question was answered by using responses from nine survey questions. Students could express their level of agreement with an aspect of their perceptions regarding the writing center and its influence upon their engagement and retention. This question was included because of the observations of numerous scholars (Barkley, 2010; Habley et al., 2012; Kuh et al, 2005; Tinto, 2012) who have

linked student engagement with student retention and included writing centers among student service programs deemed to be effectively engaging students. Strong agreement with all or most of these statements would suggest a high level of influence.

Because students who had never visited the writing center would be unable to present an opinion, the first question in the section discussing the writing center was designed to screen out students who had not taken part of this campus service. If students indicated they had never been to the writing center, the students reached their completion point of the survey. If participants indicated they had used the writing center at least once, a final set of questions was provided intending to gain feedback on the students' experiences with their writing center experiences. Only nine (25%) of the 36 total students taking the survey had visited the campus writing center.

The first statement, "Being tutored in the writing center has made me feel more connected to, more engaged with, the college community I am a part of," derived the following response: 44% strongly agreed, 44% agreed, 0% disagreed, and 11% strongly disagreed. For the second statement, "Being tutored in the writing center has improved my chances of persisting in school," 56% of the nine respondents strongly agreed, 33% agreed, 0% disagreed, and 11% strongly disagreed. When offered a third statement, "Being tutored in the writing center has improved my overall grade point average," 88% of the participants agreed with this assertion. This statement was followed by a fourth: "Being tutored in the writing center has improved my grade in my ENG 040 or ENG 050 course." For this statement, 44% strongly agreed, 33% agreed, 11% disagreed, and 11% strongly disagreed. The fifth statement was "Being tutored in the writing center has improved my writing skills regardless of course outcomes." Forty-four percent strongly

agreed, 44% agreed, 0% disagreed, and 11% strongly disagreed. For the sixth statement, "Being tutored in the writing center has improved my general study skills regardless of course outcomes," 33% strongly agreed, 44% agreed, 11% disagreed, and 11% strongly disagreed.

Next, the respondents were shown a seventh statement, "Being tutored in the writing center has improved my confidence as a student," to which 67% strongly agreed, 22% agreed, 0% disagreed, and 11% strongly disagreed. The eighth statement was "Being tutored in the writing center has helped me develop skills which I can apply to my general education." Fifty-six percent strongly agreed, 33% agreed, 0% disagreed, and 11% strongly disagreed. Finally, the survey concluded with a ninth statement: "Being tutored in the writing center has helped encourage me to participate more in class." For this statement, 67% strongly agreed, 22% agreed, 0% disagreed, and 11% strongly disagreed.

Therefore, for the nine statements measuring student perceptions of the effect their writing center visits had upon their engagement and prospects for persisting in school, at least 77% agreed with two of the statements, 88% agreed with three of the statements, and 89% agreed with four of the statements. This demonstrates a perception that the writing center had improved respondents' engagement with their college and prospects for persisting in school. Table 4 presents these results in more detail.

Table 4

Summary of Responses to Research Question 3

Reported Effects of Being Tutored in the Writing Center

	SA	A	D	SD
Made me feel more engaged with the community college	11%	44%	44%	0%
Improved my chances of persisting in school	11%	56%	33%	0%
Improved my overall grade point average	44%	44%	0%	11%
Improved my grade in ENG 040 or ENG 050	44%	33%	11%	11%
Improved my writing skills regardless of course outcomes	44%	44%	0%	11%
Improved my general study skills regardless of course outcomes	11%	33%	44%	11%
Improved my confidence as a student	11%	67%	22%	0%
Helped me develop skills I can apply to my general education	11%	56%	33%	0%
Helped encourage me to participate more in class	67%	22%	0%	11%

Note. SA = strongly agree, A = agree, D = disagree, SD = strongly disagree

Summary

A higher percentage of students who visited the writing center successfully completed their developmental composition courses than the percentage of students who never visited the writing center. Moreover, the ANOVA Chi-square Goodness of Fit statistical analysis of the retention data on developmental composition students who had visited the writing center, as opposed to those who had not, demonstrated within the proposed .05 confidence level that visits to the writing center influenced retention of developmental composition students, as measured by completion of the course with a passing grade. In regard to the online survey, while a larger sample of student responses would have been preferable, 90% of the 36 students who responded to the survey

questions regarding retention prospects expected to pass their developmental composition courses, complete their two-year degree, and/or continue their studies at a four-year college. Concerning engagement, over 50% of the respondents did not consider themselves engaged with the community of their college, though most were on speaking terms with at least one faculty member or administrator outside of classroom interaction. More than half of the respondents believed the faculty and administration sincerely cared about them as individuals, and considered themselves highly motivated to succeed in school.

Overall, 89% of the students who indicated they had visited the writing center at least once expressed a perception that being tutored in the writing center had benefitted them. However, 11% strongly disagreed with all nine statements regarding the effects of the writing center upon his or her career as a student. This will be discussed in more detail in the final chapter.

In Chapter Five, the findings of the study and conclusions are discussed. Implications for practice are presented. Then, recommendations for future research in student engagement and retention, as they relate to and are influenced by writing centers, are provided for consideration.

Chapter Five: Summary and Conclusions

The three major elements of this study were student retention, student engagement, and the effects of writing center usage upon the two previous factors among developmental composition students in one Missouri community college. Administrators and faculty of institutions of higher learning in America agree this nation faces a serious challenge with student retention and success, or the lack thereof, and the situation is worse for community colleges than for four-year universities because of the relatively low level of preparation a significant percentage of the nation's post-secondary students possess as they enter college (Carnevale et al., 2010; Farnsworth, 2010; Habley et al., 2012; Mortenson, 2012). Numerous scholars (Barkley, 2010; Habley et al., 2012; Kuh et al., 2005; Tinto, 2012) have linked student engagement with student retention and have included writing centers among student service programs deemed to be effectively engaging their students. However, little quantitative research has been done regarding whether writing centers demonstrably relate to student engagement (Babcock & Thonus, 2012). If writing centers do relate to engagement, then logically speaking, writing center services must relate to student retention as well.

Therefore, this study was designed to determine if any links existed between student use of a writing center and student engagement, and consequently between writing centers and student retention, in one Missouri community college. This chapter

briefly reviews the conceptual framework of the study, how the study was conducted, and the findings discussed in Chapter Four. In addition, conclusions drawn from the students' results, along with implications for practice and recommendations for future studies, are offered.

Review of the Study

Kuh et al. (2005) found, when colleges get students actively engaged with the school they attend, those students derive better retention rates than colleges that fail to foster engagement. Scholars further concluded colleges must take deliberate, concrete actions to make retention central to the institutional mission, as opposed to leaving it at the periphery (Liggett et al., 2011). According to these authors, taking deliberate, concrete action must not only lead to desirable outcomes, but outcomes must also be demonstrable (Liggett et al., 2011). These scholars challenged writing centers to take stock of the full range of methodologies available and find the ones which will best serve the interests of writing centers (Babcock & Thonus, 2012; Liggett et al., 2011; Schendel & Macauley, 2012).

The conceptual framework for this study revolved around Tinto's (2012) theory of student retention and Habley et al.'s (2012) work with student engagement. The link between these two theories comprised one of the linchpins of this entire study. Given that student engagement influences student retention, this study was undertaken to determine if the services offered at a college campus writing center had any impact on student engagement, thus supporting student retention, and to explore specifically what role writing center usage played. By using the ideas proposed by Kuh et al. (2010), the

overarching question became, “Will student use of a writing center improve student retention?”

Babcock and Thonus (2012), Gofine (2012), as well as Schendel and Macauley (2012) pointed out writing center research for the past several decades has relied heavily upon anecdote and personal testimony to account for the work writing centers do. Therefore, the problem, from a writing center perspective, is that writing centers have not effectively communicated the results achieved in quantitative terms. Babcock and Thonus (2012) challenged writing center professionals to “...take our time, narrowing our topics and selecting our methodologies carefully so that our work is RAD─replicable, applicable, and data driven─and therefore generalizable beyond ‘our’ writing centers” (p. 179). In response to this challenge by writing center professionals (Babcock & Thonus, 2012; Gofine, 2012; Schendel & Macauley, 2012), this study was designed to be quantitative in nature, thus filling a void in the literature available by moving away from the qualitative realm that has an extensive existence in regards to data collected about college writing centers. Instead, this study quantitatively examined the extent to which the writing center of one selected community college in Missouri influenced the engagement and retention of its developmental students.

After obtaining IRB permission from Lindenwood University and the subject college, a two-pronged approach designed to answer four research questions was employed. The first question involved a statistical analysis to determine if a demonstrable link between student use of a writing center and student retention existed. In the fall of 2013, 1,234 students were enrolled in one of the 40 developmental composition courses offered at the college. After the final drop date, 987 students were

still enrolled. After final grades were recorded by the institutional research office of the college, all student outcomes were tallied and then matched by student identification number with the number of times each student had visited the college's writing center during that semester. Data regarding number of visits to the writing center were provided by the TutorTrac program used by the center to record all usage of the service. At the end of the semester, 744 students had passed their developmental composition course, and a total of 154 students had visited the writing center at least once.

The final three questions involved a descriptive analysis of student responses to a 19-item online survey. The survey contained statements regarding three general sets of information: students' perceptions of their prospects of persisting in school, students' engagement with the community of their school, and students' use of the writing center and its effects upon their engagement and prospects for persisting in school. Respondents were offered the options to strongly agree, agree, disagree, or strongly disagree with these 19 items.

Findings

The first research question, regarding actual completion of the course (*What difference, if any, is there between the number of visits to a community college writing center and student retention, as measured by successful completion of a developmental composition class?*) was investigated using a Chi-square Goodness Fit statistical assessment (Bluman, 2010). The findings demonstrated a statistical difference existed between number of visits to the writing center and the pass/fail rates of those developmental composition students. Analysis of the data was simplified by the fact that developmental composition courses are pass or fail with a 70% cumulative average being

deemed a passing grade and anything below the 70% cumulative average being considered a failing grade, as per college English Department policy (Course Abstract, ENG 050, Fall 2013). Therefore, every student could be grouped into one of two clearly delineated categories: those who were eligible to enroll in a regular composition course and those who were not eligible. For the purposes of this study, each category also denoted whether the student was retained or not retained. These categories allowed for an unambiguous number, not confused by students who transferred to another school, who were simply taking one semester of courses for supplemental training, or who never intended to pursue a complete degree in one unbroken sequence.

As mentioned earlier, the fall semester developmental composition courses originally had an enrollment of 1,234 students. By the final drop date, 987 students remained, and 154 developmental composition students visited the writing center at least one time. Of the students who visited the campus writing center, 86 students visited one or two times, and the remainder, 68 students, visited three or more times. Seventy-one percent of the students who visited the writing center passed their developmental composition course. A total of 634 students enrolled in the fall of 2013 developmental composition courses never visited the writing center, but nevertheless passed. Four hundred forty-six students never visited the writing center and failed their developmental composition course. Only 11 students who visited the writing center at least one time withdrew from the course, representing less than 1% of the total number of students.

For the purposes of this study, a student was said to have been retained if he or she stayed enrolled in his or her developmental composition class and passed the class, regardless of what options the student pursued at the completion of the course. A simple

comparison of course completion percentages suggests a positive influence of writing center visits upon a student's retention prospects. Students who were never tutored had a 1% lower retention rate than the entire group. Moreover, students who were tutored one or two times had a 14% higher rate of retention than the entire cohort and a 15% higher rate than those who were never tutored. Students who were tutored three or more times had an 8% higher rate of retention than the entire cohort and a 9% higher rate than those who were never tutored.

Interestingly, students who were tutored three or more times also had a 6% lower rate of retention than those who had been tutored only one or two times. While these percentages taken together suggest a positive influence of writing center visits upon student retention, this study asked if there was a statistically significant difference between number of writing center visits and student retention. Therefore, the data were subjected to a statistical analysis.

Perhaps most interesting, of the 490 students who failed their developmental composition course, 446 students never visited the writing center, indicating that 91% of students who never visited the writing center failed. The 247 students who withdrew from their developmental composition course before the final day to drop represent 20% of this number. Ninety-nine percent of students who withdrew from their developmental composition course never visited the writing center, and that number may offer the best argument that visits to the writing center could positively influence a student's engagement and prospects for retention. While the percentages addressing students who have not taken advantage of this college campus service suggest a positive influence of writing center visits upon student retention, the Chi-square Goodness of Fit test showed

an actual significant difference between pass and fail rates and number of visits to the writing center. This statistical test was significant at 9.843, greater than the critical value of 5.991, at an alpha =.05 and 2 degrees of freedom. The *p*-value obtained was 0.007288, which is lower than .05, indicating a statistically significant difference between the populations of students. Thus, the null hypothesis of the study was rejected.

The findings for question number two (*"What factors related to retention do developmental education composition students most often report as being influential in their college experiences?"*) were derived from descriptive analysis, and the findings suggest high expectations by students regarding their prospects of persisting in their education. As a preliminary note, questions number two and number three received only 36 responses from the 1,176 students who received the online survey; therefore, the breadth of the data collected was not nearly as broad as had been hoped (Fink, 2009).

The findings regarding student perceptions of their prospects for persisting in school were collected from responses to four Likert-scale statements on the survey, to which the student could express level of agreement. Overall, 90% of the respondents expected to complete all of their courses with a passing grade that semester including their ENG 040 or ENG 050 course. Ninety-seven percent of the students surveyed expected to be enrolled for courses at their present college or another college during the next semester. Finally, 91% of the respondents expected to complete their two-year degree or transfer to a four-year college within the next three years. None of the statements had lower than a 90% positive response regarding students' perceptions of their prospects for persisting in school, and taken together, these responses suggest this group of respondents overwhelmingly expected to complete their courses of study.

The findings for question number three (*"What factors related to engagement do developmental education composition students most often report as being influential in their college experiences?"*) were derived from responses to five Likert-scale statements on the survey, to which the student could express level of agreement. These data were also subjected to descriptive analysis rather than statistical analysis. Only 18% of respondents were an active member of at least one club, student organization, study group, or activity group affiliated with their college; and only 42% considered themselves actively engaged with the community of their college. Interestingly, however, 100% considered themselves highly motivated to succeed in college and go on to a successful career; and 50% of respondents claimed to be on personal speaking terms with at least one professor or college administrator not involving a class they were taking. Moreover, 73% believed the faculty and administration of their college were sincerely concerned about them as an individual.

The findings for the fourth and final question (*"What factors regarding the community college writing center do developmental education composition students most often report as being beneficial in their college experiences?"*) were derived from responses to nine Likert-scale statements on the survey, to which the student could express level of agreement. These data were also subjected to descriptive analysis. Only those who had visited the writing center at least one time were shown these statements on the survey. Of the 36 total students taking the survey, only nine (25%) had ever visited the writing center, making this a considerably smaller sample group than desired (Fink, 2009).

Of the nine respondents, 88% claimed being tutored in the writing center had made them feel more connected to and more engaged with, their college community. These same respondents also believed being tutored in the writing center had improved their chances of persisting in school, had improved their overall grade point average, and had improved their writing skills regardless of course outcomes. Seventy-seven percent of respondents asserted being tutored in the writing center had improved their grade in their ENG 040 or ENG 050 course. The sixth statement in this section of the survey, "Being tutored in the writing center has improved my general study skills regardless of course outcomes," generated 77% agreement. Eighty-nine percent claimed being tutored in the writing center had improved their confidence as a student and had helped them develop skills which they could apply to their general education." Finally, 89% of the respondents believed being tutored in the writing center had helped encourage them to participate more in class.

In summary, most student respondents believed their time in the writing center had improved their engagement with the school and prospects for continuing their studies. Of the nine students who had visited the writing center at least once, one student consistently strongly disagreed with all nine statements regarding the effects of the writing center upon his or her career as a student. However, while the response rate was smaller than anticipated, the overall numbers from the responses that were offered suggest an overwhelming perception that being tutored in the writing center had been of benefit.

Conclusions

The findings in this study strongly suggest the use of a community college writing center by its developmental composition students can positively influence those students' prospects for persisting in their courses of study, which is in alignment with suggestions previously offered by scholars (Griswold, 2003; Kostecki & Bers, 2008; Perin, 2004; Reinheimer & McKenzie, 2011; Robinson, 2009). The original goal was first to seek statistical demonstration that visits to writing centers improved retention of students, as called for by numerous previous researchers (Altbach et al., 2011; Babcock & Thonus, 2012; Barkley, 2010; Bredtmann et al., 2011; Farnsworth, 2010; Gofine, 2012; Lerner, 2001; Schmidt & Alexander, 2012). The statistical analysis of writing center usage and retention data in this study, based upon methods taken from Bluman (2010), Creswell, (2009), Fink (2009), and Fraenkel et al. (2012), demonstrated a statistical difference between students who visited the writing center and students who did not visit.

Next, three questions were designed to explore how students perceived their prospects for persisting in school; what students perceived about their level of engagement with the culture of their school; and finally, what effects students perceived their visits to the writing center to have had upon their engagement and retention. As for student perceptions regarding prospects of persisting, engagement, and the effects of writing center usage upon the previous two factors, a few gaps in the scaffolding occur. First, a larger number of student responses to the online survey would have been desirable (Fink, 2009). Unfortunately, one may plausibly assume that the small group who did respond to the survey were among the more engaged students of the entire cohort, rendering the representational accuracy inconclusive. However, as scholars

(Archer, 2008; Petchenik & Watermolen, 2011) have pointed out, online survey response rates sometimes run as low as a 2% return rate.

The students who did respond to the survey considered their prospects of persisting in their education to be good. Overall, 90% of the respondents expected to complete all of their courses with a passing grade during the Fall 2013 semester, including their ENG 040 or ENG 050 course. Ninety-seven percent expected to be enrolled for courses at their present college or another college during the following semester. Finally, 91% of the students who responded expected to complete their two-year degree or transfer to a four-year college within the next three years. None of these statements had lower than a 90% positive response regarding students' perceptions of their prospects for persisting in school, and taken together, these responses suggest this group of respondents overwhelmingly expected to complete their courses of study. These responses positively answer the concerns about retention raised in the works of Amaury and Crisp (2012), Barkley (2010), Berger et al. (2012), Boroch et al. (2010), Farnsworth (2010), Griswold (2003), Habley et al. (2012), Jacobs and Archie (2008), Kuh et al. (2010), Mortenson (2012), and Tinto (2012).

Student perceptions of self-engagement with their college community, however, were ambivalent. If previous research linking student engagement with student retention (Barkley, 2010; Habley et al., 2012; Kuh et al., 2010; Tinto, 2012) is correct, researchers would have to accept the high level of student expectations of persisting previously mentioned would entail a high level of engagement for those same students. Researchers could further plausibly assume a greater level of engagement than students claimed to perceive based upon the fact they took the time to respond to a survey on behalf of the

college, were on speaking terms with at least one faculty member or administrator outside of the classroom, and believed the faculty and administration were concerned about them as individuals.

However, student responses to the engagement questions clearly indicate they did not consider themselves to be engaged with the community of their college. These claims about respondents' lack of engagement may stem from the college's lack of services rather than actual engagement on the part of the student (Barkley, 2010; Berger et al., 2012; Mortenson, 2012). As another possibility, perhaps the survey statements were worded too narrowly to collect accurate measures of student engagement, and future researchers might consider more directive statements.

However, at the same time, 100% of the students in the study considered themselves highly motivated to succeed in their studies, which included 50% interacting personally with at least one faculty member or administrator on campus outside of classroom interaction and 73% with a feeling of sincere caring on the part of faculty and administration of their college. Scholars (Barkley, 2010; Berger et al. 2012; Griswold, 2003; Jacobs & Archie, 2008) list such factors as important engagement indicators. These contradictory responses taken together may indicate more about student self-perception than about the school itself. Student perceptions of being highly motivated to succeed, upon second thought, may have belonged more with Question Two regarding prospects of persisting in school. This information also indicates students did have some level of engagement with the community of the college (Kuh et al., 2010; Tinto, 2012), even though survey results suggest otherwise.

If student perceptions of not being engaged actually derive from not perceiving any services or activities with which to be engaged, it would render the presence and environment of the writing center as a critically important portal for promoting student engagement (Davis, 2006; North, 1984). The possibility of students not perceiving a campus culture with which to be engaged (Amaury & Crisp, 2012; Barkley, 2010; Boroch et al., 2010; Griswold, 2003; Jacobs & Archie, 2008) gains credence from students' positive responses regarding the writing center, which was apparently perceived as a valuable student service. The lowest percentage positive answer for any of the nine questions regarding the effects of the writing center upon their engagement and prospects for persisting in school was 77%, and several ran as high as 89%. This high percentage of responses would lead scholars in the field to consider these respondents engaged and more likely to persist (Amaury & Crisp, 2012; Barkley, 2010; Berger et al. 2012; Habley et al., 2012; Jacobs & Archie, 2008; Kuh et al., 2010; Tinto, 2012). Briefly stated, the descriptive analysis of the online survey responses suggests that developmental composition students who responded to the survey did believe the writing center influenced their engagement and chances of persisting in school, a perception supported by the actual improvement in retention numbers, which was statistically demonstrated within a .05 confidence level.

Implications for Practice

The apparent inconsistency between student perception of engagement and evidence of engagement need not come as a surprise, since these students were commuter students attending a community college with no dormitories, no athletic teams, no Greek fraternities or sororities, no intramural sports, and very few clubs or extracurricular

organizations and activities, the very things mentioned by Barkley (2010), Habley et al. (2012), Kuh et al. (2010), and Tinto (2012) as factors that promote retention. The participating college did not offer much a student could be engaged with outside of classroom instruction. Simply serving as a place where students could go for a comforting atmosphere may have constituted part of the writing center's value to the community in addition to the tutoring service offered there (Geller et al., 2007; Schuh et al., 2011). The casual, collegial atmosphere in the writing center may have done as much to foster engagement and retention as the academic support (Davis, 2006). In any event, by their own reckoning, these students did not see themselves as being members of any sort of campus culture.

Ultimately, writing centers are student services, free spaces employing the best practices of metacognitive process-based learning (Smilkstein, 2011) in which students can negotiate the process of solving problems through the act of writing in the presence of a student peer tutor (Davis, 2006; Geller, Eodice, Condon, Carroll & Boquet, 2007; North, 1984). Writing centers are real life manifestations of a true portal into academia for anyone who would like to work on any aspect of any writing project for any audience, and as such, are especially valuable for the person who finds the college atmosphere foreign and intimidating, as so many developmental composition students do in community colleges (Davis, 2006; North, 1984).

Writing centers are emphatically not mere editorial services or proofreading services for assigned essays, as many of the un-informed think (Brooks, 1995). One of the clichés of the writing center business is "they make better writers, not better papers" (North, 1984, p. 69). The free coffee, free printing service, and free computers to work

on in a comfortable environment are often as important to commuter students in a community college environment as the actual instruction in the process of writing and critical thinking and problem solving (Davis, 2006; Geller et al., 2007; Jones, 2001; Kostecki & Bers, 2008; Robinson, 2009).

Writing centers offer a safe haven for open inquiry into ideas and into expression of those ideas; as such, they offer students a place where they can become engaged, in the most literal sense of the word, and thereby enhance their chances of persisting in school (Kuh, et al., 2010; Perin, 2004; Pomerantz, 2006; Schuh et al., 2011). As the voluminous research in the field discussed throughout this dissertation has demonstrated, the more engaged a student is, by whatever means, the more likely he or she is to remain a part of the college community he belongs to (Barkley, 2010; Carnevale et al., 2010; Farnsworth, 2010; Habley et al., 2012; Kuh et al., 2005; Mortenson, 2012; Tinto, 2012). Writing centers are faced with the challenge of getting the message out so more people can experience the services offered therein and persuading students to buy into a more long-term process-based approach to composition. This leads full circle to the single major critical implication for practice: the challenge of designing and implementing the kinds of research that will satisfactorily demonstrate the value of writing centers to the students, faculty, administration, and community who demand quantifiable proof that all of these alleged results do accrue from the presence of writing centers and a student centered approach to education.

Writing centers provide an integral component of the student services constellation of a college, and most teachers and administrators who accurately understand what function these centers serve almost invariably support the service

(Adler-Kassner, 2008; Geller et al., 2007; Griswold, 2003; Kostecki & Bers, 2008; Reinheimer & McKenzie, 2011). Arguably, the most critical implication for practice during the past 40 years has been communicating to the students, faculty, and administration of the college community precisely what writing centers do (Babcock & Thonus, 2012; Gofine, 2012; Schendel & Macauley, 2012). The most common misconception is that they fix papers, or even worse, fix students. Writing centers do not fix anything. On the contrary, North (1984) spoke of what he called the "new" writing center thus:

> It represents the marriage of what are arguably the two most powerful contemporary perspectives on teaching writing: first, that writing is most usefully viewed as a process; and second, that writing curricula need to be student-centered. This new writing center, then, defines its province not in terms of some curriculum, but in terms of the writers it serves. (p. 69)

A few of the primary goals for addressing this misperception are to cultivate ongoing relationships with the students who come in for help, to get those students to come in on a regular basis, and to train those students how to use the service in order to learn the process of generating and polishing whatever types of text they need for any given assignment (Davis, 2006; Robinson, 2009; Schendel & Macauley, 2012). These goals cannot be accomplished in one session.

The second most important implication for practice is to improve the pedagogy. For all the talk of improving instruction and better serving students' needs, much research is carried out, as previously mentioned, for assessment purposes geared more toward validation and protection of services in question than actual improvement of their

pedagogies (Babcock & Thonus, 2012; Gofine, 2012; Lerner, 2001; Schendel & Macauley, 2012). In the best of all possible worlds, research would not only validate what is being done well but would also identify what could be done better and provide guidance in specifically how to improve the service (Babcock & Thonus, 2012; Gofine, 2012; Kostecki & Bers, 2008; Lerner, 2001; Reinheimer & McKenzie, 2011; Schendel & Macauley, 2012). The following sections will recommend possible research designs, procedures, and data collection methods that might better accomplish the above stated goals.

Recommendations for Future Research

The most important result accruing from this study regards recommendations for future research. As has been discussed at length in previous chapters, questions arise in writing center circles regarding how to design research studies that will provide quantitative data accurately demonstrating what outcomes writing centers accomplish (Babcock & Thonus, 2012; Gofine, 2012; Lerner, 2001; Schendel & Macauley, 2012). Writing center professionals profess the benefits of their services to the people who take advantage of those services, but the priority with administrators, politicians, and the public who pay for these services is the question of what quantifiable outcomes accrue; and the desired outcomes are student retention and success (Barkley, 2010; Carnevale et al., 2010; Farnsworth, 2010; Habley et al., 2012; Kuh et al., 2005; Mortenson, 2012; Pomerantz, 2006; Schuh et al., 2011; Tinto, 2012). From a purely pragmatic point of view, writing centers are valued according to how well they help students "succeed," which is invariably measured by whether those students finish their classes, pass those classes, and flourish at the next level (Babcock & Thonus, 2012; Barkley, 2010; Gofine,

2012; Habley et al., 2012; Kuh et al., 2010; Lerner, 2001; Schendel & Macauley, 2012; Tinto, 2012).

Research design. At the most simple quantitative level, it would help if writing center professionals could demonstrate statistically that students who visit their college writing center have a greater chance of persisting in their composition classes in proportion to the number of times they have been tutored. This study has demonstrated that a statistical difference existed in the groups who were enrolled in a developmental composition class and visited one college writing center. So many circumstances may cloud the raw numbers that *identifying subgroups* within the study might provide a more accurate picture of what truly results from being tutored in a writing center (Babcock & Thonus, 2012; Gallagher, 2011; Gofine, 2012; Lerner, 2001; Schendel & Macauley, 2012). For instance, exploring demographics and other factors, such as the relative ages of the students, the number of years since developmental composition students had last attended school, gender, financial condition, marital status, whether or not students had children, and whether or not the student was also working full-time or part-time might reveal influences upon their behaviors, perceptions, and use, or lack of use, of the writing center.

Finally, native language skill in English might have been a factor; English as a Second Language (ESL) is an entire subfield in the teaching of composition. Any of these factors might have influenced behaviors and results (Barkley, 2010; Farnsworth, 2010; Habley et al., 2012; Kuh et al., 2005; Mortenson, 2012; Pomerantz, 2006; Schuh et al., 2011; Tinto, 2012). Future researchers might find it worthwhile to isolate any of the previously mentioned subgroups of students, or others, and design studies similar to this

one in order to determine what differences might appear among those groups and, more importantly, how to better serve those groups.

Furthermore, though this study was designed to gather quantitative data, operating on the premise that writing center research had focused too much upon qualitative research during previous decades, future studies could nevertheless still profitably be designed to gather qualitative data to supplement the meaning of the quantitative data in various mixed methods configurations (Creswell, 2009; Fink, 2009; Merriam, 2009). A qualitative case study could be designed for the students who came to the writing center three or more times (the very students whom researchers would intuitively think should derive the most benefits) yet who in the present study exhibited a higher failure rate when compared to those who visited the writing center only once or twice. A case study could provide perceptions of why students who use a writing center service three or more times over a course of several months derive no benefits such as making better grades in developmental composition and yet continue to visit the writing center. Additional questions could be designed to determine if the student was actually gaining benefits but simply not rapidly enough to pass the course and be counted as a success. A mixed methods study might be designed to collect student demographic information suggested above that might help explain why the desired results were not obtained. Perhaps the student spoke English as a second language or was a learner with special needs or simply had too many other personal obligations that prevented the student from making what would be expected as normal progress.

A mixed methods study with a qualitative follow-up to the quantitative results would permit future researchers to gather information from the students themselves

(Creswell, 2009; Fink, 2009; Merriam, 2009). For instance, a survey could be designed (whether by mail or online) in which the student could provide feedback regarding why being tutored in the writing center had not led to success. Other options for this group would be to offer an end-of-the-semester survey similar to course and instructor surveys or even request face-to face interviews to solicit students' thoughts about the writing center service. Questions could solicit information about the students' experiences in the tutorials, what specifically students felt had worked and had not worked, and if for whatever reason students felt the writing center had failed to adequately assist them (Liggett & Price, 2011; Neff, 2002).

Condaro (2014) listed the following possible benefits of student session summary responses: "just in time" data for course revision; a way to make conferences more productive; source material for extra credit; a catalyst for frank in-class discussions about writing; and source material for a course wiki on writing development (p. 4). Moreover, as another viable perspective on this approach, several scholars (Mackiewicz & Thompson, 2013; Thompson & Mackiewicz; 2014; Thompson, Whyte, Shannon, Muse, Miller, Chappell, & Whigham, 2009; Tienken, Goldberg, & DiRocco, 2010) discussed how a study of codified types of questions tutors ask during tutoring conferences could shed light upon what is happening in the sessions. Questions could be listed and then codified by methods outlined by Saladana (2012) and then analyzed for possible patterns and results.

Similarly, mixed methods studies could be designed to gather both quantitative and qualitative data for students who came to the writing center only one time and did not experience success. This mixed methods study could be designed to determine scenarios

of why they did not return. Future research might also be designed to alleviate specific incidents, misuse, or misconceptions under which students visited the writing center. For instance, some students might have come in literally just before the essay was due to be turned in, thinking they could have it edited for surface level errors and then felt what they had wanted to happen did not happen. Other students might have been overwhelmed by the assignment at hand and unable to focus upon the tutoring help available. Yet other students might have been so incorrigibly below requisite skill level that, even in spite of real progress, it was not enough to pass the assignment, and then considered it pointless to come back for another tutoring session. Perhaps, the tutor on a particular day might have simply done an ineffective job with the tutorial, or real progress was made, but the student's teacher assigned a grade that the student did not feel compensated him or her for the effort put in during the tutorial. Finally, some students' general writing skills might have been good enough to succeed through most of the semester without feeling the need to use the service until a big term paper at the end of the semester and then the students came in to get help with MLA or APA format.

These are a few scenarios that might lead to useful research. For instance, an online survey listing such scenarios as those above could be sent to all students who had visited the writing center only once, allowing students to check any of the scenarios that applied to their situation, along with a comment box for any additional comments. Such research would offer a valuable tool for improving both the pedagogy and promotion of the writing center.

Future research studies might isolate these scenarios and survey complete cohorts about their perceptions of what transpired during their visit to the writing center and how

they might have been oriented into better and earlier use of the service. A thorough list could be made and another online survey sent to all one-time visitors; or if a more qualitative mixed methods approach were desired, those students could be contacted and asked if they would be willing to be interviewed face-to-face about their experience and share their thoughts about the service they received. Once again, if it turned out that the service had not, for whatever reason, adequately met whatever legitimate expectations students might have held regarding the service, the writing center staff would know where to begin improving the service (Babcock & Thonus, 2012; Gallagher, 2011; Gofine, 2012; Schendel & Macauley, 2012).

Another future research recommendation would be to increase the volume of data by designing a study with institutional support requiring all students to respond to a survey, identify the students who had used the service and felt they had benefited from the tutoring, and then survey those students regarding the specific benefits they felt they had derived. This study was an attempt to garner such data, but the group of respondents was disappointingly low for any sort of global conclusions. This study would have been considerably stronger and more useful with a higher response rate for the survey designed to answer Question Two, Question Three, and Question Four, though such low response rates have been noted in past studies (Archer, 2008; Petchenik & Watermolen, 2011).

If there were enough responses to the survey and those responses, on the one hand, accurately identified ways in which the service in truth had failed to satisfy student needs, the staff would know what improvements needed to be implemented in the service. If, on the other hand, the responses revealed that the students had simply failed in whatever way to do their parts, it would provide a starting place for future initiatives

for helping students bridge the gap between where they are and where they need to be by properly using the service. One possibility would be to require students to answer an online survey in the college website before being permitted to access their grades, which would almost certainly lead to a much higher response rate.

On a similar note, the body of data for evaluating writing centers could be expanded by increasing the geographical reach of the survey. For instance, the survey used in this study could be sent to every community college in any selected state or region, or every community college in the nation for that matter, leading to a larger geographical sample. Another option would be to collect retention data on the entire student body of the participating college, run the same statistical analysis used in this study, and survey every student who had visited the writing center, regardless of what course the student had taken.

Instrumentation. Another possible quantitative research angle could address the possibility of the *post hoc ergo propter hoc* logical fallacy. Perhaps engaged students are more likely to use a writing center (and other available services) in the first place, as opposed to visiting the writing center and then being somehow influenced to become more engaged, while unengaged students would never bother visiting the center, or if they did visit, would never truly engage with the tutor and the pedagogy (Barkley, 2010; Farnsworth, 2010; Habley et al., 2012; Kuh et al., 2005; Morrison & Silverman, 2012; Pomerantz, 2006; Schuh et al., 2011; Tinto, 2012). To address this possibility, perhaps some sort of pre-semester/ post-semester quantitative engagement survey such as the Community College Survey of Student Engagement (CCSSE) could be administered to every student during student orientation before the semester began. Then during the

semester or at the end of the semester, the engaged students could be compared with the unengaged students and see if any differences were identifiable. In order to do this, students taking the original engagement survey would be ranked from high engagement to low engagement. When their retention numbers were collected, the retention numbers could be statistically measured to see if there were any differences between the students who exhibited high engagement at the beginning and those who exhibited low engagement at the beginning. Perhaps there would be different levels of engagement between those groups with regard to their use of the writing center. It would be interesting to see if the engagement levels rose or dropped or even stayed the same among the various groups depending upon their use of the writing center.

One possible qualitative study for a future date is a survey suggested by Schendel and Macauley (2012) in which students would be surveyed, as the tutorial is coming to a close, regarding what tutees have accomplished during the tutorial. For instance, students could be asked by the tutor to give feedback regarding the tutoring session: to list two things they accomplished in the tutorial and then provide two specific demonstrations of what they learned. Then students could indicate what they would work on between then and the next tutoring session and, finally, what they would like to work on during the next tutoring session. The benefits could be numerous. Such an approach would render on-the-spot feedback regarding what was accomplished. Also, it would motivate the student to take ownership of his or her own work and promote the process-based approach that writing center professionals consider critical to any real long-term benefits (Babcock & Thonus, 2012; Gofine, 2012; Lerner, 2001; North, 1984; Schendel & Macauley, 2012). Furthermore, it would promote an ongoing tutorial relationship which

would render the sorts of engagement and retention benefits engagement and retention specialists desire (Barkley, 2010; Farnsworth, 2010; Gallagher, 2011; Habley et al., 2012; Kuh et al., 2005; Morrison & Silverman, 2012; Pomerantz, 2006; Schuh et al., 2011; Tinto, 2012).

As an effective follow-up, a copy of this session summary could be sent to inform the teacher what transpired in the tutorial so he or she could better help the student connect the learning from the tutorial to the classroom instruction. If enough of these relationships were cultivated through this on-the-spot research approach, descriptive analysis of future cohorts might demonstrate to everyone's satisfaction that visits to the writing center did indeed promote the engagement and retention of the students who took advantage of the service. Moreover, this approach would lend itself to the much-coveted "alignment" of outcomes, pedagogy, and assessment discussed by Anderson and Krathwohl (2001).

Finally, the big data option will likely be the future of writing center research, as it already is for such corporate and government entities as the NBA, Google, Wal-Mart, Amazon, the United States Government, and eventually almost certainly education (Mayer-Schonberger & Cukier, 2013). As previously mentioned in this study, the online survey did not collect the desired number of responses from students who had visited the writing center. The school studied in this piece of research has used the TutorTrac record system for several years now, and the college has kept all student outcomes records from the beginning. It is now possible to go back several years, and into perpetuity, and harvest all student demographics and retention outcomes for every student at the school and measure those against any desired configuration of factors, including number of

visits to the writing center, or any other service for that matter, as was done in this study, and get a much more global picture of whatever relationship exists.

Moreover, those student groups could be arranged by any desired demographic measure, as discussed earlier, if such information were desired. In their much lauded, and in many ways disturbing book, *Big Data* (2013), Mayer-Schonberger and Cukier pointed out how government agencies and multi-national corporations now have access to such a prodigiously enormous quantity of raw data that they no longer need statistical cause and effect demonstration to accurately predict even such future trends as where the H1N1 virus will break out based upon google searches. The sheer quantity of data allows them to use correlation without bothering with cause and effect proofs and still know with uncanny degrees of certainly they will be correct. While there is plenty not to like about such procedures, they almost certainly will be used in education, and writing centers could profitably measure their level of effectiveness with such procedures by simply gathering all of the data already available in their data banks and studying it from more creative angles: student's age, ethnicity, pre-college education, number of years since last taking classes, marital status, course load, entrance test scores, psychological profile, or any other student services they may or may not have used, to name only a few obvious options.

Data collection. Quantitative data will continue to be collected as it was in this study, and qualitative data such as was collected in past studies the author chose not to use will continue to be collected by others. Ethnographies, case studies, student testimonies, and surveys of every description have been the common currency of writing center research for the past four decades, and those will continue to be used in the future

(Babcock & Thonus, 2012; Gallagher, 2011; Gofine, 2012; Lerner, 2001; North, 1984; Schendel & Macauley, 2012). However, those methodologies, as useful as they have been in many ways, will have to be supplemented in the future with the sorts of quantitative methodologies, such as the statistical analysis used to answer Question #1 in this study. As mentioned earlier, those quantitative data collection methods will employ present and future technologies which will allow the collection and parsing of previously unthinkable quantities of data. What changes in practices and pedagogies those studies will mandate remain to be seen.

As for more qualitative mixed method studies, given the malleable human nature of tutoring, scholars will still need to design case studies, ethnographic studies, student surveys at the time of the tutorial, and more in-depth student surveys later in the semester or even during the following semester (Babcock & Thonus, 2012; Collins, 2010; Gallagher, 2011; Gofine, 2012; Lerner, 2001; Liu & Yin, 2010; Merriam, 2009; Neff, 2002; North, 1984; Schendel & Macauley, 2012). Moreover, surveys will need to be designed for the instructors of those students to determine if the instructors perceive any differences between the performance of students who used the service and students who did not use it. Finally, for those scholars willing to face the Promethean logistics of doing such a study, students could be located three to five years after graduation, or leaving school without graduating, to survey their thoughts about the service and its impact upon them after entering their careers.

Summary

The major elements of this study revolved around the issues of student engagement with their college communities, student retention, the effects of student

engagement upon student retention, and the effects of one Missouri community college writing center upon the engagement and retention of its developmental composition students (Amaury & Crisp, 2012; Carnevale et al., 2010; Farnsworth, 2010; Fowler & Boylan, 2010; Habley et al., 2012; Mortenson, 2012). Student retention, or rather the lack of acceptable student retention, has been identified as arguably the greatest present challenge to American higher education (Hersh & Merrow, 2005; Lumina Longitudinal Study, 2009). Research dating back more than 40 years has demonstrated, the more engaged a student is with the college community he or she is a part of, the more likely he or she is to complete a course of study and take a degree (Amaury & Crisp, 2012; Carnevale et al., 2010; Farnsworth, 2010; Fowler & Boylan, 2010; Habley et al., 2012; Mortenson, 2012). Given this conclusion, the central concept of the present study was that any factor which improves student engagement would de facto improve student retention (Barkley, 2010; Boroch, 2010; Jacobs & Archie, 2008; Kuh, et al., 2005; Morrison & Silverman, 2012; Perin, 2004; Pomerantz, 2006; Schuh et al., 2011; Tinto, 2012). Moreover, the study posited that writing centers might arguably improve student engagement, thereby improving student retention.

Writing center research dating back to its beginnings has relied mostly upon qualitative research designs, primarily case studies, ethnographic studies, and anecdotal evidence which some present educational leaders find inadequate to account for the benefits writing centers provide (Babcock & Thonus, 2012; Collins, 2010; Gallagher, 2011; Gofine, 2012; Lerner, 2001; Liu & Yin, 2010; Merriam, 2009; Neff, 2002; North, 1984; Schendel & Macauley, 2012). Moreover, the relatively few quantitative studies carried out have garnered generally unsatisfactory results (Lerner, 2001). Writing center

research specialists for the past several years have challenged writing center professionals to design quantitative studies that will answer the needs of the early twenty-first century: namely, whether writing centers improve students' writing skills, student's grades, students' engagement, and students' retention (Babcock & Thonus, 2012; Gallagher, 2011; Liu & Yin, 2010; Schendel & Macauley, 2012).

In an attempt to answer these scholars' challenges, this study was designed to employ quantitative research to determine whether the writing center of one Missouri community college had improved student retention among its developmental composition students and/or whether those students perceived any influence of their visits to the writing center upon their engagement with the community of their college or their prospects of persisting in their courses of study (Bluman, 2010; Fink 2009; Fraenkel et al., 2012).

Research Question One was answered by tracking the course pass/fail rates of every developmental composition student enrolled in the subject college during the Fall 2013 semester and then matching those rates with the number of visits every student paid to the college writing center as recorded by the TutorTrac program the center employed to track usage. At the end of the semester, the college's institutional research (IR) office separated all students into three discreet groups: students who had never visited the writing center, students who had visited the writing center one or two times, and students who had visited the writing center three or more times. Next, these data were subjected to statistical analysis, specifically an ANOVA Chi-square Goodness of Fit test in an attempt to determine if a statistical difference existed in student retention rates according to number of visits to the writing center. The analysis demonstrated within the desired

.05 confidence level that a difference did exist in retention rates among the following groups: the group who never visited the writing center, the group who visited the writing center 1-2 times, and the group who visited the writing center three or more times (Bluman, 2010; Creswell, 2009; Fink, 2009; Fraenkel et al., 2012). Therefore, the null hypothesis, that writing centers had no influence upon student retention, was rejected; and the alternate hypothesis, that writing centers did have an influence upon student retention, was accepted.

Data for Questions Two, Three, and Four were generated by an online Likert-scale survey sent to the 1,167 developmental composition students who were still enrolled in those courses on 7 October 2013 (Week nine of the sixteen-week semester), when the college's Institutional Research office sent out the survey. These responses were evaluated by descriptive analysis employing percentages (Creswell, 2009; Fink, 2009; Fraenkel et al., 2012). The second question, regarding students' perceptions of their prospects for persisting in school, was answered by responses to four Likert-scale statements on the survey, to which the student could express level of agreement. Not one of these statements had lower than a 90% positive response regarding students' perceptions of their prospects for persisting in school, suggesting this group of respondents expected to complete their courses of study.

The third question, regarding students' perceptions of their engagement with the culture of their school, was answered by responses to five Likert-scale statements on the survey, to which the student could express level of agreement. Fewer than 50% of these students considered themselves actively engaged with the community of their college. However, 100% of them considered themselves highly motivated to succeed in their

studies, 50% of them were on speaking terms with at least one faculty member or administrator outside of classroom interaction, and 73% believed the faculty and administration of their college was sincerely concerned about them as an individual. These response percentages suggest the students, though they perceived themselves to be unengaged with the community of their college, may have been more engaged than they realized. Trying to get a more thorough and accurate picture of how engaged students are, as opposed to their perceptions, and determining what such a disconnect might mean would make for a potentially valuable future study, as suggested earlier.

The fourth question, regarding students' perceptions of their college writing center and its effects upon their engagement with the culture of their school and prospects for persisting, was answered by responses to nine Likert-scale statements on the survey, to which the student could express level of agreement. The numbers suggest an overwhelming perception that being tutored in the writing center had benefitted the students who had visited there in every aspect of their academic performance. Positive responses to the nine statements ran from 77% at the low end of the scale to 89% at the high end.

This leads full circle to the challenge of designing and implementing the kinds of research that will satisfactorily demonstrate writing centers' value to the constituencies that demand some sort of quantifiable proof that valuable benefits do accrue from the presence of writing centers (Babcock & Thonus, 2012; Gofine, 2012; Lerner, 2001; Schendel & Macauley, 2012). The most important result of this study regards recommendations for future research. The priority with administrators, politicians, and the public who pay for these services is the question of what they get for their money;

and what they want is student retention and success (Barkley, 2010; Habley et al., 2012; Kuh et al., 2010; Tinto, 2012). From a purely pragmatic point of view, writing centers will be valued according to how well they help students "succeed," which is invariably measured by whether those students finish their classes, pass those classes, and flourish at the next level (Babcock & Thonus, 2012; Barkley, 2010; Gofine, 2012; Habley et al., 2012; Kuh et al., 2010; Lerner, 2001; Schendel & Macauley, 2012; Tinto, 2012).

The suggested research procedures listed previously might accomplish the previously stated goals of not only validating what is being done well but also identifying what could be done better and provide guidance in specifically how to improve the service: in summary, bigger collections of data for more comprehensive quantitative studies, procedures designed to get better response rates from students, mixed methods studies to supplement quantitative data with qualitative data, and more creative surveys, whether face to face or online (Babcock & Thonus, 2012; Creswell, 2009; Fink, 2009; Gofine, 2012; Merriam, 2009; Schendel & Macauley, 2012).

In conclusion, this study does give credence to the suggestion that developmental composition students of one Missouri community college benefitted from being tutored there. However, more global and persuasive evidence would be desirable, and moving forward it will be necessary to design better and more quantitatively convincing studies to both demonstrate the value these centers bring to their schools and to improve upon what is already being done. As Grutsch McKinney (2013) discussed in her latest book, writing center professionals will have to re-conceptualize what they do, how they operate, how they measure outcomes, and how they present the service if they are to remain viable in contemporary education. Ideally, future studies would find a way to collect survey

responses from all students and to collect those responses over a period of several concurrent school years and perhaps from a wider geographic range in order to get a more comprehensive survey group, which will provide a more substantial base to improve pedagogical outcomes.

Appendix A

Invitation Letter

7 October 2013

Study Title: The Effects of Writing Centers Upon the Engagement and Retention of Developmental Composition Students in One Missouri Community College

Dear Student,

I am currently enrolled in the doctoral program in higher education leadership at Lindenwood University, St. Charles, MO. As a part of this program, I am conducting a research study, and I would like to invite you to participate in an online student survey.

In this study, I am seeking to determine what, if any, effects student use of the college's writing center has upon student engagement and retention. If you choose to participate, you will be asked to answer 19 questions in the attached survey. These questions will involve your perceptions about your personal engagement with this college, your perceptions about your prospects for persisting in your education, and (if you have been tutored in the writing center) your perceptions about what influence the writing center has had upon your personal engagement and prospects for persisting.

The attached online survey should take no more than five to ten minutes to complete. Participation in this survey is completely voluntary, and if you should feel uncomfortable at any time in answering any or all of the questions, you do not have to answer. Moreover, whether you choose to participate or not, it will in no way influence your privacy, your grade, or your status as a student at this college. Although you will not benefit directly from participating in this study, we hope that others in the writing center field and this college will benefit by being able to better serve future college students in reaching their desired goals because of your help. Moreover, the results of this study will be provided to participants who express an interest in obtaining those results.

Participation is confidential. Results will be recorded only by student ID number and will not be matched with anyone's name. Survey information will be kept in a secure location. The results of the study may be published or presented at professional meetings, but your identity will not be revealed. Participation is anonymous, which means that no

one outside of the research team will know your identity or your individual answers. Those will be grouped with the numbers and answers of every ENG 040 and ENG 050 student enrolled for Fall 2013 who chooses to participate.

I will be happy to answer any questions you may have about the study. You may contact me at (417) 447-8225 or balld@otc.edu or my faculty advisor, (Dr. Sherry DeVore, (417)-881-0009 or sdevore@lindenwood.edu) if you have any questions. You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) by contacting Dr. Jann Weitzel, Vice President for Academic Affairs at (636) 949-4846.

If you would like to participate, please click on the survey below and answer the 19 questions. By doing so, you are consenting to have your responses considered in this study.

Thank you for considering this opportunity to help us learn how we can better serve the students of this college in their educational pursuits.

Sincerely,

David E. Ball
Lindenwood University Doctoral Student

Student Perception Survey

Please take this student perception survey offering the following four options:

strongly agree, agree, disagree, strongly disagree

Students' Expectations Regarding Retention

1. I expect to complete all of my courses with a passing grade this semester:

strongly agree, agree, disagree, strongly disagree.

2. I expect to pass my ENG 040 or ENG 050 course this semester:

strongly agree, agree, disagree, strongly disagree.

3. I expect to be enrolled for courses at my present college or another college next semester: strongly agree, agree, disagree, strongly disagree.

4. I expect to complete my two-year degree or transfer to a four-year college within the next three years:

strongly agree, agree, disagree, strongly disagree.

Students' Perceptions Regarding Engagement

5. I am an active member of at least one club, student organization, study group, or activity group affiliated with my college:

strongly agree, agree, disagree, strongly disagree.

6. I consider myself actively engaged with the community of my college:

strongly agree, agree, disagree, strongly disagree.

7. I consider myself highly motivated to succeed in college and go on to a successful career: strongly agree, agree, disagree, strongly disagree.

8. I am on personal speaking terms with at least one professor or college administrator not involving a class I am taking:

strongly agree, agree, disagree, strongly disagree.

9. I believe the faculty and administration of my college are sincerely concerned about me as an individual:

strongly agree, agree, disagree, strongly disagree.

10. Please indicate the number of times you have been tutored in your college's writing center this semester:

zero times, 1-2 times, 3 or more times.

The Writing Center

1. Being tutored in the writing center has made me feel more connected to, more engaged with, the college community I am a part of:

strongly agree, agree, disagree, strongly disagree.

2. Being tutored in the writing center has improved my chances of persisting in school:

strongly agree, agree, disagree, strongly disagree.

3. Being tutored in the writing center has improved my overall grade point average:

strongly agree, agree, disagree, strongly disagree.

4. Being tutored in the writing center has improved my grade in my ENG 040 or ENG 050 course:

strongly agree, agree, disagree, strongly disagree.

5. Being tutored in the writing center has improved my writing skills regardless of course outcomes:

strongly agree, agree, disagree, strongly disagree.

6. Being tutored in the writing center has improved my general study skills regardless of course outcomes:

strongly agree, agree, disagree, strongly disagree.

7. Being tutored in the writing center has improved my confidence as a student:

strongly agree, agree, disagree, strongly disagree.

8. Being tutored in the writing center has helped me develop skills which I can apply to my general education:

strongly agree, agree, disagree, strongly disagree.

9. Being tutored in the writing center has helped encourage me to participate more in class:

strongly agree, agree, disagree, strongly disagree.

Appendix B

LINDENWOOD

LINDENWOOD UNIVERSITY ST. CHARLES, MISSOURI

DATE:	August 22, 2013
TO:	David Ball, Ed.D.
FROM:	Lindenwood University Institutional Review Board
STUDY TITLE:	[495328-1] The Effects of Writing Centers upon the Engagement and Retention of Developmental Composition Students in One Missouri Community College
IRB REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	August 22, 2013
EXPIRATION DATE:	August 21, 2014
REVIEW TYPE:	Expedited Review

Thank you for your submission of New Project materials for this research project. Lindenwood University Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and continuance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the IRB.

This project has been determined to be a Minimal Risk project. Based on the risks this project requires continuing review by this committee on an annual basis. Please use the complete/amendment form for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of August 21, 2014.

Please note that all research records must be retained for a minimum of three years.

If you have any questions, please contact Tameka Tammy Moore at (618) 516-7027 or tmoore@lindenwood.edu. Please include your study title and reference number in all correspondence with this office.

If you have any questions, please send them to IRB@lindenwood.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Lindenwood University Institutional Review Board's records.

Appendix C

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Permission Letter from Institution

Date: July 25, 2013

Dear [ ]

I am conducting a research study, titled *The Effects of Writing Centers upon the Engagement and Retention of Developmental Composition Students in One Missouri Community College*, in partial fulfillment of the requirement for a doctoral degree at Lindenwood University.

The purpose of this research is to determine if there is any statistical correlation between writing center usage and retention for developmental composition students and to survey developmental composition students' perceptions regarding engagement, prospects of persisting, and the part writing centers may have played in their academic careers.

I am seeking your permission as the Principal Investigator in this study to contact the developmental composition students at your institution who may be interested in participating in this study.

Participation in the study is completely voluntary. The participants may decline to take the anonymous online survey without penalty. The identity of the participants and the institution will remain confidential and anonymous in the dissertation or any future publications of this study.

Please do not hesitate to contact me with any questions or concerns about participation in the study. A copy of this letter and your written consent should be retained by you for future reference.

Sincerely,

David E. Ball

David E. Ball
Doctoral Candidate
Lindenwood University

Permission Form

I, [redacted], grant permission for the developmental composition students of [redacted] to be contacted regarding participation in the study, *The Effects of Writing Centers upon the Engagement and Retention of Developmental Composition Students in One Missouri Community College*, by David E. Ball.

By signing this permission form, I understand that the following safeguards are in place to protect those who choose to participate:

1. The participants may decline to participate the study without penalty.
2. The identity of the participants and the institution will remain confidential and anonymous in the dissertation or any future publications of this study.

I have read the information above, and any questions that I have posed have been answered to my satisfaction.

[redacted]

7-25-13
Date

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Vita

David Elton Ball received a B.A. in English in 1981, an M.A. in English in 1984, and a Ph.A. in English in 1986, from the University of Arkansas, Fayetteville. From 1981 through 1990, Mr. Ball taught English composition as a graduate assistant at the University of Arkansas and the University of Tulsa, and as an adjunct at Missouri State University. Also, from 1984-1987 he taught English for the Upward Bound Program at the University of Arkansas. At the University of Tulsa, while completing 36 hours of course work toward a doctorate in English, he served as Writing Consultant for the University of Tulsa Law School during the Spring 1986 semester. During the 1986-1987 school year, Mr. Ball served as one of two Academic Coordinators for The University of Tulsa Athletic Department. From 1987-1990, he helped institute the Missouri State University Writing Center and served as Assistant Director. In 2000, he founded the Carol Jones Writing Center at Ozarks Technical Community College and, in addition to teaching composition and literature, still serves as Director of the program.