Human-Computer Interface Design for Online Tutoring: Visual Rhetoric, Pedagogy, and Writing Center Websites

Alice J. Myatt

Georgia State University

Follow this and additional works at: http://scholarworks.gsu.edu/english_diss

Recommended Citation

http://scholarworks.gsu.edu/english_diss/65
HUMAN-COMPUTER INTERFACE DESIGN FOR ONLINE TUTORING:
VISUAL RHETORIC, PEDAGOGY, AND WRITING CENTER WEBSITES

by
ALICE J. MYATT

Under the Direction of Mary Hocks

ABSTRACT

This dissertation examines the theory and praxis of taking an expanded concept of the human-computer interface (HCI) and working with the resulting concept to design a writing center website that facilitates online tutoring while fostering a conversational approach for online tutoring sessions. In order to foster a conversational approach, I explore the ways in which interactive digital technologies support the collaborative and communicative nature of online tutoring. I posit that my research will yield a deeper understanding of the visual rhetoric of human-designed computer interfaces in general and writing center online tutoring websites in particular, and will, at the same time, provide support and rationale for the use of interactive digital technologies that utilize the space within the interface to foster a conversational approach to online tutoring, an outcome that the writing center community strongly encourages but acknowledges is difficult to achieve in online tutoring situations (Bell, Harris, Harris and Pemberton, Gillespie and Lerner, Hobson, Monroe, Rickley, Thomas et. al). The resulting prototype design that I submit as part of this dissertation was developed by considering the surface and conceptual dimensions of the HCI along with pedagogies that support interactivity, exploration, communication, collaboration, and community.

INDEX WORDS: Human-computer interface, Visual rhetoric, Academic website design, Conceptual Dimension, Writing center studies, Writing center websites, Pedagogy, Visual rhetorical analysis, Conversational model of tutoring, Online tutoring, Virtual writing community
HUMAN-COMPUTER INTERFACE DESIGN FOR ONLINE TUTORING: VISUAL RHETORIC, PEDAGOGY, AND WRITING CENTER WEBSITES

by

Alice J. Myatt

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in the College of Arts and Sciences Georgia State University 2010
HUMAN-COMPUTER INTERFACE DESIGN FOR ONLINE TUTORING:
VISUAL RHETORIC, PEDAGOGY, AND WRITING CENTER WEBSITES

by

Alice J. Myatt

Committee Chair: Mary Hocks
Committee: Beth Burmester
George Pullman

Electronic Version Approved:

Office of Graduate Studies
College of Arts and Sciences
Georgia State University
December 2010
ACKNOWLEDGEMENTS

I have been privileged to have support, inspiration, and encouragement from a number of extraordinary people at Georgia State University. When I began my doctoral work, I had a deep and abiding interest in the intersections of culture, identity, and images, but not a clue as to what visual rhetoric was; I thank Dr. Mary Hocks for introducing me to the rewarding scholarship of visual rhetoric. Dr. Baotong Gu helped me synthesize my background in computers and management with the field of technical communication, while Dr. George Pullman deepened my appreciation for digital rhetoric. From the time of my first class in graduate school, Dr. Beth Burmester helped me to better understand pedagogy, writing center studies, and the way in which rhetoric influences our writing center work. All have been mentors to me, and I thank them.

Many other people have been a part of this process, including but not limited to Dr. Lynée Gaillot, Lara Smith-Sitton, Dr. Jennifer Bowie, and Dr. Jan Gabler-Hover. No acknowledgement would be complete without my thanks for the companionship and support of my fellow colleagues in graduate school: Jeanne Bohannon, Andrew Davis, Peter Fontaine, Jennifer Forsthoefel, Oriana Gatta, Laura Johnson, Juliette Kitchens, Cara Minardi, Diana Sullivan, and many more. Working and learning from them and with them made an immense contribution to my work.

My family deserves the most praise, though, for being there for me from the time I started this journey until now, and I am pleased to give it to them. They have supported me with patience and enthusiasm, and I am deeply grateful for the many ways they helped me. My love and thanks go to my husband Robert, son Robin, daughter Esther, and my parents-in-law, Bob and Peggy Myatt, all of whom I thank from the depths of my heart and soul.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF CHARTS</td>
<td>xi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xii</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td><strong>CHAPTER ONE: PUTTING THE TOOLS OF VISUAL RHETORICAL ANALYSIS TO WORK</strong></td>
<td>4</td>
</tr>
<tr>
<td>Background of the Research</td>
<td>4</td>
</tr>
<tr>
<td>The Human-Computer Interface</td>
<td>4</td>
</tr>
<tr>
<td>Prototype Design Case Study</td>
<td>6</td>
</tr>
<tr>
<td>Rationale and Relevance</td>
<td>8</td>
</tr>
<tr>
<td>In Search of the Conversational Model</td>
<td>9</td>
</tr>
<tr>
<td>Theory and Praxis of Teaching in Online Learning Environments</td>
<td>10</td>
</tr>
<tr>
<td>“The Electronic Contact Zone”</td>
<td>11</td>
</tr>
<tr>
<td>Visual Rhetoric</td>
<td>12</td>
</tr>
<tr>
<td>Studying Writing Center Websites</td>
<td>12</td>
</tr>
<tr>
<td>Universal Design Principles without a Universal User</td>
<td>14</td>
</tr>
<tr>
<td>Heuristics</td>
<td>15</td>
</tr>
<tr>
<td>The Research Questions</td>
<td>16</td>
</tr>
<tr>
<td><strong>CHAPTER TWO: INTERDISCIPLINARY CONNECTIONS</strong></td>
<td>19</td>
</tr>
<tr>
<td>Introduction of the Literature Review</td>
<td>19</td>
</tr>
<tr>
<td>Composition Studies</td>
<td>20</td>
</tr>
<tr>
<td>Pedagogical Paradigms in the Writing Center</td>
<td>20</td>
</tr>
<tr>
<td>Critical Pedagogy</td>
<td>27</td>
</tr>
<tr>
<td>Chapter Title</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Feminist Pedagogy</td>
<td>28</td>
</tr>
<tr>
<td>Digital Pedagogy</td>
<td>29</td>
</tr>
<tr>
<td>The Changing Face of Audience</td>
<td>33</td>
</tr>
<tr>
<td>Writing Center Studies</td>
<td>37</td>
</tr>
<tr>
<td>The Conversational Model of Tutoring</td>
<td>38</td>
</tr>
<tr>
<td>Online Tutoring</td>
<td>40</td>
</tr>
<tr>
<td>Collaborative Environments</td>
<td>48</td>
</tr>
<tr>
<td>Prescriptive/Directive Tutoring</td>
<td>49</td>
</tr>
<tr>
<td>Non-Prescriptive/Non-Directive Tutoring</td>
<td>50</td>
</tr>
<tr>
<td>Learning and Teaching in Digital Environments</td>
<td>50</td>
</tr>
<tr>
<td>Online Tutoring Program Websites: Designing for Interactivity and Community</td>
<td>52</td>
</tr>
<tr>
<td>Heuristics and the World Wide Web</td>
<td>53</td>
</tr>
<tr>
<td>Visual Rhetoric</td>
<td>55</td>
</tr>
<tr>
<td>Heuristics for Website Visual Rhetorical Analysis</td>
<td>59</td>
</tr>
<tr>
<td>The Human-Computer Interface</td>
<td>59</td>
</tr>
<tr>
<td>Building Virtual Communities</td>
<td>70</td>
</tr>
<tr>
<td>Chapter Three: Methodologies and Methods</td>
<td>75</td>
</tr>
<tr>
<td>Overview</td>
<td>75</td>
</tr>
<tr>
<td>Methodologies: The Interdisciplinarity of Human-Computer Interface Design</td>
<td>75</td>
</tr>
<tr>
<td>Critical analytical theory and critical theory of technology</td>
<td>76</td>
</tr>
<tr>
<td>The ecological approach and virtual communities</td>
<td>78</td>
</tr>
<tr>
<td>Design research methodology</td>
<td>78</td>
</tr>
<tr>
<td>User-Centered Design Methodology</td>
<td>79</td>
</tr>
</tbody>
</table>
Methods: a Three-Part Research Plan ................................................................. 80

Methods Purpose and Initial Design ................................................................. 81

Selecting User-Centered Design over Usability Testing ................................. 83

Part I: Visual Rhetorical Analyses - Online Tutoring Websites .................... 86

Part II: Surveys and Focus Groups ................................................................. 88

  Surveys of Writing Studio Tutors and Student Writers ................................. 88

  Online Focus Groups ..................................................................................... 89

Part III: Iterative Design Strategies ............................................................... 91

  Project Personas ............................................................................................ 92

  Subject Matter Experts .................................................................................. 93

Conclusion ....................................................................................................... 94

CHAPTER FOUR: DESIGNING FOR INTERACTIVITY, COLLABORATION, AND CONVERSATION ....................................................................................................................... 95

Surveys and Focus Groups of Writing Studio Tutors and Student Writers .... 97

  Survey of Student Writers ............................................................................ 97

    Student Writers: Demographic Information ............................................. 97

    Student Writers: Using the Writing Studio Website and Online Tutoring .... 99

  Survey of Writing Studio Tutors ................................................................. 101

    Writing Studio Tutors: Demographic Information .................................... 101

    Writing Studio Tutors: Using the Writing Studio Website and Online Tutoring 103

Online Focus Groups .................................................................................... 104

  Overview ....................................................................................................... 104

  Online Focus Group: Student Writers ......................................................... 105
Online Focus Group: Tutors ................................................................. 108
Iterative Design Strategies ................................................................. 110
Personas .................................................................................................. 111
Subject Matter Experts ........................................................................... 113
Conclusions ............................................................................................. 114

CHAPTER FIVE: DESIGNING THE PROTOTYPE ........................................... 117
The High-Fidelity (HF) Prototype .......................................................... 117
Visual Rhetorical Analyses: Online Tutoring Websites ......................... 119
  The Writing Center, Colorado State University (http://writingcenter.colostate.edu/) .... 125
  The Writing Studio, Georgia State University (http://www.writingstudio.gsu.edu) ...... 134
  The Writing Center, University of Missouri (https://writery.missouri.edu/) .............. 139
  The OWL at Purdue, Purdue University (http://owl.english.purdue.edu) ............... 144
The Prototype Design ............................................................................... 151
Lessons Learned from the Prototype Design ......................................... 159

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS ..................... 162
Addressing the Research Questions ....................................................... 162
  Visual Rhetorical Analyses .................................................................. 163
  Benefits and Limitations of Metaphors and Conceptual Models ..................... 166
  Fostering the Conversational Model ...................................................... 167
Limitations of the Study .......................................................................... 170
Recommendations and Implications for Writing Center Studies ............... 171
Directions for Further Research .............................................................. 175
WORKS CITED ......................................................................................... 178
APPENDIX A: TUTORS SURVEY/FOCUS GROUP CONSENT FORM ........................................ 189
APPENDIX B: STUDENT WRITERS SURVEY/FOCUS GROUP CONSENT FORM ................... 196
APPENDIX C: TUTORS EMAIL INVITATION ........................................................................ 203
APPENDIX D: STUDENT WRITERS EMAIL INVITATION .................................................... 204
APPENDIX E: TUTOR SURVEY INSTRUMENT .................................................................... 205
APPENDIX F: STUDENT WRITER SURVEY INSTRUMENT ................................................ 210
APPENDIX G: SESSION TRANSCRIPTS, TUTORS FOCUS GROUP ....................................... 215
APPENDIX H: SESSION TRANSCRIPTS, STUDENT WRITERS FOCUS GROUP ................... 222
APPENDIX I: TRANSCRIPT OF SUBJECT MATTER EXPERT CONVERSATION 1 .................. 226
APPENDIX J: TRANSCRIPT OF SUBJECT MATTER EXPERT CONVERSATION 2 ................... 231
APPENDIX K: PERSONAS .................................................................................................. 241
APPENDIX L: THE INTERACTIVE CHAT WINDOW, OVERVIEW AND INTERVIEW ............ 243
APPENDIX M: GOOGLE SEARCH ....................................................................................... 247
LIST OF TABLES

Table 3.1: Characteristics of the Visual Rhetorical Analysis 87
Table 4.1: Writing Studio Prototype Personas 111
Table 5.1: Characteristics of the Visual Rhetorical Analyses 124
Table 5.2: Visual Rhetorical Analysis – Website Design Features 150
LIST OF CHARTS

Chart 4.1 Frequency of Writing Studio Website Visits in the Past Two Years  99
Chart 4.2 How Students Use the Writing Studio  100
Chart 4.3 How Students Use the Internet  101
Chart 4.4 Tutor Survey Results: Website Use and Online Tutoring  102
Chart 4.5 Modes of Online Tutoring  103
Chart 4.6 Internet Usage: Tutors  104
LIST OF FIGURES

Figure 1.1 Writing Studio Website July 2010 7
Figure 1.2 Writing Studio Website Prototype Design November 2010 8
Figure 2.1 Amiga Workbench: an early human-computer interface 63
Figure 5.1 Colorado State University Home Page 125
Figure 5.2 The Writing Center, Colorado State University 126
Figure 5.3 Colorado State University Writing Studio Screen Shot 127
Figure 5.4 Colorado State University’s Writing Studio 129
Figure 5.5 Icons: Colorado State University Writing Studio 131
Figure 5.6 Georgia State University Home Page 134
Figure 5.7 The Writing Studio of Georgia State University Home Page 135
Figure 5.8 The Writing Studio Online Tutoring Page, Georgia State 138
Figure 5.9 University of Missouri Home Page October 2010 139
Figure 5.10 University of Missouri Writing Center Home Page circa 2004 (Breuch) 140
Figure 5.11 University of Missouri Writing Center Home Page 142
Figure 5.12 The Online Writery Web Page, University of Missouri 142
Figure 5.13 Purdue University Home Page 144
Figure 5.14 The Purdue OWL Portal 145
Figure 5.15 The Writing Lab at Purdue Web Page 146
Figure 5.16 The Online Writing Lab Web Page, Purdue 148
Figure 5.17 Writing Studio Prototype: Upper Left Section 151
Figure 5.18 Writing Studio Prototype: Top Banner 152
Figure 5.19 Writing Studio Prototype: Top Center 153
Figure 5.20 Writing Studio Prototype: Top Right 153
Figure 5.21 Writing Studio Prototype: Top Right 153
Figure 5.22 Writing Studio Prototype: Interactive Chat Window 154
Figure 5.23 Writing Studio Prototype: Social Networking Icons 155
Figure 5.24 Hyperlinked Write/Chat logo 155
Figure 5.25 Quick Links element 155
Figure 5.26 Podcast Section, Writing Studio Home Page, Lower Right 155
Figure 5.27 The Writing Studio Prototype: Completed Design 158
Figure 6.1 Prototype of Georgia State Writing Studio Website Design 164
INTRODUCTION

My dissertation examines the theory and praxis of taking an expanded concept of the human-computer interface (HCI) and working with the resulting concept to support a conversational approach for online tutoring sessions and the design of writing center websites that facilitate online tutoring. I posit that my research will yield a deeper understanding of the visual rhetoric of human-designed computer interfaces in general and writing center online tutoring websites in particular, and will, at the same time, provide support and rationale for the use of interactive digital technologies in writing center website design that utilize the space within the interface to foster a conversational approach to online tutoring, an outcome that the writing center community strongly encourages but acknowledges is difficult to achieve (Bell, Harris, Harris and Pemberton, Gillespie and Lerner, Hobson, Monroe, Rickley, Thomas et. al). Most scholarship encourages (or, at least, accepts) the use of online tutoring sessions--asynchronous (e.g., e-mail) and synchronous (e.g., real-time chat)--to assist student writers in their writing projects, but too often discussions center on technological tools and the best, or easiest, ways to use such tools; I believe that ongoing research and scholarship should reflect more deeply about the pedagogical issues involved in the spaces and places of online tutoring of writers, and again, understanding the rhetorical nature of the human-computer interface is vital to a sound pedagogical approach for the online tutoring of writing. In classroom and tutoring settings, the human-computer interface has become more than a mediator, more than a contact point: it is the scene of action and activity, a scene of life (Anderson). For contemporary society, the human-computer interface is more than just a facilitator of collaborative work: it is becoming a place where contact not only occurs, but a place within which contact occurs (Skjulstad and Morrison).
More than providing a space for online tutoring sessions between inexperienced student writers and writing tutors, however, writing center websites that use interactive technologies enhance conversation among online writers, even as the physical space of Georgia State’s current Writing Studio provides a place for writers to gather, talk, and exchange ideas. The research I present in this dissertation, while incorporating scholarship from a variety of disciplines, draws together strands of scholarship from three primary, specific disciplines: visual rhetoric, composition studies, and writing center studies. At times, each of these fields draws from other disciplines such as human-computer interface design, social sciences, and information management, and thus, where appropriate, I incorporate work from such fields.

My dissertation begins with a chapter addressing the background of my interest in this research and the relevancy of human-interface studies to the fields of composition and writing center studies; it then elucidates the research questions that form the basis for my investigations. In the second chapter, I move into a discussion of literature relevant to my particular project. Following the background and literature review chapters, I discuss my chosen methodology and methods in Chapter Three. Chapter Four discusses the results of the case study, presenting what was learned from the project. In Chapter Five, I report on the outcomes from designing the Writing Studio website interface prototype and report on the results of the visual rhetorical analyses that were part of the interface prototype design. In that chapter, I connect the conversational approach to tutoring writing to the visual by using the tools of visual rhetorical analysis, and the chapter concludes with the presentation of the website interface prototype that will hopefully support the tutoring of writing at Georgia State University. Was the interface design successful? What lessons can be learned
from the research? Chapter Six presents the conclusions and recommendations of this study, and the dissertation ends with a list of works cited and appendices that present the research tools and other information that supported my work.
CHAPTER ONE: PUTTING THE TOOLS OF VISUAL RHETORICAL ANALYSIS TO WORK

Chapter One situates this dissertation within interdisciplinary conversations concerning interfaces and interface design, digital learning environments, and writing center studies, provides rationale for the dissertation, and introduces the research questions along with the specific thesis statement for the research study. It concludes with a transition into the literature review of Chapter Two.

Background of the Research

The Human-Computer Interface

My interest in the human-computer interface developed as a result of my work designing and developing content for several academic websites and my course work in visual and digital rhetoric, as well as reflection inspired by Cynthia Selfe and Richard Selfe’s article “The Politics of the Interface: Power and Its Exercise in Electronic Contact Zones” and Barton and Barton’s seminal work on the ideology of maps. While I owe much of my recognition of the human-computer interface as a subject of research and study to those articles, working with academic websites led to my sustained interest in the field of technical communication, especially in the area of content management systems (CMSs), which shape the organization and flow of information on computer networks and between users and computer systems. It is within the human-computer interface, however, that the access to control is situated. While the human-computer interface is the controlling mechanism, because it is a human construct, it is not and cannot be free of rhetoric and ideological influences (Selfe and Selfe; Eble; Pullman and Gu, Wysocki). Most particularly, the work I have done and am doing for Georgia State University’s Writing Studio website prioritized
human-computer interface design and theory as an area of research for me. The more I studied and worked with human-computer interface issues, the more I realized that they are, as Anne Wysocki and Julia Jasken emphasized in 2004, sites of rhetorical activity that merit sustained research and investigation. Also in 2004, Selfe and Selfe called for more technical communicators to do research in human-computer interface studies; such a call is echoed in the 2009 *Computers and Composition* special issue on interface studies (to which I return in the literature review portion of this dissertation), and I am excited by the opportunity to do some specific work in this underdeveloped area. Thus, I posit that my research will yield a deeper understanding of the visual rhetorical nature of human-designed computer interfaces in general and writing center online tutoring websites in particular, and will, at the same time, provide support and rationale for the inclusion of interactive digital technologies in writing center website designs that utilize the space within the interface to foster a conversational approach to online tutoring, an outcome that the writing center community strongly encourages but acknowledges is difficult to achieve (Bell, Gillespie and Lerner, Harris, Harris and Pemberton, Hobson, Thomas et al).

As I researched the scholarship concerning interface studies, I discovered what guest editor Joel Haefner would point out in his introduction to the 2009 *Computers and Composition* special issue mentioned above: While some amount of theory and pedagogical scholarship has been written in the last twenty or so years about the interface and interface design, there is little scholarship dealing with “work and production within the context of the electronic interface” or with “case studies in how and by whom interfaces are composed” (137). When I combined my interest in the human-computer interface with my work and interest in the online tutoring of writing, I found a viable opportunity to develop
and work with the design of the human-computer interface for Georgia State University's Writing Studio website, developing a case study that examines the work and production within the human-computer interface, thus contributing in a substantive way to the scholarship of both interface studies and writing center studies. And, although writing centers studies is its own field, work done in writing center studies has direct connection to, and effect upon, composition studies – in particular the teaching of writing.

**Prototype Design Case Study**

In order to research the implications of incorporating pedagogical awareness into website design, and in order to accommodate the research into the allotted time frame, this research project is a case study of the design and development of the prototype, not a case study of the design of a live site. The case study, which is categorized as a form of qualitative research, has as its focus an individual or small set of participants, and forms conclusions about only that individual or set, situated only in that specific context. In describing the value of case studies, Mary Sue MacNealy notes that “empirical researchers use the term to refer to a carefully designed project to systematically collect information about an event, situation, or small group of persons or objects for the purpose of exploring, describing, and/or explaining aspects not previously known or considered.” The purpose, she adds, “is to develop new insights, new knowledge” (197). This is an accurate description of what I hoped to accomplish in with my dissertation: to implement a carefully planned design for a human-computer interface in order to gather information about the “group of objects” that form a writing center web page or website.

For my research, the starting point was the website for the Writing Studio at Georgia State University, a large portion of which I redesigned in July 2008, and which focused my
studies toward the field of technical communication and website design. The case study I undertook asked, “How do we get from here (Figure 1.1) to there (Figure 1.2)?” The answer to that question is this dissertation, and it begins by establishing the relevance of the research, ending with my conclusions to specific research questions that guided my work.

Figure 1.1 The Writing Studio at Georgia State Website, July 2010
Rationale and Relevance

Researching the computer interface from a visual rhetorical standpoint requires that I draw various and potentially disparate disciplinary strands together. I agree with Michele Eble, who recently pointed out that we must recognize that designing and developing a
human-computer interface that acts as a content management system “involves issues of accessibility, design, usability, and technical know-how, as well as questions involving pedagogical issues” (99). While writing center websites may not normally be thought of as content management systems, many of them house multiple resources for multiple audiences, and function as sites (or systems) for the retrieval of information. Throughout my dissertation, I argue that writing center design should factor in pedagogical praxis so as to support the pedagogical aims of the writing center. Thus, in addition to pedagogy scholarship that relates to learning and teaching in digital environments, my dissertation incorporates and expands upon scholarship from the fields of visual and digital rhetoric; from writing center studies I make use of scholarship about collaborative environments and the conversational model of tutoring, while from the social sciences and education, I study virtual communities and how to build sustainable online communities.

In Search of the Conversational Model

One of the most commonly cited challenges encountered in online tutoring sessions is the lack of or diminishment of the conversational model (Breuch, Bell, Harris, Hobson). As colleges and universities continue to implement online tutoring sessions, a variety of strategies and approaches have developed for using virtual spaces, but often, pedagogical foundations are left out of the discussion. One aspect often mentioned as lacking is the ability for writers to gather and discuss their writing when conversations on writing are confined to digital spaces (Thomas, DeVoss, and Hara). My argument is that some of the theory and praxis connected to teaching in online learning environments can be applied to online tutoring – most notably that of building community through shared collaborative spaces (which occurs in the human-computer interface). I do not suggest that the
environments are the same, nor do I think the face-to-face (f2f) setting should be replicated in digital environments. I do, however, believe that by applying some of the scholarship and research on building successful online classes and communities, and by using f2f social-constructivist and critical pedagogical principles to guide the human-computer interface design of writing center websites and virtual writing communities, we can enhance the experience and effect positive outcomes when tutoring online in virtual spaces, whether in synchronous (real-time) or asynchronous (e-mail) venues.

**Theory and Praxis of Teaching in Online Learning Environments**

The tutoring of writing is a form of teaching; even when tutors are peer tutors, learning is taking place. When learning happens, teaching has been done (Harris, Murphy). Thus, the theory and praxis of teaching in online learning environments is highly relevant to developing a successful writing center website that incorporates interactive digital technologies, pedagogical awareness, and visual rhetorical principles into its design.

The current generation of learners is one comprised primarily of individuals who have been born digital and have “grown up digital” (Tapscott). Don Tapscott defines these learners as marked by a strong sense of collaboration and openness about their learning (162-63). For them, interactivity is a norm, part of their everyday lives. They use iPhone applications, visit Facebook daily, and follow their interests using Twitter. Their reading habits are better described as consumption habits, or composition habits. They are as at ease with uploading homemade (often collaboratively homemade) videos to YouTube as the older baby boomer generation would be in checking out books from the local library. For them, interactive digital technologies are familiar and welcome; in fact, many of them admit to feelings of anxiety if they are “unplugged” for too long a period of time. Thus, educators
have been adjusting the theory and praxis of teaching in digital environments to reflect these learners’ engagement with technology. I explore these aspects of the Net Generation further in Chapter Two’s section on digital pedagogy.

“The Electronic Contact Zone”

At times, drawing on the concept wherein Mary Louise Pratt described the classroom as a contact zone, I react to and work with the human-computer interface (HCI) as an “electronic contact zone” (see Selfe and Selfe; Jackson). The HCI’s point of contact becomes electronic when it includes the digital and the virtual: everything from multi-media elements (including sound and video), navigational icons, and links, to the colors, sizes, and faces of fonts being used. Just as a contact zone classroom requires that divergent voices and viewpoints be heard and engaged, so the electronic contact zone of the interface should encourage and welcome the diverse backgrounds and cultures of the students who use them. Pratt argued that education is negotiated in contact zones where students of diverse backgrounds learn to communicate with each other and with their teachers. I believe that the same learning to communicate can come about within virtual spaces that encourage conversation and transformative learning, and this is the outcome I hope to achieve.

This dissertation thus studies the visual rhetorical aspects of the HCI by means of a case study that follows the development and design of a website prototype for the Georgia State Writing Studio’s virtual space; one of its primary functions would be to support online tutoring sessions led by an experienced writer. This work focuses on the ways in which visual rhetoric provides tools that help web designers plan and develop websites that support the pedagogical aims of their home institutions; the best of such design begins with the visual rhetorical analyses discussed and developed further in this work. This research
includes the design and development of a high-fidelity wireframe prototype, but it does not encompass the final product. The wireframe, patterned after the existing Writing Studio website, features a link on the Writing Studio website to a forum that represents the virtual writing community (VWC), which will most likely have its own webpage, and from the VWC webpage, students and alumni will find information and links to online tutoring sessions in addition to the main home page itself. My hypothesis is that this foregrounding of community and conversation will foster conversational engagement in online tutorials.

**Visual Rhetoric**

Visual rhetoric has a long and rich history, but it is only recently that it has come into its own as a field of research and a discipline. This has come about in part because instead of being a subset of various disciplines, visual rhetoric has become a trans-disciplinary field (Hocks) that draws into its studies subsets of various disciplines. This coincides with the rise, fall, and reascension of rhetoric as a discipline, with visual rhetoric now being a subset of rhetoric and worthy of its own cadre of academics, most of whom consider themselves either digital or visual rhetoricians. The field of visual rhetoric will, I believe, continue as an area of rich academic study, but its scope has become more focused as its companion field of digital rhetoric has experienced growth and reputability that matches the growth and ubiquity of the World Wide Web and other digital environments in which learning occurs. Thus, in my dissertation, I put to use the theories and tools of visual rhetoric.

**Studying Writing Center Websites**

One of the first steps to designing an effective website for online tutoring is to look at existing websites to get a sense of what works and what may challenge or impede the online
tutorial. I use the tools of visual rhetoric to perform specific visual rhetorical analyses in Chapter Five, which begins with the rationale for analyzing websites, using a common framework that identifies key characteristics while allowing for and acknowledging the individualistic nature of writing center programs, both online and face-to-face. After discussing the benefits and drawbacks of heuristics, I move into a presentation of the heuristic-centered approach I developed for use with the visual rhetorical analyses, and the chapter concludes with the results of the visual rhetorical analyses.

Much of the literature concerning online tutoring programs takes care to point out what may appear obvious to many within writing center studies: successful online tutoring programs must be developed and deployed within unique and specific institutional settings. At the same time, though, strong recommendations are given that online tutoring programs permit writers to retain control of their writing, thus preserving their own voices. Online tutors are encouraged to support developing writers and to avoid becoming prescriptive in their approach. And while the literature discusses, in varying degrees, the pedagogy of online tutoring, scant attention has been given to the pedagogy of such online tutoring websites. Yet, I argue that every such website displays certain pedagogical features. Thus, questions to ask should include but not be limited to, “How do the pedagogical features in this text (the website) compare to those that represent your writing center?” and should interrogate the quality and usefulness of such features as tips, figures, questions, hyperlinks, handouts, interactive dialogue boxes, and other features that support the teaching of writing. Additionally, any analysis of pedagogical features should ask how certain aspects of the website could be expanded or strengthened to make the site (and thus the tutoring that occurs within the site) more effective and supportive of the writing center’s pedagogy.
Thus, an effective analysis of an online writing center website will include both a visual rhetorical analysis that investigates and interrogates the visual design and effect of the website and a pedagogical analysis that seeks to connect accepted pedagogical standards and features to the website in order to better understand how users interact with and respond to the interface that provides the vehicle for online tutoring sessions. While it might be tempting to construct a checklist or rubric that would enable a faster (and quantifiable) analysis, such an approach ignores the richness and complexity mentioned in the outset of this section: that of each online writing tutoring program’s individual nature.

Successful analyses begin with incorporating the context and specific institutional demands that surround the development and use of online tutoring in academic settings. For that reason, the analytical approaches used here are primarily qualitative and differ from quantitative visual rhetorical analyses that typically examine the surface features of a website: use of contrast, repetition, use of color, typography, layout features, and more. By developing a set of heuristics that encourages design analysts to focus more strongly on the visual rhetoric of the human-computer interface, this research advocates the use of specific, defined heuristics that can be used to successfully analyze diverse and idiosyncratic online tutoring program websites, making use of both conceptual and surface dimensions.

**Universal Design Principles without a Universal User**

In researching the theories and applications connected with developing the prototype, I realized the challenges and probable reductiveness of basing the design of the prototype on a small subset of users. Thus, I developed a method of incorporating universal design principles geared toward the universe of users, not a universal user (Bowie). We need user-centered research, and we need to keep the end user in mind in anything we design. This is
an area that needs ongoing researchers: technology continues to expand and evolve, which means that we need to research constantly how new technologies affect users. While it may be challenging for some academic website designs to be user-centered, as there are usually two or three distinct groups of users (students, teachers, administrators) to factor in, that does not negate the need for user-centered design; it just makes it more complex. In Chapter Three, I discuss the role of usability tests at greater length, identifying their drawbacks and benefits while situating their usefulness at various stages of the website design process.

**Heuristics**

If designers of writing center websites are to design with integrity of purpose and with an awareness of the pedagogical implications of the sites they design for use by a virtual writing community, then it is vital that they have access to a set of standards, elements, or criteria that supports and makes sense of the design decisions they make. An essential part of my research, then, examines the roles of heuristics in the design process. In understanding the benefits and limitations of heuristics, I explicate the historical context of such tools within interactive interface design, folding into the discussion as needed the concepts of metaphors and conceptual models in order to investigate how best to achieve a transferable, scalable, yet customizable, set of criteria for the design of pedagogically sound writing center websites while avoiding the reductive prescription of a checklist.

Working with heuristics offers one approach to performing a visual rhetorical analysis of any website, and especially so when the website under scrutiny may logically be approached in any of at least three contexts: that of student learning, the teaching of writing, or the professionalization of writing center work. Writing center websites, and the pages that represent the virtual tutoring space (and that are in some instances, the virtual
tutoring space), are strongly individualistic and situated within a unique institutional environment. They are also, at the same time, part of the larger collection of writing center websites in general; in turn, they thus become just another website, subject to the same standards and issues of all websites.

The Research Questions

While compiling my research, I read a recent special issue of *Computers and Composition* that focused on interface studies and was introduced by a letter from guest editor Joel Haefner. I am gratified to note that my conclusions about the need for specific and sustained research into the rhetorical aspects of interfaces and interface design are shared by scholars who were (and are) actively engaged in research and scholarship connected to that area. In common with the authors who contributed to that issue (Carnegie, Carpenter, DePew et al., Knight, Rosinski), I share Haefner’s conviction that interface studies is an area clamoring for additional research and scholarship, and I hope to contribute in a substantive way to existing scholarship.

The foregoing emphasizes the need for continued research into the design and composition of the human-computer interfaces that host online tutoring sessions. My contemplation of the design and development of human-computer interfaces leads to my research questions, among which are:

- Can we say that interface design is visually rhetorical? I believe it is, and thus, if we do accept that premise, in what ways are writing center website designs visually rhetorical?
• Of what benefit is it to conduct visual rhetorical analyses of writing center websites? How will a visual rhetorical approach improve the design of such sites and provide benefits to users?

• Can attention to visual and digital rhetoric and audience-focused design improve the way(s) in which human-computer interfaces facilitate building virtual writing communities? What are the characteristics of successful online communities?

• If the metaphors that currently shape the human-computer interface are obsolete, as Eble argues, how do we select ones that not only represent the teaching and learning taking place today, but that respect and accommodate people from diverse cultures and backgrounds? What conceptual models do current students draw on?

• Is it possible to apply a conversational model to an interface for online tutoring, and if yes, what pedagogy should inform such a model?

Guest editor Haefner writes, “An interface is a sort of no man’s land, a limbo between things. It is not surprising, then, that interface studies—the cultural and rhetorical analysis of interfaces—is also in a borderland, a zone of ambiguity” (135). The scholarship interrogating the visual rhetorical aspects of the interface is slim, especially in the field of composition studies. In fact, the recent 2009 special issue of *Computers and Composition* is one of the few instances of sustained scholarly inquiry by scholars within the humanities to tease out some of the complexities of the design and use of interfaces. In cautioning against accepting the transparency of the interface as a normal, natural, state, Haefner observes that although “the computers and composition community is defined by the critical analysis of technology and how it affects writing and the teaching of writing,” it is still a fact that “interfaces, probably because of the presumption of transparency, have not received the
critical attention that they deserve” (135). Haefner issues a call for additional research into the use of interfaces, saying, “What has been less emphasized is the interface as a site of production, of work. [. . . ] A comprehensive interface literacy, as Stuart A. Selber (2004) suggested, would include both functional and critical literacies, both how an interface structures and enables production and the cultural/ideological implications of that mode of production” (136). The need now is for more projects leading to case studies like the one presented in this dissertation, and I appreciate the opportunity to engage with the questions that I submitted in this section. The answers will enlighten and, I hope, encourage continued exploration into learning and teaching about interfaces and interface design.
CHAPTER TWO: INTERDISCIPLINARY CONNECTIONS

Introduction of the Literature Review

Given the interdisciplinary nature of this research project, the literature in this chapter is wide-ranging and thus at times overlapping. However, these overlaps can be productive, for they highlight areas of intersection that serve to explain the relevance of the scholarly work that applies to the research undertaken for this project. Additionally, such intersections form the basis for the heuristics I developed to describe the virtual rhetorical tools that I recommend using when designing writing center websites that facilitate and support online tutorials and virtual writing communities.

In addition to a limited discussion of contemporary treatments of interface design and development, within this chapter is a discussion of other online writing communities amidst some historical contextualization; for example, does the literature available show that any of them are connected to writing centers? If no specific literature exists, what guidelines from existing disciplines may inform the development of the best practices of integrating interactive digital technologies and virtual writing communities into writing center websites? As I progress, I also explain some of the terms that I use throughout the dissertation. All of this is synthesized with a limited review of current literature on both online communities and recent trends in human-computer interaction design.

As mentioned in the introduction to this dissertation, the research I present here incorporates scholarship from a variety of disciplines, drawing together strands of scholarship from three primary, specific disciplines: composition studies, writing center studies, and visual rhetoric. At times, each of these fields draws from other disciplines such as human-computer interface design, social sciences, and information management, and
thus, where appropriate, I incorporate work from such fields. Therefore, I found it most helpful to establish three broad main categories: composition studies, which includes scholarship on collaborative environments and learning and teaching in a digital age; writing center studies, which includes scholarship on pedagogy, the conversational model of tutoring, writing conferences, and online tutoring; and visual rhetoric, which includes discussions on the interface and the graphical user interface (GUI). I conclude with a section on building virtual communities and examine its relevance to the prototype design.

**Composition Studies**

**Pedagogical Paradigms in the Writing Center**

In order to better understand the nature of the work undertaken in this research study, this section traces out pedagogical paradigms that have influenced, usually strongly influenced, the work done in the majority of writing centers. While acknowledging the idiosyncratic nature of writing centers, they are often situated within departments that have specific pedagogical approaches, and all of them are run by human directors who espouse to some degree a specific pedagogy or blend of pedagogies.

Writing center work is inextricably entwined with compositions studies and the teaching of writing. Dave Healy, in “From Place to Space: Perceptual and Administrative Issues in the Online Writing Center,” notes that as writing centers relocate from physical to virtual spaces, their associated pedagogies will also relocate (192). These pedagogies also shape and influence the design of the writing center websites that generally host the virtual writing center and online tutoring sessions.
As the teaching of writing changes and evolves, so does the work of writing tutors. As James Berlin traces out in his book on the history of writing in American colleges and universities, for many years at the end of the nineteenth century and well into the twentieth century, the prevailing teaching model in composition was current traditional pedagogy. This pedagogical approach was (and is, for it’s never entirely disappeared) characterized by treating writing as a product, a product that could be broken down into its separate parts and formulized for success. Writing teachers taught by giving students models of what they considered successful writing, and the work of teacher and tutor alike was to identify errors in writing, departures from the ‘norms’ that reflected a one-size-fits-all mentality. Of course there are always exceptions; but for the most part, current traditional pedagogy focused on grammar and the use of rules to attain a written product. Robert Moore’s 1950 article on writing “clinics” and writing “laboratories” thus well reflects the work tutors did during the heyday of current traditional teaching practices. Moore’s article is peppered with terms like “specimen” and “diagnosis,” but it also highlights how most writing center work was seen: the clinic or the lab, whichever designation was chosen, was a place for “remedial treatment” (394). For teachers and students who like and prefer rules and clear-cut boundaries, current traditional is reassuring, almost like a comfy blanket one reaches for without thinking. For most teachers and writers, though, current traditional approaches lack the spark of innovation and creativity, and often such pedagogy shuts down beginning writers. These concerns, along with other reasons, led to a paradigm shift that occurred in the mid-to-late 1970s in the United States.

This paradigm shift began in the mid-to-late 1970s, when Donald Murray looked at the linear process of writing. Composition research began to focus on the stages and
strategies of writing, and some of the published work from this period influenced the pedagogical approaches we still use. Mina Shaughnessy published *Errors and Expectations* in 1977 (concerning basic writers and the need for teachers to be socially aware), Peter Elbow had written “A Method for Teaching Writing” in 1968, and in 1984, the paperback edition of Donald Murray’s seminal book focusing on the process of writing, *Write to Learn*, appeared. From this and continuing on with work from the 80s, much research and many articles were published that advocated a more epistemological approach to writing—that students should write to learn, that they needed to learn the processes involved in writing, and thus learn how to incorporate strategies for becoming better writers. Scholars such as Nancy Sommers and Toby Fulwiler wrote about the recursive, not linear, nature of successful writing and revision. In 1988, James Berlin wrote an influential article entitled “Rhetoric and Ideology in the Writing Class,” in which he noted that rhetoric, and thus instruction in rhetoric, can never be “innocent” and thus separate from ideology (477). Out of all of these contributions to the academic discourse on composition came a more social-rhetorical pedagogical approach, in contrast to the product-oriented traditional approach that favored correctness and writing to a model over all else. It is within this social-rhetorical pedagogy that approaches like service-learning and the rhetorician as an agent of social change fit.

Concurrent with the development of the social-rhetorical pedagogy, probably beginning with Peter Elbow’s work in the mid-to-late 1960s, a pedagogy based on expressivism became popular. The expressivist approach emphasized the writer, and the experiences and truthfulness of the writer, above all else. For example, in 1987, Elbow wrote “Closing My Eyes as I Speak: An Argument for Ignoring Audience,” advocating an author-
centric approach (although his published work reaches back into the late 60s). Elbow (and others such as Donald Murray and Peter North) advocated workshop writing and felt that writing was an internal process that came about from getting in touch with one’s inner self and channeling the “inspiration” that followed such communion.¹

Stephen North was an early writing center scholar who favored using expressivist pedagogy in the writing center. His foundational article, “The Idea of a Writing Center” strongly encouraged tutors to leave the current traditional approach of tutoring and include more strategies of helping writers to “express” themselves (see also Brooks on minimalist tutoring). Writing was seen as a means of self-discovery and personal enlightenment, and the work of the tutor was often that of a cheerleader who supported the writer’s explorations or a muse who was particularly helpful in the beginning stages of writing, during the stages of invention and drafting. The goal of tutor work was to help each writer find his or her own unique voice, and tutors were often trained in the Socratic dialogic method in order to help writers discover paths to writing (see Lunsford, Murphy).

Expressivism enjoyed much popularity for almost two decades. However, as social constructionist pedagogy rose in popularity in the field of general education, the benefits of such an approach were taken up and endorsed by several notable writing center scholars and compositionists—among them Bruffee, Berlin, Bizzell, Ede and Lunsford—leading to another paradigm shift in writing center pedagogy. While acknowledging the very real benefits of expressivism, such as moving beyond formulaic product-based pedagogy and returning control of writing to the writer, Lunsford and others challenged the seeming freedom offered by expressivist teaching. Was it really freedom? This notion of freedom was

¹ In 1986, Lester Faigley examined these three theories of composition, referring to them as “expressive,
especially challenged when applied in the writing center, following North and Brooks’ advice to use heuristics as a way of helping students “discover” the ideas they wanted to communicate. Lunsford, writing in a seminal article on collaboration and control in the writing center, argued that the Socratic dialogic method only seemed to offer freedom; in reality, many tutorial sessions were guided by the tutors. It was the tutor guiding the session who discovered the ideas by means of leading questions, questions that were posed and then answered by the student, and that often the writer wrote to please the tutor, following in the path identified by the tutor. The flaw, she noted, was that such an approach overlooked the social dimensions of writing, ignoring scholarly work of many who argued that knowledge, language, and yes, writing, was socially constructed (Bakhtin, Geertz, Ong, Berlin, Bruffee, and Ede come to mind). As Christina Murphy noted in “The Writing Center and Social Constructionist Theory,” when it comes to the work done in writing centers, “the most significant influence of social constructionist theory [...] has been its endorsement of collaborative learning and collaborative writing” (110), though she cautions against its acceptance as a “meta-ideology” (121).

Discourse communities are especially vital in understanding and implementing social constructionist pedagogy; it is in varying discourse communities that knowledge becomes generally accepted and agreed upon, and it is the language of the discourse community that writers need to know in order to be successful communicators. David Bartholomae addresses some of the challenges in entering into a discourse community in his article on “Inventing the University.” In this paradigm, tutors become audiences for the writers they work with, thus it is not uncommon for such tutor work to include peer group tutoring (replicating the sense of discourse community), and even if teaching one-on-one, tutors try
to avoid being the authority figure, but rather being another voice among the many that the student will encounter as they craft their writing.

Murphy and Sherwood identify social constructionist pedagogy as the current dominant paradigm in the writing center community, although there are certainly other models to choose from, such as models that incorporate postmodern or post-process theories of composition. For example, they note the theories of Nancy Grimm (postmodern approaches) and Elizabeth Boquet (on the “noise” from the center), pointing out that such approaches tend to value and support “writers’ plural identities and processes” (5).

The conversational model of tutoring is closely connected to social constructionist and critical pedagogy, while it is more antithetical to current traditional and expressive theories of pedagogy. I say this because of the approaches embedded within these pedagogical theories. The current traditional approach features more of the “skill and drill” variety of learning, and views teacher and tutor as authorities who can and should teach writing by lecturing students, providing models for student writers to follow, and by being the authoritative end-source in answering questions. Instead of guiding or aiding students to discover ways in which their writing can be improved, current traditionalists tend to inform student writers directly of where their writing is faulty, spotting the errors, and they then offer “solutions” that will “fix” the writing. This is not a true exchange of communication or a dialogue between two writers, but a hierarchical exchange in which the subservient student listens to the dominant expert. The same hierarchical environment is replicated in many of the websites I visited as part of my research: Read this, click here, fill this out.

In contrast, both the social constructionist and critical pedagogical approaches are more open to meaningful, non-hierarchical, and dialogic exchange. Critical pedagogy
incorporates many of the same theories and praxes as social constructionism; it expands its scope, though, to include recognition of the public and political nature of writing (Friere, Giroux). For both of these pedagogies, social and society are key terms. For the social constructionist, meaning is socially constructed, and communication relies on the discourse community—the particular social community in which we function—within which such communication takes place. Thus, tutors who employ a conversational model of tutoring generally view themselves as collaborators and guides more than they see themselves as authority figures who have exclusive ownership of the “right way” of writing.

Current pedagogy often draws from all three of the main pedagogies detailed above. The modern, or post-modern, writing center tutor needs to be familiar with, and able to incorporate, all of the pedagogical models, for each serves a purpose. At times they may compete with each other, especially when one (such as expressivism) clashes with a specific rhetorical approach, but each does bring something to the writing experience and add to the student’s ability to write to a variety of audiences, which is so critical in our current environment.

The increasing ubiquity of interactive digital technologies supports social constructionist and even postmodern approaches, for both incorporate contemporary notions of virtual social networking and the use of the World Wide Web as a resource for writers. Technology can support the interaction between tutor and tutee, especially when distance learning courses are used by a university; however, the challenge in such instances is often the reliance on directive advice and, even on the part of the most careful tutor, a ‘channeling’ of the tutor onto the writer. Technology must be handled with care (Hobson, Selfe, Harris), but one of the advantages of a social constructionist pedagogy is that it fosters
the conversation about technology that we need if we are to continue to converse with writers about their writing in ways that support writers as they move with increased confidence into their own discourse communities.

Thus, whether intentional or not, writing center websites reflect specific pedagogies, and all writing center work, including that of the websites that represent real and virtual tutoring spaces to the world, must factor in pedagogical aims, theories, and practices. Before leaving the review of pedagogy, historical and current, we need to recognize the impact of three recent developments in pedagogy that relate to writing center website design: critical, feminist, and digital pedagogies.

**Critical Pedagogy**

Long associated with the work of educator Paulo Friere, who articulated critical pedagogy as a way of using students’ past learning as a bridge to develop new learning, critical pedagogy gained popularity in the closing decades of the twentieth century. Friere advocated the use of a problem-posing/problem-solving approach to teaching, placing the teacher in the position of a guide and facilitator of learning instead of being a central authoritative dispenser of knowledge. Ira Shor, another well-known advocate of critical pedagogy, describes its defining characteristics as "habits of thought, reading, writing, and speaking which go beneath surface meaning, first impressions, dominant myths, official pronouncements, traditional clichés, received wisdom, and mere opinions, to understand the deep meaning, root causes, social context, ideology, and personal consequences of any action, event, object, process, organization, experience, text, subject matter, policy, mass media, or discourse" (129). Critical pedagogy is transformative, empowering, and political.
When we make use of a virtual space to encourage student writers to think more critically about their own writing, we often draw on the underlying principles of critical pedagogy. As music professor Frank Abrahams puts it, “Education is a conversation where students and their teachers pose and solve problems together” (64), and it is this conversational aspect of critical pedagogy that makes it a valuable approach in writing center work. It is also useful when performing visual rhetorical analyses, as the concepts of critical pedagogy motivate me to look below the surface and first impression of a writing center website. When designing a writing center website, the tenets of critical pedagogy encourage designers to seek ways of incorporating aspects of critical thinking into the site design when possible and practical.

**Feminist Pedagogy**

In a 2009 article titled “Integrating Feminist Pedagogy with Online Teaching: Facilitating Critiques of Patriarchal Visual Culture,” scholars Alice Lei and Lilly Lu discuss their “implementation of the Interaction Analysis Model (IAM) as example of an online feminist learning space” (58). The focus of these two authors was online asynchronous teaching, not website design, but what I found helpful was their description of the five cognitive activities of IAM that are part of knowledge-making in online discussions, which online tutoring sessions certainly are. These five activities “are: (a) sharing and comparing of ideas, (b) cognitive dissonance, (c) co-constructing knowledge, (d) assessing proposed constructions, and (e) applying newly constructed knowledge” (58). Especially in websites that emphasize collaboration, self-guided exploration, and ways to apply newly gained knowledge, we may find the influence of feminist pedagogy. Another aspect of tutoring writers is the “cognitive dissonance” that often aids student writers to explore unfamiliar
paths and resources that broaden their outlook and add depth to their research. This important characteristic of tutoring should occur within the virtual space and place of online sessions just as much as those that take place in the physical writing center.

As Shaowen Bardzell notes in her article “Feminist HCI: Taking Stock and Outlining an Agenda for Design,” the features of feminism that make it a “natural ally to interaction design, [are . . .] its central commitments to issues such as agency, fulfillment, identity, equity, empowerment, and social justice” (1301). These are also the characteristics of feminist pedagogy, and thus integrating an awareness of this form of pedagogy is vital to designing academic websites like ones representing writing center work and online tutoring.

Digital Pedagogy

Pedagogy has a tradition that reaches back into the roots of instruction--even before it was given its own name and terminology, teachers sought to find ways of connecting to and instructing their students. Today, digital pedagogy is a term that has different meanings for different people, but I believe that digital pedagogy is more than just pedagogy that uses digital technology and media. I find it most productive to think of digital pedagogy as pedagogy that seeks to incorporate an awareness of the different levels of digital literacy that students bring into the post-modern, multi-cultural, and globalized classroom.

In 1945, Vannevar Bush posited the associative linking of information in a way that mimicked the way our brains work. Bush has been described as one of the forefathers of the Internet and an early architect of computer interfaces; from his description of what he called the memex, it might also be appropriate to consider him an early theorist of digital rhetoric. From Bush’s early work, we begin to see the evolution of digital environments (which rely on electronic technology for their existence), and as such environments
progressed, scholars in many fields, such as art history, sociology, communication, anthropology, and composition studies, began research into the rhetorical aspects of digital spaces. Scholars noted the challenges and possibilities, the pros and the cons, that digital spaces offer us. The more scholars engaged with writing in digital environments, the more demanding become the question as to the connection between traditional rhetoric and digital rhetoric.

Digital spaces may break away from traditional rhetoric and develop certain rhetorical strategies unique to digital compositions. For example, in Writing Space, Jay David Bolter discusses the rhetorical aspects of hypertext and hyperlinks (as does Richard Lanham in his own scholarship). While Bolter does trace hypertext to pre-digital forms throughout history, he notes that linear reading is no longer a feature of digital spaces, whether the digital text is in the form of a CD, DVD, or found posted on the World Wide Web. Knowledge-seeking has become an interactive process in which the reader or listener has some control over what and how information is retrieved, displayed, and consumed. In “Hypertext and the Question of Visual Literacy,” Bolter notes that both writing and reading on the Web are defined by the “expectation of interaction” (4). In digital environments, the audience is much more complex and less prone to exact definition than that in traditional rhetoric. Standard approaches to argumentation may not adhere within digital writing spaces: Bolter suggests that hypertext and hypermedia work “against” the “discursive nature” of standard traditional argument (7). Yet, sophisticated interactive digital technologies may alleviate such an outcome, and they may actually encourage

---

2 For example, Neil Postman's Amusing Ourselves to Death, Technopoly, Marshall McLuhan's Understanding Media, Walter Ong's Orality and Literacy, and Cynthia Selfe’s “Technology and Literacy: The Perils of Not Paying Attention” are only a few of the notable works in this vein.
conversational discourse in certain digital contexts. Students coming of age in our contemporary society now see digital media in the same transparent way that books once became transparent.

An important contribution to digital pedagogy comes from Dickie Selfe’s article in “Techno-Pedagogical Explorations: Toward Sustainable Technology-Rich Instruction,” from *Teaching Writing with Computers: an Introduction*. He lists many of the characteristics of digital, or as he puts it, “technology-rich pedagogy,” and I repeat here those characteristics that connect to writing center studies (he shares others that are unique to classroom spaces).

- All technology-rich (TR) pedagogy is experimental.
- Develop locally sustainable [tutoring/]teaching practices. Develop locally sustainable [tutoring/]teaching practices. Develop locally sustainable [tutoring/]teaching practices.
- Don’t let the technologies themselves drive your pedagogy.
- Get to know your students, their technological attitudes and abilities, and their expectations for technology-rich instruction.
- Assess what you do as you go along.
- Don’t take yourself and your efforts too seriously.
- For each TR experiment [such as the development of an online, interactive chat system], use the PAR system (preparation, activity, reflection).
- Network (in the interpersonal sense) with those around you.
- Share your insights with other scholars/teachers.
- Help develop a culture of support for [teaching with technology] TWT at your institution.

(17-18)

Implementing as many of the above elements into our pedagogical aims as possible will enhance the work we do for student writers, whether they come to us for a face-to-face (f2f) or an online session. In both spaces, digital pedagogy encourages student writers to understand ways in which their use of technology shapes their academic work.

Margaret Lloyd and Stuart Irvine describe some of the “tools” vital to the success of an online, or digital, pedagogy in “Digital pedagogy: Finding the balance in an online learning and teaching [OLT] environment,” in which they note that the “tools implicit
within the OLT environment can be categorized as being: (a) technical, (b) operational, and (c) process.” The writing center website prototype combines all three of these types of tools within the human-computer interface, as will be seen in Chapter Five. What must accompany our enthusiasm for designing for online tutoring and virtual communities is an equal commitment to developing the professional resources for educators to use them effectively. In other words, we must be able to arrive at an understanding of the complexities involved in the term digital pedagogy.

A common thread running through much scholarship on learning in digital environments is the ease with which today’s students move within their social and personal spaces in a manner that demonstrates that they have developed, to some degree, what some call electronic literacy and others refer to as digital literacy. (These terms, though similar, are not interchangeable, as there are differences between the word electronic and digital.3) From browsing the Internet, playing computer games, sending e-mail, producing video clips, and taking digital pictures, many of today’s students, from different backgrounds and cultures, accept and are fluent in the media and tools they use in digital environments. Another facet of digital pedagogy relates to those to whom it applies: those born and raised digital and those who can remember pre-digital environments. To those born digital, digital media is fast approaching the transparency of established text, an idea that I engage with at various points in my work, while those of the pre-digital generation can still remember a time without computers, networking, the Internet, and the World Wide Web.

3 The term electronic is more encompassing than the term digital. Electronic materials (which may include analog media that requires electrical equipment for delivery) may include all digital materials; digital materials depend on digital (binary) devices and networks for storage, processing, and delivery (see Tennant, “Digital v. Electronic”).
Along with other educators who espouse a digital pedagogy, I want to incorporate Robert R. Johnson’s “user-centered approach to the classroom” (161), and by extension, the writing center. I agree with him that viewing students as active participants in meaningful projects will aid them in developing research skills and writing to a specific real-world audience. Johnson makes a valid point when he notes that, for many writing teachers, letting go and relinquishing authority over the writing process may be a challenge at first, but this is an attitude and a skill at which most tutors excel. While acknowledging that not every tutoring session will have the perfect dynamic, still the ideal outcome would be, in Johnson’s words, that the engagement of writers with tutors who are real audiences and actual users creates an environment for text production (here I use the word “text” broadly) that alters the authority of teachers and writers alike—an alteration that forces a refiguring of the ends of discourse toward the users. The text is generated through an actual interaction between the user and the writer. Agency, in other words, is not lost in user-centered design; it is openly shared (Johnson 163).

The Changing Face of Audience

One of the factors or markers most sought after institutionally is that of retention. Retention happens when students are retained, staying in the same college or university throughout their academic years. Retention is just as important to the success of a writing center, for repeat visitors indicate that trust has been developed between the tutor and the student writer; it also is an important factor in the ‘word of mouth’ publicity that is so vital to having a strong and interdisciplinary cadre of writing center tutors and student writers. While shying away from thinking of the teaching of writing and the activity of the writing center in corporate terms, nonetheless it is helpful to think in terms of the provider/client
relationship that is the basis for successful repeat business – whether that business be selling computers or homes, or providing services like tutoring. Thus, a consideration of the changing face of audience merits inclusion here.

In the second edition of *The Rhetorical Tradition*, editors Patricia Bizzell and Bruce Herzberg describe one of the enduring effects of Derrida’s deconstructionist activity: its use as a tool for breaking down binaries and problematizing fields of discourse with seemingly fixed categories (1472). Thus, with the application of deconstructionist analysis, notions that binaries like author/audience or producer/audience are immutable and naturally occurring fall apart beneath deconstructionist scrutiny. Anne Wysocki, in her 2005 article “awaywithwords: On the possibilities in unavailable designs,” echoes these sentiments when she speaks of the “engine of dichotomies that has driven what many consider to be most problematic with Western thought” (58). Jay David Bolter draws on Derrida’s work in his own groundbreaking scholarship, among which are the article “Hypertext and the Question of Visual Literacy” and the book *Writing Space: Computers, Hypertext, and the Remediation of Print*. In *Writing Space*, Bolter provides some background to the development of participatory culture, although he himself does not use the term. In *Writing Space*, he speaks of “Refashioned Dialogues,” noting that early forms of writing sought to control the knowledge-making experience of the reader. The etymology of the word *read* in Anglo-Saxon history is “to interpret” and derives from the earlier Latin word *logo*, which carried the meaning of “to gather, to collect,” thus Bolter suggests that the early experience of reading was a process in which the reader gathered up signs while moving over the writing surface (100).
What does Bolter’s historical look at the practice of reading yield? It provides a clear understanding of the traditional, once-passive nature of audience: a passivity that reached its peak in the mid-Victorian era and the century that followed it. Early notions of audience conveyed the sense of a passive reader, in which the reader followed a path prescribed by the author, a path over which the reader had little control, given the linear style of writing that began with the papyrus roll, continued through the codex, and maintained its presence in the machine printed signatures of our current bound book. This also emphasizes another key point in the development and understanding of current audience: the issue was not so much a longing for preserving a seemingly natural order as it was a matter of control.

With the introduction of deconstruction into rhetorical theory, the idea of immutable binaries was challenged. Derrida’s work reached the United States in the early seventies, and its popularity in literary criticism and theory coincided with the development of the World Wide Web and the Internet. Bolter notes the influence of both Derrida and Roland Barthes, not a deconstructionist per se but nonetheless quite influential in “breaking down linear form,” as Bolter puts it. In fact, Bolter does put Barthes into his section on “Deconstruction and Electronic Writing,” according him as much influence as Derrida and Foucault in constructing our current notions of text. In Barthes’ work “From Work to Text,” Bolter sees the computer in Barthes’ explication of the differences between the work (the physical manifestation) and the text (the methodological field). Thus, deconstructionists saw the “fixing” of any text as a futile gesture, a vain attempt to fix meaning. Along with the development of hypertext, which Bolter defines as a “network of connected writings” or even as the “dynamic interconnection of a set of symbols,” the idea that the author was unable to fix meaning or achieve a static statement bound in printed form opened the way
for a dialogue between the text and its reader(s). More than that, it opened up a multiplicity of dialogues, voices, and permitted the re-fashioning of the text once the reader became engaged with the text, the idea bound up in the text (179-83).

Between the early work of Bolter around the turn of this century and the recent work of Henry Jenkins (who writes specifically about participatory culture) lies a body of work that addresses and explicates the evolving nature of audience and its relationship to digital environments. Influential articles and books come from Dan Anderson, Dana Anderson, Mary Hocks, Andrea Lunsford and Lisa Ede, Cynthia Selfe, Richard Selfe, Anne Francis Wysocki and Julia Jasken, and others. Hocks, in “Understanding Visual Rhetoric in Digital Writing Environments,” notes that writing now involves the “intertwining” of production, interaction, and publication; no longer are readers passive audiences but many are now active consumers (631). Advances in Internet technology and the increased popularity of forms like blogs, wikis, and other interactive genres inspire modern readers to take control of the writing, even if they are not the initial authors.

Henry Jenkins drew on the work of these and other scholars in his work as Director of the Comparative Media Studies Program at MIT and as an advocate and scholar of participatory culture. In a recent white paper published via the Internet, Jenkins notes the characteristics of this culture: it is

a culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another (at the least they care what other people think about what they have created). (3)
Participatory culture is communal, marked by affiliations, collaborative problem-solving, multiple new media expressions, and a tendency to use digital means to circulate information. Such characteristics call for innovative approaches to composition teaching and tutoring.

**Writing Center Studies**

The history of writing center studies is becoming ever richer with the passage of time. The writing center community’s modern history traces its roots back to the early part of the twentieth century, though the modern writing center most of us are familiar with became popular during the 1970s, as open enrollment and an increased emphasis on university education swelled the enrollment figures throughout the United States. There are many good resources for learning about the early history of writing centers; the focus of my research is on website design and the integration of interactive digital technologies, and thus I review some of the current literature on online tutoring, which makes use of such technologies. I begin by explaining the importance of the conversational model of tutoring, move into a discussion about online tutoring, and then establish their relevance to digital collaborative environments.

---

The Conversational Model of Tutoring

In 1980, Charles Bazerman explored the advantages of using what he described as a “conversational model” for teaching composition. In this model, student writing is seen as part of an ongoing, written conversation (657). What are some of the hallmarks of a conversation? It occurs between a minimum of two people, one must listen actively to what has been said and then respond in a meaningful way; often the response is framed according to the situation and the responder’s purpose(s). The same thing transfers over to writing when we use a conversational model: writing is part of an ongoing discourse, other writers respond to earlier writing (requiring active reading), and often the response is driven by rhetorical situations and purposes. This use of a conversation model of teaching is resituated by Kenneth Bruffee in his work on peer tutoring and by Muriel Harris in her work on student/teacher conferencing.

In 1984, Bruffee published his seminal article, “Peer Tutoring and the ‘Conversation of Mankind,’” and with that publication, peer-tutoring (and conversational approaches to tutoring) really took off, although it took some time before peer-tutoring was fully recognized as a viable and effective tutoring model. Bruffee traces out some of the roots of the conversational approach to learning, mentioning Rorty, Vygotsky, Geertz, and Fish specifically. Bruffee notes that reflective thought is in reality “organically related” to social conversation, an observation that Geertz supports. Geertz posits that social thinking (overt thinking out loud and in public) is fundamental to human nature and most likely precedes the private thinking that we learn to do as we are acculturated as children into Western society and its mores. As related by Bruffee, scholar Stanley Fish also observed that our mental thinking processes “have their source” in an “interpretative community” (qtd. in
Bruffee 209). The conversational model of tutoring relies on the dialogic exchange of meaningful communication. Collaboration is often conversational; there must be at least two people involved for meaningful collaboration to occur. A few years after Bruffee published that article, Muriel Harris’s foundational book on effective writing conferences was published (*Teaching Writing One-to-One*). A specific audience for the book that she mentions in her introduction is the tutor in a tutoring situation, and although her focus is on teaching more than peer tutoring, her approach is strongly conversation-based. Successful conferencing results from conversation, not one-way lecture as communication, and it is this type of conferencing that conversational tutoring emulates.

Conversational tutoring is not quite the same as peer tutoring. In peer tutoring models, undergraduates tutor fellow undergraduates, while graduate student tutors work with fellow grad students. The conversational model offers more flexibility while avoiding hierarchy: trained tutors work with students of all levels, but they use the strategies and techniques associated with conversation. The student retains ownership of her or his writing, thus tutors avoid writing on or appropriating the tutee’s paper. The tutor becomes an active reader, an audience for the writer, and asks questions that might normally be asked in any conversation.

The conversational model of tutoring is a major tenet of social constructionism, which situates writing as a form of conversation, leading to the conclusion that student writers best learn how to write through application of the conversation model. Patricia Bizzell uses the example of someone new who has arrived at the church picnic; that person lingers at the edge of a gossipy, talkative group, listening carefully before beginning to make a contribution to the ongoing conversation. The conversational model makes use of two
ideas that form the philosophical foundation for contemporary writing centers: the power of collaborative work with a peer along with a “transitional community” that supports the efforts of students to move into the academic discourse community (Bruffee, Bartholomae) and the value of one-on-one conferencing in a setting that provides individualized instruction (Harris). In *Teaching One-to-One*, Muriel Harris notes that talking with students as they write or prepare to write indicates a commitment to writing as a process of discovery in which students are helped to learn how to shape a piece of writing as it takes form (6-7). This model also emphasizes that writing is primarily an act of communication in which the needs of the reader are crucial considerations. Asking questions of student writers is a feature of the conversational model, as is allowing students to talk about their writing, discussing problems and explaining what they are doing, thus keeping the writer, not the teacher, in the central position and in control of the writing done. This central tenet of writing center work strongly influenced the decisions I made as a designer working on the Georgia State Writing Studio website.

**Online Tutoring**

The history of online tutoring, though brief in number of years, is rich in its complexity and engagement with integrating various forms of technology into learning in digital environments; it also includes scholarship that moves beyond an identification of tools to encompass theory and best practices. Most histories of online tutoring reach back to the mid-90s, when Muriel Harris, Eric Crump, Mike Palmquist, Mike Pemberton, Irene Clark, James Inman, Donna Sewell, Eric Hobson and others recognized that integrating digital technologies could expand the offerings and services of traditional brick-and-mortar writing centers. The initial focus was on offering email support and developing online
writing “labs” (OWLs) that provided resources for writers. Famous in this history are the OWL at Purdue, the University of Minnesota’s Online Writing Center and the Online Writery at University of Missouri. Also noteworthy are the University of Louisville Virtual Writing Center (which uses the acronym VWC) and the UNC Chapel Hill Writing Center.

UNC began its online writing center in 1998, so they have a lot of experience, although they adhere to an asynchronous model. They provide a great FAQ for those seeking to implement online sessions (including a link to online pedagogy). UNC restricts the use of online tutoring to members of the university community, as does the University of Louisville and Georgia State University’s Writing Studio. Mike Palmquist’s 2003 article “A Brief History of Computer Support for Writing Centers and Writing-Across-the-Curriculum Programs” illuminates the opportunities and challenges faced by administrators and tutors in writing centers who seek to incorporate digital technologies productively and in a way that benefits and supports student learning.

Scholarship connected to online tutoring includes but is not limited to Muriel Harris and Michael Pemberton’s 1995 “Online Writing Labs (OWLs): A Taxonomy of Options and Issues,” Eric Hobson’s edited collection Wiring the Writing Center from 1998, Dickie Selfe’s 1995 article “Surfing the Tsunami: Electronic Environments in the Writing Center,” and also from 1995, “From the (Writing) Center to the Edge: Moving Writers along the Internet” by Muriel Harris. Mike Pemberton and Joyce Kinkead’s edited collection The Center Will Hold (rich in detail about Harris’s contributions to the field) appeared in 2003, a couple of years after a 2000 article by Sam Racine, Denise Dilworth, and Lee-Ann Kastman Breuch entitled “Getting to Know Audiences in Cyberspace: A Usability Approach to Designing Skill Centers for Online Writing Centers.” A recent entry from 2007 is
“Dialoguing at a distance: How do we communicate with external students?” by Ann-Marie Priest of Central Queensland University and which has an excellent review of the pros and cons of online tutoring, both asynchronous and synchronous.

Online tutoring seldom exists on its own (some professional, for-profit sites excluded) but is commonly found as an adjunct to physical tutoring locations. Thus, and most especially as seen in some of the early scholarship dealing with online tutoring, it is enticing to try and replicate/duplicate face-to-face sessions as much as possible online. Recent scholarship recognizes that online tutoring sessions have specific features that are separate from the physical tutoring space, however. I find it particularly helpful to consider the “community of practice” theoretical approach made popular by Wenger and Lave, and which I discuss further in the section on community building. Communities are marked as much by their practices as they are by their discourse, but the two—discourse communities and communities of practice—are distinctly different. Thus, the community of practice that marks online tutoring differs from the community of practice found in physically located tutoring. However, the discourse community of writing centers enjoys a common pedagogical language that speaks to both face-to-face (f2f) and online tutoring. My dissertation draws on the discourse community of writing center studies, most especially the scholarship of conversation and community. In this section, I begin with conversation and its connection to online tutoring.

Because successful conversation relies as much on body language as it does on spoken language, there are certainly challenges to maintaining a successful conversational
approach when tutoring with technology, especially in online situations. Working with student papers via e-mail fosters a directive, non-collaborative style, although savvy tutors work against such inclinations. In tutor sessions that take place online, the absence of body language makes it difficult to gauge the listener's (in this case, the typist on the other end of the virtual connection) reaction, which may lead in turn to misunderstandings and foster, again, a directive mode of tutoring. When used effectively, though, the conversational model of tutoring is of benefit to both tutor and tutee, and advances the skills of both listener-reader and speaker-writer. From my own observations, I also believe it is a model that brings great satisfaction to those involved in it, whichever side of the tutorial equation they may be on.

I agree with Elizabeth Boquet and Neal Lerner’s ideas about ideals in writing center work when they note the value of “maintaining physical and virtual [italics added] spaces where students write in the company of other writers, work at the point of their own needs, talk about why writing matters and in what contexts it continues to matter—although these are not ideals of writing centers only, they are ideals of writing center work” (186). Given the familiarity with online writing spaces that many contemporary students have, clearly the online tutorial, or the online tutor, becomes an increasingly familiar context for the teaching of and learning about writing. I believe that Harris, Boquet, and Lerner have all articulated ideals for writing center praxis that reflect the conversational model that is so effective in helping writers improve their writing. Thus, in planning for the implementation of an “ideal” writing center website, the design should implement a model in which conversation

Liv Marken and Amanda Goldrick-Jones shared a presentation they did for the 2008 CATTW Conference in Vancouver that is a good summation of some of the issues involved in online tutoring. See http://docs.google.com/Doc?docid=0AQQKQ_D9zBxVYWpiamZxbmM1azdmXzM4ZHdibnRwYzc&hl=en
is an identifying feature, in which the tutor placed the writer and not the text in a central position, and in which the writer retains control of their writing.

If not already selected, an important step in approaching the interface design of the online tutoring space would be to come up with a conceptual model for the online space. In a thoughtful article in the *Writing Center Journal*, Lee-Ann Kastman Breuch states, "New technology invites us to reconsider our previous conceptual models" for online writing centers; she defines a conceptual model as "a mental map of sorts for understanding how to use a product or to interact with an interface" (23). Keeping in mind the reality that each campus has unique needs, peculiar to itself, would motivate designers to come up with a conceptual model for their campuses, along with the input and advice of as many student writers and tutors as care to participate. As the focus group sessions showed (see Chapter Four), the Georgia State tutors, for the most part, like and support the studio model and the café concept, so that is the model I kept in mind as I designed the prototype.

In addition to the foregoing, institutional context affects the latitude of how and by what means writing centers will implement online tutoring. Open-source programs are generally low-cost and customizable; however, there are some good software programs that also are budget-conscious and customizable. Whatever the software solution, it needs to fit the unique needs of a particular campus, and it should allow the writing center director to use the technology to support diverse student populations while being conscious of distance, time constraints, mobility issues, accessibility, and millennial students' interest in computer-mediated instruction. A number of writing centers have recently begun experimenting with virtual environments like Second Life, and early reports are generally favorable, although it is much too early to have any real definitive conclusions.
Not only do opinions (based on results, I might emphasize) differ as to whether or not the rhetorical aspects of online tutoring are the same as face-to-face sessions, suggestions on the best way to implement online tutoring differ as well. This makes sense: what works for one setting/context may be inappropriate somewhere else. This, again, emphasizes the value of preplanning and understanding one's audience when designing the interface.

Lisa Bell, in the *Writing Center Director’s Resource Book*, speaks of preserving the rhetorical nature of tutoring when going online, noting that it is remarkably easy for tutors to shift from “tutoring” to “editing,” as there is no writer in front of the tutor to maintain the focus on “communicating ideas,” not just editing. In online settings, she believes that it is easier for the writer to abdicate responsibility; it is easier for the tutor to work “for” the writer, not “with” the writer (353-54). Although a carefully-designed human-computer interface is not a panacea or ultimate solution, still, I believe that, carefully designed with both audience and user in mind, it can become an asset in assisting both tutor and tutee to sustain dialogue and avoid falling into prescriptive and routine responses. For example, in common with f2f tutoring, online tutors need time to reflect and time to read tutorial transcripts, so as to adjust their rhetorical approaches before responding. Online tutors must learn how to wait for responses from the student writer, how to articulate their reader responses in writing, and how to provide appropriate models for student writers. Especially if using synchronous tutoring sessions, the online tutors need to learn how to incorporate emoticons and online chat shorthand (see Mohrbacher), and should have available a list of web guides and handouts and know how to insert hyperlinks to such resources into their

---

6 This may account for the popularity and prevalence of e-mail tutoring as the only option given on many writing center websites that offer “online tutoring.”
online responses, whether such be via e-mail or chat. The interface used by tutors should support them in these goals.

The most important feature, and one which should remain the same whether sessions take place in online or f2f sessions, is that the tutorial be conversational and dialogic, use questions to help the writer remain firmly in control of the text, and recognize when writers need encouragement to come in to have a f2f session. Just as f2f sessions may not suit all writers and the particular needs they have, online sessions will not suit all writers or be able to fulfill various needs they may have. A successful implementation will recognize that cyberspace is a separate space and thus will certainly have unique characteristics that set it apart from face-to-face tutoring. In both venues, though, the student writer remains central to the mission and goals of the writing center. Before concluding with this review, it is appropriate to discuss what current online tutoring solutions are being used in writing centers and even in professional, for-profit settings.7

Two solutions often implemented are synchronous and asynchronous online sessions. Synchronous sessions occur in real-time, within the interface8. Asynchronous sessions take place via e-mail or by using an educational website like Blackboard or Moodle. An early acronym for online tutoring is the OWL, or online writing lab, made popular by the work of Muriel Harris of Purdue University. In their introduction to 2003’s The Center Will Hold, Michael Pemberton and Joyce Kinkead credited Harris with “spearheading” the creation of OWLs; they note that at the time of their writing there were “well over a

7 A comprehensive spreadsheet posted as a Google Doc by Liv Marken, (Writing Help Coordinator at the University of Saskatchewan) compares the pros and cons of many of the solutions that are available for use in online settings: See http://spreadsheets.google.com/ccc?key=0AhJw6UH83IdbcG1WbWIPNhkpUTVSRHFQdXQ2YUpYOoE&hl=en
8 Although a few are conducted by phone, using a telephone for a tutoring session is rare.
hundred more‖ at institutions of learning all across the United States (11). Many of us within the writing center community, though, balk at the use of the word “lab” – it has taken many years of scholarship and effort to move past the product-oriented and reductive connotations of the word. Thus, some online tutoring centers look for alternatives.

For some, the acronym COW—center for online writing—seems a good substitute for OWL. When I searched for the phrase “center for online writing”, Google returned a mere eight hits, four of them being Kirkwood Community College, two being from Glendale CC, and one from the OWL at Purdue. The final item linked to Inman and Sewell’s *Taking Flight with OWLs* (see below). The COW at the Kirkwood Community College ([faculty.kirkwood.edu/rschlue/kcccow/cow.htm](http://faculty.kirkwood.edu/rschlue/kcccow/cow.htm)) announces, “All you need to do is send an e-mail with an attached file to the address following the procedures and guidelines section,” thus clearly indicating that it performs only asynchronous tutoring.

Online Writing Labs, or OWLs, are much more prevalent. Doing a Google search (October 2009) returned hits from such institutions as Purdue, Dakota State University, the Edina, Minnesota public school system, University of Florida, and the for-profit SmartThinking, just to name a few. More of these sites offer asynchronous than synchronous online tutoring, although synchronous tutoring sessions are becoming more popular as the technology to implement them becomes more available and less costly. From the beginning of Purdue's online writing lab (OWL) until now, the incorporation of technology has prompted some thoughtful and insightful scholarship about not only using technology to provide online tutoring, but using it with care, planning (at least as much as

---

9 In fairness to online tutoring centers, though, an equivalent search for “online writing center” returned 15,000 hits – but I use the first instance to address the identity formation inherent in having an acronym that announces what the organization or system is or does.
the institutional setting allows), and respect for both tutor and student (see Bell, Harris, Pemberton). While I would not characterize the scholarship as abundant, it does exist and provides good resources for writing center directors who are in the position of implementing online tutoring. Foundational edited collections like Eric Hobson's *Wiring the Writing Center* and Inman and Sewell's *Taking Flight with Owls* are two important books that come to mind. Muriel Harris, with a depth of experience from her years of directing the Purdue writing lab, both in its electronic and physical spaces, has also written about online tutoring, as have other directors and tutors (Bell, Breuch, Pemberton, and Jackson, among others).

**Collaborative Environments**

According to Maureen Goggin in *Keywords in Composition Studies*, collaborative learning is an umbrella term beneath which lies a range of pedagogical techniques, which most often involve small groups of two or more working together and which include, but are not limited to, peer planning, review, critique, tutoring, and conferences. As praxis, collaboration signifies not only the phenomenon of two or more authors working on a single project but also extends to the view that all writing is collaborative. As a theory, it is invoked to support bipolar concepts of discourse as both individual acts of cognition and as social acts (35-39). Collaborative learning became more popular as enrollment in colleges grew due to the GI Bill and open enrollment in the 60s and 70s. Among other things, teachers advocating the use of collaborative learning noted these benefits: it helped students develop audience awareness and shifted the responsibility of learning to write, or improving one's writing, from the teacher back to the student. Proponents of current-traditional and expressivist pedagogy find this type of learning antithetical to their belief that writing is primarily an individual act. Anne Ruggles Gere traces the roots of collaborative learning
back to Vygotsky, who saw learning as a dialectical process between individual and society (Gere 6). Collaborative learning is essential to the peer tutoring model and one-on-one conferencing; in writing center studies, Kenneth Bruffee and Muriel Harris are active proponents of this method of learning (as are John Trimbur, Ede and Lunsford). Another feature of collaborative learning is the decentralization of the teacher, in accord with social constructionist and critical pedagogical approaches to teaching. Collaborative learning most often takes place within a discourse community, for it is the use, exploration, and advancement of the discourse within a community that marks learning. One of reasons I find the idea of incorporating a virtual writing community into writing center website design attractive and worthy of merit is that it offers a space for collaboration and the exchange of ideas that are hallmarks of our digital world.

**Prescriptive/Directive Tutoring**

Prescriptive or directive tutoring is characterized by closed questions, or even discouragement of questions, and is an aspect generally associated with current traditional pedagogy, in which the teacher assumes a central position as authority figure and gatekeeper and instructs or directs students in the accumulation of teacher-given knowledge. Directive tutoring masks or silences the writer's voice, expressing instead the tutor's or teacher's voice. While many think of directive work in pejorative connections only, my experience indicates that when working with ESL students, or with students who are working on resumes or personal statements, a measure (a cautious measure!) of directiveness may be advantageous. The essential thing is to determine the need(s) of the writer and proceed accordingly; however, one should always be mindful of the need for the writer's voice to be heard.
Another relevant discussion is “Repetition and the Rhetoric of Visual Design” by James Porter and Patricia Sullivan. This chapter looks at the role of repetition, especially as how it relates to page design in technical documentation. While repetition can be valuable, the study demonstrates that there are disadvantages to using too much repetition. An interesting outcome is found in their discussion of directional design versus interactive design. The former directs learners, giving them very little scope to experiment and explore, while the latter does offer opportunities for “independent learning” (300). This supports my effort to include a high degree of interactivity into the design of the Writing Studio website.

**Non-Prescriptive/Non-Directive Tutoring**

The goal of those centers that adhere to a conversational model of tutoring relies on the use of non-prescriptive, thus non-directive, tutoring, which contrasts with prescriptive/directive tutoring (see preceding section) and is marked by a willingness to let the writer remain in control of the writing, the use of open-ended questions, and responding in a non-judgmental way to the writing. For the most part, this type of tutoring reflects pedagogy that is open and supportive of students who learn by doing, who learn by exploring and making decisions about their work. Thus, this is a hallmark of critical and feminist pedagogies. This type of tutoring fosters the growth of the writer, resulting in better writers, not better writing only.

**Learning and Teaching in Digital Environments**

Learners and teachers who learn and teach in digital environments encounter tensions that result in part from the evolving nature of social networking. While living and working within a community is a constant feature of the human condition, the nature of
community has been changing as technological advances make virtual spaces more than a point of contact: the human-computer interface is now a place of sustained activity on various levels. Understanding current attitudes toward public and private spaces is but one instance of the way in which younger members of society, who are often described as Millenials or NetGeners, have become accustomed to the exchange of vital and often sensitive information across often insecure or unsecure digital environments. Here, I digress briefly into some explanation of the general, or average, student figure I kept in mind as I worked on the design of the writing center website and as I constructed the personas that I present in Chapter Four (I discuss personas more in Chapters Three and Four). Granted that there are always exceptions to any generality offered, most students today fall into the generation described variously as the Millennial generation or Generation Y; I like the appellation ascribed to this group by researcher and author Don Tapscott in his book *Grown Up Digital*: the Net Generation, or Net Gen.

These individuals were born between 1977 and 1997, and they are currently the largest population segment of American society: 27% compared to the 23% of the baby boomers (15). It is this specific generation that I think of in connection to our post postmodern ways of thinking about composing in digital spaces. For the Net Geners, hybridity and multimodality are ubiquitous and transparent elements of their digital environment— they take for granted the ability of technology, combined with multiple medias (especially the Internet as a particular media), to remix and weave together existing content into new and more creative forms. Tapscott describes Net Geners as taking the art of conversation to new heights; even though some of us more staid boomers might wonder about the choice of vocabulary used in those conversations, it is generally true that our
current body of students is highly vocal and apt to be engaged in some form of communication. According to the Pew Research Center, “some 40 percent of teens and young adults have their own blogs, . . . [and] some 64 percent of the Net Generation engaged in some form of content creation in 2007, compared with 57 percent in 2006” (qtd. in Tapscott 45). Among the characteristics that Tapscott attributes to the Net Generation are: They want freedom in everything they do, from freedom of choice to freedom of expression; they love to personalize, customize; the Net Generation wants entertainment and play in their work, education, and social life; they are the collaboration and relationship generation; they are innovators (34-35). Collaboration is an outstanding feature of the Net Generation. For example, collaborative video games are an increasingly popular form of entertainment for Net Geners. Tapscott notes that the online World of Warcraft game has “an astonishing 10 million subscribers around the world” (57). This game is strongly collaborative; players have the opportunity to form or join guilds, and then play together. This penchant for collaboration is one reason that I believe we will observe a steady increase in the number of students who prefer to engage in online tutoring sessions.

Online Tutoring Program Websites: Designing for Interactivity and Community

The development of the website representing The Writing Studio at Georgia State University began with the design of the website for the Center for Writing and Research, as the writing center was known up until 2004, when Beth Burmester of the University of Illinois/Chicago accepted the position of director of the writing center. Burmester, whose work in writing centers began in DePaul University’s Center for Writing-based Learning, worked with a committee to rethink the purpose and mission of the writing center for the Georgia State community of students. In keeping with the pedagogical aim of fostering the
teaching of writing, writing to learn, and incorporating a conversational model of tutoring writing, Burmester and the graduate students who worked as tutors in the center selected the nomenclature of The Writing Studio as representative of the goals and mission of the work done in tutoring writers, drawing on the conceptual model of an artist’s studio or café. However, the website inherited by The Writing Studio was one that reflected a combination of current-traditional and social constructivist pedagogical influences, as can be seen from a review of the website’s history via the Wayback machine (at www.waybackmachine.org).

Heuristics and the World Wide Web

A heuristic differs from a set of criteria or rubric in that heuristics accommodate a range of characteristics or criteria; this use of heuristic in the field of information management can be found as far back as 1945 (Polya, 1945). An informative discussion of the history of the use of heuristics in artificial intelligence occurs in a 1985 article by Romanycia and Pelletier titled “What is a heuristic?” In discussing the use of heuristics in computer programming, they note:

In Gelernter’s (1959) geometry program paper, we find a definition reminiscent of Polya [1945]: A heuristic method is a provisional and plausible procedure whose purpose is to discover the solution of a particular problem at hand [Feigenbaum and Feldman 1963, p. 135]. Gelernter emphasizes that the necessity of avoiding algorithmic, exhaustive search is the rationale for introducing heuristics into a problem situation. Gelernter is also one of the first to point out that heuristics work in effect by eliminating options from an impractically large set of possibilities:

A heuristic is, in a very real sense, a filter that is interposed between the solution generator and the solution evaluator. [Feigenbaum and Feldman 1963, p. 137]

(in Romanycia and Pelletier 48-49)

For the purpose of this research project, the key words are “eliminating options from an impractically large set of possibilities.” If one were to try to develop a rubric or checklist
that listed an exhaustive list of possible permutations that might be encountered during the process of analyzing a writing center website, it would be impractically lengthy. However, developing a tool that enables analysis along a well-developed set of criteria that can be used heuristically offers the ability to use a consistent set of criteria for such analysis.

In *The Technical Communication Handbook*, Laura J. Gurak and Mary Hocks note that web page design has matured to the point that the field agrees on specific “universal guidelines” (383) that web users now expect; lack of these common features inhibit and confuse users in the same way that consumers of alphabetic text would be confused and very likely frustrated by opening a book and finding the positions of the table of contents and the index reversed. To that end, they recommend that web pages incorporate alignment of elements along a grid, with appropriate use of white space, typographical elements, titles and headings, carefully chosen colors, and properly integrated visual elements that balance the necessary but clear and concise text that might be used on the page (384-386).

A useful heuristic will include evaluation of navigation features like search bars and left menus for external links, judiciously used links that “use text or a mouseover feature to explain what people can expect” when they follow the link, and links that follow a consistent color pattern for visited and unvisited sites (Gurak and Hocks 384). All web pages should meet the accessibility guidelines developed by the World Wide Web Consortium (W3C) and accepted as standards by technical communicators. Additionally, web designers should consider the metadiscourse Eric Kumpf advocates and which I develop further in the next section. In developing the heuristic, I also drew on Jay David Bolter’s work on remediation, hyperlinks, and transparency, visual rhetoric and interface theory from Anne
Frances Wysocki, and awareness of audience stance, hybridity, and transparency from Mary Hocks.

**Visual Rhetoric**

The definition of visual rhetoric depends upon the scholar; in their introduction to *Defining Visual Rhetoric*, Charles Hill and Marguerite Helmers explain that visual rhetoric is “understanding how images... work upon readers” (2). This is one reason for adding in an emphasis on conceptual models or metaphors to the heuristic for visual analysis. Most people use conceptual models to make sense of unfamiliar environments, but it is important to understand that a conceptual model that works for one person make not work for another. Two people from different backgrounds could see images in completely opposite views. Additionally, not all visual objects are rhetorical in nature, which is why, in the *Handbook of Visual Communication*, Kenneth Smith notes that “not every visual object is visual rhetoric. What turns a visual object into a communicative artifact--a symbol that communicates and can be studied as rhetoric--is the presence of three characteristics. . . . The image must be symbolic, involve human intervention, and be presented to an audience for the purpose of communicating with that audience" (15). Understanding the symbolism embedded within an image helps designers to choose strong conceptual models.

Visual rhetoric is an integral part of interface design, and understanding how images create meaning contributes to successful design. In *The Grammar of Visual Design*, Gunther Kress and Theo van Leeuwen discuss terms that they argue help us to understand how we make meaning from images. They advocate using a grammar of visual design to craft images that convey meaning efficiently between producer and consumer. For example, in using the tem *rhetorical vectors*, which might seem at first glance to be incongruously joined,
they explain that vectors are the diagonal lines (real or imaginary, but primarily imaginary) throughout an image. Vectors create action in an image, determining whether or not an image is narrative or conceptual, hence their grammatical term *rhetorical vectors* (59).

Another ‘grammatical’ concept in their book is modality. Modality is how believable or realistic an image is, and is closely connected to affordance, another important concept in website design. Each mode of communication privileges some affordances over others. For example, a video privileges the affordances of sight, motion, and the manipulation of time. However, audio modes privilege sound and the way in which sounds or speech can play upon our emotions. Most users today are accustomed to a mix of modes, hence the trend toward using the term multimodality (168). Other grammatical concepts discussed by Kress and van Leeuwen are framing and salience. Salience is the degree to which a visual object dominates the composition, while the rhetoric of an image is affected by the framing around it: the way the image is framed or cropped. Among other things, the way an image is framed adds or detracts from its credibility (212-14). While the preceding is not an inclusive list of items to analyze when performing a visual rhetorical analysis, the concepts mentioned help us to appreciate that more than surface features should be considered as part of such an analysis, and I expand on this concept further in Chapter Five.

A visual rhetorical analysis normally analyzes visual design elements like typefaces, the use of images and icons (including logos), use of color and color schemes, and other surface features. An analysis may also include a consideration of the features of contrast, repetition, alignment, and proximity made familiar to us in the work of technical communicators and information designers like Mike Palmquist or Robin Williams. All of these considerations and more form part of what technical communicator Eric Kumpf
describes as visual metadiscourse, noting that the elements within a designer's control include “layout, color, and typography” among other characteristics (402). Kumpf advocates the inclusion of metadiscourse in website design, for it fosters the awareness of at least ten categories that he finds useful in his teaching of technical communication: “first impression, external skeleton, interpretation, heft, consistency, style, convention, expense, chunking, and attraction” (405). It is intriguing to note the combination of external, or surface, features like the external skeleton, chunking, consistency, and heft. The value of metadiscourse for my work lies in its inclusion of concepts more complex than those of the surface dimension, such as interpretation, style, convention, and attraction. While I do not attempt to itemize all ten of these categories in the visual analyses I performed, I do include visual metadiscourse as a concept to be considered. And I appreciate Kumpf’s recognition of the connection between design and pedagogy when he notes that, “one way to teach the results of this control relies on an expanded application of metadiscourse and its pedagogic purpose that includes visual factors as well as the abstract representations of words” (402).

Much contemporary work focuses on what is being termed “social media” – that is, the formation of and communication within digital social networks. In some instances, such communities became agents of change and activism, educating their members and using traditional rhetorical strategies to do so. Anne Frances Wysocki, in a digital article in the online journal *Kairos*, notes that another way traditional rhetoric continues within digital environments is in the structure and form of websites, where web designers draw from long-accepted rhetorical norms to create/impart a sense of well-maintained order to convey a sense of logos. In this, they apply the long-standing rhetorical canons of arrangement and delivery. Her online article “Monitoring Order” is an exploration into the rhetoric of the
digital, and in addition to the aforementioned use of order and containment to build ethos and present a logical and coherent “face” to the viewer, she notes that digital compositions tend to replicate existing Western cultural and political hegemonies, especially when the design choices are approached in a formulaic manner. Thus, she encourages designers and producers of digital compositions to recognize that digital rhetoric is more than simple persuasion; it can contribute to the shaping and development of knowledge on both communal and individual levels.

In order to understand the rhetorical and pedagogical aspects of the writing center websites that I analyze, it is also vital to include such attributes as the presence of a mission statement and the key words used in it, the presence or lack of interactive features, the words selected to guide users through the virtual space, and, for the purposes of my research, whether or not references are made to a community or communities of writers. Some of the sites I looked at did not offer any form of online tutoring for writers but did stress the value of being a member of a virtual (or physical) writing community. These aspects of visual metadiscourse add to the visual rhetorical analyses and the development of the final prototype I present in Chapter Five.

In Chapter Five, I discuss the outcomes of the visual rhetorical analysis process and go into greater depth for each category; for example, how does a site invite exploration? When it comes to looking and interpreting the pedagogical features of a website, it must be acknowledged that such an analysis must be understood as situated within the particular biases of the researcher. Thus, in Chapter Three, I discuss the methodologies that inform my own approach to this work.
Heuristics for Website Visual Rhetorical Analysis

By applying visual rhetorical analysis heuristics to online writing center websites, it becomes evident that websites reflect specific pedagogies, whether such be intentionally designed or not. Volumes have been written about various types of pedagogy that shape writing center work, but for the purposes of this research project, the three major paradigms of current-traditional, social constructionist, and critical liberatory pedagogies are used as reference points. In web design, heuristics gained favor when Jakob Nielson developed what he referred to as a set of heuristics to help fledgling World Wide Web designers understand the differences between “good” and “bad” web designs in the very early days of web design, circa 1990. According to Nielsen’s www.useit.com, “Heuristic evaluation is a usability engineering method for finding the usability problems in a user interface design so that they can be attended to as part of an iterative design process. Heuristic evaluation involves having a small set of evaluators examine the interface and judge its compliance with recognized usability principles (the ‘heuristics’)” (“Ten Usability Heuristics”). By researching recent trends in interface and interactivity design, tracing out the pedagogical activities of writing center websites, and identifying surface and conceptual dimensions, I was able to develop the set of heuristics that I used to analyze the writing center websites in Chapter Five. The chart listing the heuristics can be viewed on page 124, presented as Table 5.1.

The Human-Computer Interface

My initial review of literature concerning the interface begins with a simple definition that becomes more complex as we continue to interrogate it. The simple definition comes from the 1990 edition of *The Art of Human-Computer Interface Design*, where
Laurel and Montford defined the interface\textsuperscript{10} as a “point of contact between two entities” (qtd. in Anderson “Interfacing” 73). Taking this as a point of reference, a common point of contact within educational settings is the classroom, and the point of interaction between instructor and student may be thus described as an interface (DePew and Lettner-Rust); I thus expand the point of contact to include the interaction between tutor and tutee. This point of contact, as Dana Anderson points out, “can include everything from multimedia elements, navigational icons, and links, to the colors, sizes, and faces of fonts used; the ways in which a given interface might influence collaboration, therefore, are at least as numerous” (73). The interface affects more than just collaborative work: it is quickly becoming a place where not only contact occurs, but a place within which contact occurs. The interface has evolved along with faster processing speeds and larger hard drives, the ease of accessing the Internet, and society’s affinity for Internet-based activities like those within massively multiplayer online role-playing games (commonly abbreviated MMORPGs) such as World

\textsuperscript{10} The online entry of \textit{interface} in the Oxford English Dictionary defines the noun \textit{interface} as a “surface lying between two portions of matter or space, and forming their common boundary. It traces the etymology of the word back to 1882, when it was used by one scholar to describe “a face of separation, plane or curved, between two contiguous portions of the same substance,” leading to its use a year later by G. Chrystal, writing in the \textit{Encyclopedia Britannica XV}, where he wrote of “the interface of the two liquids in the axial line.”

In 1962, Marshall McLuhan wrote, “The interface of the Renaissance was the meeting of medieval pluralism and modern homogeneity and mechanism” (141).

Quite appropriate to my work is an example given by the \textit{OED} of a report in the Washington, DC \textit{Evening Star} of August 18, 1962: “Interface...seems to mean the liaison between two different agencies that may be working on the same project” (qtd. in \textit{OED Online}, accessed 1-6-2010).

The rise of the interface’s use in digital environments may be traced back to a description in the \textit{Annual New York Academy of Science CXV} report, page 574, which notes that the “collection of components which connects the analog and digital computers to each other, and which controls and converts the data, is generally termed the ‘interface’” (qtd. in \textit{OED Online} accessed 1-6-2010).

Thus, the interface I discuss consists of human, computer screen and keyboard, and I refer to it consistently as the Human-Computer Interface (HCI).
of Warcraft and Hero Online or in virtual worlds like Second Life or The Sims, which make use of MMORPG-like programming and interfaces. Although what happens on the screen in a virtual world is just that—virtual—for the user involved in that virtual life, the action is taking place on the screen in front of them. The interface has become more than a mediator, more than a contact point: it is the scene of action and activity, a scene of life. The continued presence and popularity of virtual worlds like Second Life and the proliferation of all sorts of wikis are just two examples of activities taking place within the human-computer interface; another example that relates to my own work is the synchronous online tutoring session: again, a place within which communication, thus contact, occurs. The synchronous online tutoring session relies on the interface for the communication that takes place during the real-time session.

Persons who worked with computers in the early 1980s and 90s may remember stark black or green screens lit by the white or grey text that was then common to most computer screens. Although graphical representations of the internal computer were around, they were not common. However, with the release of Apple’s first Macintosh, followed soon after by Windows 3.1 operating systems (between 1983 and 1986), graphical user interfaces (GUIs) became more and more common, so that today it is hard to imagine a computer screen without a GUI and the icons it uses to represent the computer universe. Beginning with the introduction of personal computers having operating systems that offered users graphical interfaces, computer users have consistently preferred the visual representations such interfaces offer over the strictly textual display of non-graphical interfaces.11

11 For an interesting history of the development of GUIs, see Jeremy Reimer’s article “A History of the GUI” at the Ars Technica web site (http://arstechnica.com/old/content/2005/05/gui.ars).
In his history of the GUI, Jeremy Reimers notes that after an initial burst of creativity in the 1980s and 90s, few changes occurred in the GUI. Although the major players in the personal computing market continue to offer enhancements, like Microsoft’s use of 3-D effects in some of its latest operating systems, the basic design has stayed the same. In its early stages, designers of GUIs were driven by competition for market share and the desire to have something easy for novice computer users to understand. The iconic display of the GUI was the answer then, and it continues to be so. As time progresses, most people in the field of information management, computer development, and educational administration see the interface as one of the most vital components in achieving a technically literate society. Certainly, one of the functions of interfaces is “to organize and provide structure for the teacher’s material to students” (Neumann and Kyriakakis 53). This simple statement embeds many complex issues, and it offers one reason among many to analyze the interface. In the same publication from the U. S. Department of Commerce, two technology professionals note that “little has been done to design the content to take advantage of the potential of new delivery mechanisms. Technology up to now has been viewed as a way of reaching a larger audience, and not as the enabler of new learning paradigms” (Neumann and Kyriakakis 53, emphasis added).

The interface is not just an innocent agent, nor an impartial and neutral point of contact. Think for a moment about the interfaces we use. Do they reflect our students’ world, their reality? Consider the icons chosen to represent the work environment of a computer: the desktop, the file cabinet, the filing folders, the files, the trash can. Do they reflect the Western-centric world of corporate culture? Why is it that we have a desktop, and not a workbench, which was actually an early GUI introduced by Amiga in the 1980s?
As learning spaces evolve with technological advances, the interface that acts as a contact point between the user and the computer becomes ever more important, although, for many, the interface rarely receives attention. In fact, for some people, the interface works best when it is transparent, or so much a part of the normal surroundings that we easily overlook its presence, taking it largely for granted. As Jay David Bolter notes in his book *Writing Space*, the goal for many designers of interfaces has been one of “transparent presentation” (25), and many designers feel they have achieved a successful interface design when the user is unaware of the mediation that occurs between user and computer when an icon is selected and, by its selection, executes a function. The icon thus becomes, in a sense, transparent. We accept its representation as the real thing, whether it is or not. The more online documents like Web pages or blogs follow or incorporate familiar conventions, the more “transparent” it is to the viewer and/or user. The screen becomes the equivalent of a tablet combining words, interfaces, icons, and pictures that users associate with other modes like sound or touch (Hocks, “Understanding”). The interface becomes subsumed by such modalities and disappears from conscious awareness. I believe that transparency, or lack of it, is a neutral feature and need not always be a negative thing; the underlying assumptions
and hegemonic practices determine whether or not transparency is, or should be, a matter of concern. As I approach the design of the interfaces that lead users into online tutoring sessions or virtual writing communities, I want to remain balanced between the needs of the user and an awareness of what happens when users from cultures other than our Western-centric society engage with such virtual spaces. As a construct, it is inevitable that the interface will have form, content, structure and purpose; the responsible design I advocate does not replicate past binaries like form/content and word/image, however, but seeks to include, not exclude, and expand, not restrict, the user’s experience with and within the interface (Wysocki, “Impossibly”).

According to the Computer Desktop Encyclopedia, an interface implies both a structure and a function, and both structure and function may include rhetorical aspects (“Interface”). In some instances, the format of a digital document and certain other aspects like typeface or size and placement of images are predetermined by the institutional setting and policies. Some policies give producers and designers the ability to design “on the fly” as it were, but still within guidelines established by the governing entity. For example, one of the primary ways such information is managed is by the use of templates, which exist as predetermined maps within whose boundaries information is gathered, displayed, and redeployed. Templates, like the interface itself, are products of design work and rhetorical choices, emphasizing even more the necessity of technical communicators being involved in the design and deployment of HCIs. As such, it behooves us to think more critically about the interface, even as Selfe and Selfe and others note (Barton and Barton, Bolter). The interface is not innocent; it is impossible for it to be free and untainted by the ideology of designers and users alike. In approaching my own design work, I recognize that the end result will of
necessity have embedded within it my own pedagogical and ideological biases. Performing a visual rhetorical analysis of the interface should reveal such biases and enhance the final product. Should I decide to use a template, the visual rhetorical analysis should make obvious that which is (or may be) transparent.

As Selfe and Selfe so clearly emphasized in 1994, the interface is not just an innocent agent, nor an impartial and neutral point of contact. Selfe and Selfe invited readers to think of the interface as a map, just as earlier, Barton and Barton used maps to illustrate how visuals are not simply neutral representations, but are “complicit with social-control mechanisms” that are linked to “power and authority.” For anyone involved in interface design, this means that the “rules of inclusion” must be understood: such rules determine, first of all, if something is mapped, and following that, what aspects of a thing are mapped, followed by decisions relating to the “representational strategies and devices” that are then used to create the map (Barton and Barton 235-238). Selfe and Selfe later compared computer interfaces to maps, writing that computer interfaces are maps having embedded within them the “gestures and deeds of colonialism,” not just occasionally but constantly and successfully (430). In this context, colonialism is the assumed dominance of Western capitalistic structures and certainly not innocent of ideology. They go on to note the ways in which computer interfaces, like maps, represent ideology and power. I appreciate their observation that interfaces are the “cultural maps of computer systems,” and as mentioned before, never ideologically innocent or inert (Wood qtd. in Selfe and Selfe 432). With this understanding, part of my work will be to develop a conceptual representation of Georgia State’s Writing Studio online tutoring space—a representation, or mapping, that reflects the work tutors do and establishing a safe place for conversation, without restricting access or
inhibiting experimentation and exploration. While I do not expect some sort of idyllic virtual utopia for writers to suddenly spring up, my goal is to uncover pedagogical and rhetorical principles that will invite and enable members of such a virtual community to engage in conversations about their writing.

In 2004, Wysocki and Jasken discussed the first twenty years of interface research and scholarship as such appeared in the journal *Computers and Composition* beginning with its first issue in 1983. Their article, “What Should Be an Unforgettable Face,” described the scholarship from two aspects: that of the first decade and that of the second; they then compared handbooks being used in 2004 with the articles that had appeared in *Computers and Composition* in the early years of that journal. They noted that some early articles (Sullivan, Barker, LeBlanc, Taylor, Kaplan, Moulthrop, Youra, Selfe and Selfe, Cubitt) looked at the rhetorical aspects of interfaces in an effort to “broaden our views so that we could see how interfaces are thoroughly rhetorical” (30). Yet, with the passage of time, the rhetorical aspects of the interface (and here I am speaking of the computer interface specifically) featured minimally in software and website design, with the majority of handbooks and design guides encouraging the view that, in order to be considered successful, interfaces should be so transparent as to disappear from the consciousness of the user. In fact, when I began my first interface design for a project in my electronic writing and publishing class, following those guidelines was the easiest thing for me to do. I did not move beyond the simplistic acceptance of those guidelines until I took my first course in

---

12 In their 2004 article, Wysocki and Jasken looked at eight general reference handbooks and six guides for web writing and research. Although 3 of the handbooks gave no space at all to web design, of those that did, and of course the guides on web writing, devoted substantial space to “giving technical information,” and very little space or effort to interrogating the cultural, political, social, and economic rhetoric embedded in interfaces (48).
visual rhetoric, and I discovered, by examining my own and my classmates’ work, the often acculturated assumptions that shaped my early work with interface designs.

Recent work on interfaces includes the 2009 special issue of *Computers and Composition* and the 2009 publication of Pullman and Gu’s *Content Management: Bridging the Gap between Theory and Practice*; these resources add to my understanding the interface as a space of rhetorical activity. For example, as Michelle Eble notes in her chapter in *Content Management*, the metaphors used in most academic CMSs are not only obsolete in contemporary online settings, but unrepresentative of the “real” learning that takes place in both virtual and face-to-face settings (97). As educators and teachers of writing, we should consider the effect of computer interfaces on students and their learning, recognizing that current interface designs often support and promulgate the banking concept of learning (see DePew and Lettner-Rust) – antithetical to my own philosophy of teaching – not only my own but of many of the professors and teachers with whom I work. It is not only in classrooms that critical and constructivist educators seek to avoid prescriptive teaching; it is also a pedagogical aspect of tutoring, in both face-to-face and online venues.

From the field of interactive design come three notable books and two articles that aided me in the design process. In 2007, Alan Cooper et al. released the third edition of *About Face: the Essentials of Interaction Design*, which is an invaluable resource for designing a viable website, explaining how and why the digital design field has moved from “interface design” to the more accurate “interaction design” of the title. While Cooper applies much of his principles to designing software, they are equally applicable to the design of effective websites. His advocacy of the use of “personas, the refinement of written behavioral blueprints, and the entire practice of Goal-Directed Design” have strongly influenced my
understanding and practice of interface design (20-21). Kim Goodwin has worked with Cooper for a number of years, and in 2007, she authored *Designing for the Digital Age: How to Create Human-Centered Products and Services*. With Cooper, she has worked extensively with the development of the concept of personas in digital design; she devotes an entire chapter to their use in Chapter 11 of her book. Her explanation of “provisional personas” and how to craft a usable design in a limited amount of time proved most helpful to my work. Finally, Ben Shneiderman and Catherine Plaisant’s 2010 textbook, *Designing the User Interface: Strategies for Effective Human-Computer Interaction* is an outstanding introduction in the field; like Cooper, the authors advocate user-centered design, including the use of personas and subject matter experts. In addition to these books, two recent articles have contributed to the expanded concept of the human-computer interface that I mentioned in Chapter One.

In “The Three Paradigms of HCI,” authors Steve Harrison, Phoebe Sengers, and Deborah Tatar review the development of what they identify as the three paradigms in the field of HCI. The first paradigm had as it focus the optimization of the “man-machine fit,” with origins in studies on engineering and human factors; I think of this as a systems approach. As the authors note, this paradigm was “a-theoretic and entirely pragmatic” (2). As the field matured, though, a second wave or paradigm developed that incorporated ideas from cognitive science, “oriented around the idea that human information processing is deeply analogous to computational signal processing, and that the primary computer-human interaction task is enabling communication between the machine and the person” (2), and I find it helpful to think of this as a task-based paradigm. The second paradigm explains why standard usability tests focus so much on how quickly users can perform or execute specific tasks. However, as the authors note, these two paradigms fail to explain
recent developments in the HCI field and in the habits of human users: concepts such as “participatory design, value-sensitive design, user experience design [. . .], embodied interaction, interaction analysis, and critical design” (2). There is an aesthetic aspect of HCI design that forms the basis of the third paradigm, “which treats interaction not as a form of information processing but as a form of meaning-making in which the artifact and its context at all levels are mutually defining and subject to multiple interpretations” (2). As with most paradigms, the approaches are not in conflict with each other, but each is useful in understanding why I have added in what I refer to as the conceptual dimension of the visual rhetorical analysis heuristic that I developed for my research.

Though I have described composition scholarship relating to writing center website design as scant, it does exit, and I mention a few notable contributions to the area here. In 2000, Justin Jackson wrote “Interfacing the faceless: Maximizing the advantages of online tutoring” in *The Writing Lab Newsletter*; in 2002, Dana Anderson wrote “Interfacing email tutoring: Shaping an emergent literate practice;” and in 2005, Synne Skjulstad and Andrew Morrison published “Movement in the interface.” Two recent dissertations have included website design in their research: Doug Dangler completed “Write Now: A Dramatistic View of Internet Messenger Tutorials” in 2004, and Lorie Hughes’ “Tutoring Technical Documents in the Writing Center: Implications for Tutor Training and Practices” was completed in 2009. Rusty Carpenter wrote “Consultations without Bodies: Technology, Virtual Space, and the Writing Center” in 2008, in which he writes, “If cyberspace is our ‘toolkit,’ it is time writing centers unpack it and begin building. It is time that writing centers solidify their identity in virtual spaces. Constructing this identity online, however, is one of our biggest challenges” (3). A very recent addition (just published in 2010) to the
scholarship comes from Beth L. Hewitt’s *The Online Writing Conference*, in which she discusses how to script narratives for use with podcasts, screencasts, and virtual tours. In all but a couple of instances, the inclusion of the writing center human-computer interface is more tangential than focused; this is a topic that seems to surface occasionally but it does not receive the attention it merits, given the broad audience and underlying pedagogy that connect to writing center websites.

Often, the interface is more than visual: it is auditory as well, with a digital voice speaking in a teacherly way to students via an aural implant. With so many people believing, and working actively for, such enhanced interfaces for student learning, it behooves us to become engaged in the rhetorical analysis of interfaces, recognizing not only their rhetorical situation but the way in which such visual representations exert rhetorical appeals. As educators and compositionists, we should be willing to examine our own use of interfaces; as technical communicators, we need to become technology critics as well as technology users. Certainly, engaging in visual rhetorical analyses is one way to become more critically aware of the power and politics of the interface.

**Building Virtual Communities**

The roots of virtual communities may be traced back to 1978, when the first MUD (multi-user dungeon) was developed by Richard Bartle and Roy Trubshaw; it can still be played at [www.british-legends.com](http://www.british-legends.com) (“Summary”). Virtual communities are also discourse communites. In defining *discourse community* in *Keywords in Composition Studies*, Peter Vandenberg traces its development to 1982, when Martin Nystrand introduced the concept of “writers' speech communities” in which the “special relations” that define written language – the way it functions and how it’s used meaningfully – are “wholly
circumscribed” by the “systematic relations” that obtain in the speech community of the writer (67). Other scholars note the difference between a speech community and a discourse community: one is born or adopted into a speech community (largely involuntary), while those within discourse communities are recruited into it by “persuasion, training, or relevant qualifications.” Characteristics of a discourse community are that they have a broadly agreed upon set of common public goals, there are participatory mechanisms in place that foster communication within the community, language use is marked by a specialized vocabulary, or jargon, and often communication falls into a specific genre or genres (lab reports, abstracts, etc.) Vandenberg cites David Bartholomae’s “Inventing the University,” in which he notes that a discourse is a special way of “knowing, selecting, evaluating, reporting, concluding, and arguing,” often with a multiplicity of voices and interpretative schemes (qtd. in Vandenberg 68); Bruce Herzberg observes that language use is a form of “social behavior,” and that discourse is a means of maintaining and extending a group's knowledge and of “initiating” new members into the group, and that discourse is “epistemic or constitutive of the group’s knowledge,” and Bruffee suggests that a “community of knowledgeable peers” is a group of people who “accept, and whose work is guided by, the same paradigms and the same code of values and assumptions” (qtd. in Vandenberg 69).

One of the key benefits to having peer tutors in the writing studio is that they can facilitate the transition of new students into the academic discourse community. Is it possible for the same benefits to accrue in virtual writing communities?

In a study of an online learning community that identified the characteristics important to feeling supported in an online collaborative learning environment, the authors identified two as outstanding: a sense of cohesion and an awareness of others (Abedin,
Daneshgar, and D'Ambra). In *Building Online Communities*, authors and researchers Rena Palloff and Keith Pratt note the “basic steps” of building a successful online community: “clearly define the purpose, create a distinctive gathering place, promote effective leadership from within, [establish and] define norms and a clear code of conduct, allow for a range of member roles, allow for and facilitate subgroups, and allow members to resolve their own disputes” (34). Christina Murphy’s “On Not “Bowling Alone” in the Writing Center, or Why Peer Tutoring is an Essential Community for Writers and for Higher Education” is the work that influenced my decision to not give up on the idea of implementing a virtual writing community; she connects the work done in the writing center, and specifically by peer tutors, to community formation; I echo her call that “[w]e need to envision the writing center as a true center for the revival of community and of civic engagement” (278). It is challenging, yes, and requires and investment of time and energy, and even though it may be beyond the reach of most writing centers at the moment, I believe this is a conversation and ideal to which we must continually return so as to make it a reality, not simply an idea(l). 

One of the earliest scholarly discussions of virtual communities that I found in an academic journal is in the October 1996 issue of the *Journal of Adolescent and Adult Literacy*, in the article “Synchronous Writing Environments: Real-Time Interaction in Cyberspace.” In the section headed Virtual Communities, the authors note some of the challenges of the early days of trying to implement synchronous writing environments: limited bandwidth and plain text interfaces. They point to specific examples of communities who used “rich multiuser environments” to engage in “group brainstorming, writing, and revising sessions [. . .] done online, sometimes capturing the work of dozens of writers” (Anderson-Inman 137). In many of the discussions of virtual communities, the idea of “communities of
practice” as used by Wenger comes into play, and when applied specifically to a writing community, I make use of what Wenger describes as the “repertoire of a community of practice” – much of which repertoire resides in the interface, where can be found “tools [...] symbols, genres, actions, or concepts” unique to the discourse community of writers (83).

An interesting site returned by my Internet searching is http://www.powa.org/, or the Paradigm Online Writing Assistant, written and maintained by Chuck Guilford, an emeritus associate English professor from Boise State University. Although the site’s tag/key words (as returned via the Google search) are “writing ideas, help, community,” there is little sense of real community on the site, especially in view of the characteristics of thriving online learning communities that Palloff and Pratt describe in their Building Online Communities. The posts on the main blog page are varied, but none have comments. Two of the five that are visible are voices asking to be heard: On December 27, 2009, toby168 posted, “I am a new member! I hope communication with anyone! I wish everyone for everything goes well!” [sic]; this post has no comments or replies. The preceding post, dated December 21, 2009 and posted by QuadDDesign, says, “I am new to this site and no one seems to be around to ask so I am just going to start a sounding board blog on my blog dashboard. If anyone happens to read this and knows if there is one on this site with people who respond, please let me know.” Again, no comments or replies. This is a largely self-service site with a plethora of advice on writing: grammar guides, style guides, how to write an argumentative or expository paper, and much of it is sound advice. Yet, the features of a real community are lacking. Most of the posts on the site comes from single instance entries, and lack the sense of give-and-take that occurs in real communities. I continue the literature
review, then, with a look at the scholarship informing the building of successful online communities.

In their 2009 article “Hacking Spaces: Place as Interface,” Douglas M. Walls, Scott Schopieray, and Dânielle Nicole DeVoss discuss recent trends in the technological tools for building virtual communities. Referencing the work of Slatin et al., they write, “Along with space-as-access dynamics, scholars in computers and writing have attended to issues of software as “space” (272). This connects to the increased awareness of the human-computer interface as a space/place in which activity occurs.

From the preceding review of applicable literature, it is clear that several areas have a rich and engaging body of work: scholars produce much relevant work on computers and writing, the place of online tutoring within writing center work, and how to design successful websites that combine interactive digital technologies with an appreciation for what might be termed the softer aspects of interactive design: aesthetics and concepts like pleasure and active learning. At the same time, no particular place has been set aside for the development of a body of work dealing specifically with writing center website design, and thus I turn to my own case study, beginning with the methodologies and methods that shaped my approach to research and design and which I present in Chapter Three.
CHAPTER THREE: METHODOLOGIES AND METHODS

Overview

In this chapter, I discuss the structure and development of the dissertation I present and explain the methodologies that shaped my approach to the research plan and the design of the website for the Georgia State Writing Studio, I review the methods used, and I conclude with an presentation of the design plan, which consists of three main strategies: visual rhetorical analyses, surveys and focus groups, and iterative design strategies. I also discuss the theories that influenced my design of the final prototype. Each one of these things contributed in substantive ways to the design of the prototype website.

Methodologies: The Interdisciplinarity of Human-Computer Interface Design

In deciding on a methodological approach to my research, I quickly realized that a single methodology was more than impossible—it was impractical. Drawing as it does upon multiple disciplines and having as one of its objectives the articulation of an approach supporting better online tutoring (better, in this context, being less directive, less prescriptive, and more conversational), the research project incorporates various methodologies at different stages of the research. Even as Todd Taylor notes in “A Methodology of Our Own,” the changing landscape of contemporary academic disciplines requires “methodological diversity and interdisciplinarity rather than rigidity and insularity” (145), and my dissertation certainly exemplifies that statement. Interface design, as many respected scholars in the rhetoric and composition fields have observed (some of which is reviewed in Chapter Two), is definitely connected to rhetoric and composition, but its applicability to information design and information management is indisputable as well. Thus, in designing
the methodology for this dissertation, my work is informed by facets of critical analytical theory, social constructionist theory, post-process theory (for discussing writing center work), and the relatively recent design research methodology. Additionally, an overarching critical theory of technology shapes my approach to all of the work I do in digital spaces, with user-centered design being the foundation upon which all the selected methodologies rest.

Because I proposed a personal, specific, and particular research project, and being a practitioner immersed in the design, development, and implementation of the writing center website, using a case-study-based, thus qualitative, methodology in evaluating my research makes sense. In describing the value of case studies, Mary Sue MacNealy notes that “empirical researchers use the term to refer to a carefully designed project to systematically collect information about an event, situation, or small group of persons or objects for the purpose of exploring, describing, and/or explaining aspects not previously known or considered.” The purpose, she adds, “is to develop new insights, new knowledge” (197). This is an accurate description of what I hoped to accomplish in with my dissertation: to implement a carefully planned design for a human-computer interface in order to gather information about the “group of objects” that form a writing center web page or website. I discuss the case study approach further in the Methods section.

**Critical analytical theory and critical theory of technology**

Informing my case study is my philosophy of education, which rests on a foundation of critical thinking, critical pedagogy, and an awareness of the role social constructionism plays in the acquisition and imparting of knowledge, as I believe that learning is a process of discovery for both teacher and student. In this project as research practitioner, I am both
teacher/student and one of my primary goals is to raise the critical awareness of the practices and theories shaping online tutoring pedagogy. Critical pedagogical principles thus become part of my particular methodology, as student writers become a part of both problem and solution, leading to transformations on the part of all involved. This is one reason why critical pedagogy is often referred to as “transformative.” Another facet of critical pedagogy theory is that within its framework, education is recognized as an ideological representation of the dominant hegemony; institutions of learning are therefore not neutral and certainly not free of bias or politics. Integrating technology into this pedagogy, as is often necessary in this digital age, requires a corollary articulation of a theory of technology, and I find most appealing the critical theory of technology offered by Andrew Feenberg. After noting the deficiencies of deterministic and neutral theories of technology, he writes, “Critical theory argues that technology is not a thing in the ordinary sense of the term, but an "ambivalent" process of development suspended between different possibilities” (par. 58). This belief underlies the ways in which I engage with different writing center websites; I reject the notion that we are controlled by technology, but I also accept that technology, like the interface, is situated within a human context and thus not free of ideological and personal influences. The way we view teaching about writing (which includes writing tutor work) will invariably shape the research methods we choose, the way we select subjects, and the questions we write. Theory can serve as a lens and a tool in understanding and interpreting the data collected in field study, but it also shapes and frames our approaches and the methods we choose, and I am no exception.
The ecological approach and virtual communities

When discussing community, I plan to make use of the ecological approach, for I find that it harmonizes with the other methodologies I describe. The ecological approach identifies four environmental “spheres of influence: the microsystem, mesosystem, exosystem, and macrosystem,” perhaps best visualized as a series of nesting circles, with the microsystem the innermost circle (Baba 141). This approach connects well with rhetorical contexts, audience, and purpose, beginning as it does with the inner circle, or microsystem, and expanding outward and recognizing the effect of social, economic, political, and religious forces that exert influence on the more intimate circles, ending with the largest circle, the macrosystem, which represents historical and cultural forces and which affects all of the other systems (Baba 142).

Design research methodology

Many of the above tenets are incorporated into design research methodology. According to researchers Vaishnavi and Kuechler, “design research involves the analysis of the use and performance of designed artifacts to understand, explain and very frequently to improve on the behavior of aspects of Information Systems. Such artifacts include - but certainly are not limited to - algorithms (e.g. for information retrieval), human/computer interfaces and system design methodologies or languages” (par. 1). This relatively recent methodology has much to recommend it. Its beginning is usually traced to design-based research in the fields of social science and education. Ann Brown, an early proponent of design-based research, advocates design-based research methodology because this methodological approach considers the subject of study to be a complex system involving transformative outcomes that arise from the interaction of more variables than are initially
known to researchers at the outset of the research project(s), including variables stemming from the researchers themselves (Brown). This relates to constructivist theory in its recognition that my personal involvement in the design and implementation of this project will, of itself, be a part of the outcomes and reporting of the study. In this particular case study, I am both researcher and an object of the research, and though I strive for objectivity, it would be naïve and foolish to assert that my personal ideologies and theoretical leanings have had no effect on the project. At the same time, and in an interesting reciprocation of the preceding statement, because I do consciously strive for objectivity and wish to benefit from my own research, the design and implementation of this project will shape and transform me.

User-Centered Design Methodology

In contrast to a system-centered design process, user-centered design places the user as the pivotal point, or central point, of any design. Prior to the acceptance of user-centered design, computer programs, software, and interfaces were designed based on the vision of the programmer or the perceived needs of the system. Beginning in the early 1990s with the work of such individuals as Jakob Nielsen, an early user-centered design advocate, an increasing body of scholarship recognized the value of considering the needs of the user as paramount to the design process. This should not result in the development of a “universal user,” though, for as Bowie points out in a recent chapter in *Rhetorically Rethinking Usability*, “universalizing tends to ignore the differences or lose the differences among the users. These users are important” (142). Thus, my design process features a user-centered methodology that recognizes the full universe of users and embraces the diversity found therein.
Methods: a Three-Part Research Plan

The methods I selected for this dissertation begin with the type of research chosen: the case study. An outcome I hoped for was to develop new insights into the work of designing a human computer interface for a specific use: the writing center website that supports online tutoring and a virtual community of writers. As MacNealy notes in her discussion of the pros and cons of case studies, when a research project has “a very narrow focus” (writing center website design) that “investigates only one event or only a very small number of people or objects” (a website, the limited number of visual rhetorical analyses), and is “conducted over a fairly short period of time—usually a semester or less” (the time frame of my research), then the case study is recommended over an ethnographic study (198). My dissertation makes no pretense of being an ethnography: as described in the preceding sentence, its focus is narrow and conducted with a short time frame (March 2010 – November 2010). However, planning is still essential to a successful and rigorous case study, and in my own instance, having a plan and timeline was an essential part of the case study method. Additionally, by combining the three methods I will describe in this section, I could achieve the benefits associated with a good case study: a holistic view of the design process, rich detail of each element that became part of the prototype, information that probably would not be gathered in other ways (as provided in the focus groups and subject-matter expert interviews), and a more precise way of defining research questions for future research (MacNealy 199). One of the objectives of this dissertation was to elucidate opportunities for further research, and this has been one of the most rewarding, though at times challenging, aspects of my case study.
Because I make use of survey results and the knowledge gained from online focus groups, I decided to label my method a mixed-methods approach, but there are some difficulties with that term, not the least of which is an accepted definition of the label. In her dissertation, “The Combined Use of Qualitative and Quantitative Methods in Educational Research,” Katrin Niglas discusses the ambiguities connected with the term:

“Leading authors [of . . ] the *Handbook of mixed methods* have seemingly agreed to use the label ‘mixed methods’ as an umbrella term for all the different designs where qualitative and quantitative aspects are combined in a way or another. [. . .] ‘[M]ixed method design’ is described as one specific type of combined designs (alongside with ‘multimethod designs’), which further breaks up into ‘mixed method research’ and ‘mixed model research’ (683). Thus, the term ‘mixed method’ is used at least at three different levels of typology while there still does not seem to be final agreement between different authors\(^{13}\) on whether a study to be classified as ‘a mixed method(s) study’ has to involve data-collection and analysis methods from both approaches (qualitative and quantitative). (20-21)

For the purposes of my dissertation, though, using the terminology of ‘mixed methods’ works well: it fits my approach and it has currency within my fields of research. It is a term understood by the discourse community of composition studies and writing center scholarship, and it conveys the types of research I used during this research project.

**Methods Purpose and Initial Design**

The intent of my dissertation was to record and analyze the design, development, and implementation of an interactive human-computer-interface that provides a locus for conversational exchanges on writing and writing development while providing access to the formal structure of online tutoring sessions via the website of Georgia State University's

\(^{13}\) Niglas (footnote 8): “For example, the glossary of the *Handbook* (Tashakkori & Teddlie eds. 2003: 711-712) contains at least 10 partly overlapping labels for (different but partly overlapping) combined designs, whereby for most terms, several partly overlapping definitions are given (eg mixed methods, mixed methods design, mixed model design, multimethods design, multiple methods design, multistrand design, monostrand design, etc.).”
Writing Studio. As has been discussed in the preceding section, the first task was to select and commit to a research method: a mixed-methods case study. The next few tasks ran concurrently with each other. In addition to selecting human participants for the survey questionnaire and the online focus groups, I needed to articulate and select a range of writing center websites to analyze using the tools of visual rhetoric. I thus developed a survey that invited all respondents to participate in a focus group; this was open to all tutors and supervisors of the Writing Studio, as well as to student writers who had consistently visited the Studio over the past two years for tutoring sessions (the criteria was six or more visits). I also began the work of selecting certain websites to analyze.

With IRB approval, I designed two sets of survey questions (Appendices E and F) and focus group questions (Appendices G and H). Administrators and tutors formed one type of focus group and were the basis for one set of questionnaires and surveys; I gave them the identifier of Focus Group Tutors (see Appendices A and C). Student writers formed the second focus group (Focus Group Student Writers; see Appendices B and D), with an accompanying set of surveys.

The research project focused on the design of an interactive interface to be used by tutors and tutees for online tutoring sessions; therefore, I did not include faculty or writing center directors in my target population. Combining the tools of external data collection with the internal records of my own experiences along with selected session transcripts added rigor to the dissertation while enhancing the external objectivity essential to usable outcomes. IRB approval ensured that the research project maintained proper academic and ethical features throughout the research project.
At the same time that I was seeking IRB approval, I developed the specific steps I planned to take for the case study. After some trial and error, I mapped out a plan that consisted of three main strategies: visual rhetorical analyses, surveys and focus groups, and iterative design strategies. In the initial stages of planning, I included a set of usability tests as part of the final stage of the dissertation, but as I delved deeper into understanding the nature of prototyping and the purposes such an approach serves, I decided to implement a set of iterative design strategies in favor of usability tests, as I discuss in the next section.

Selecting User-Centered Design over Usability Testing

In “The Culture of Technology in the Writing Center: Reinvigorating the Theory-Practice Debate,” authors Beebe and Bonevelle refer to the usefulness of chaos theory in understanding the relationship between theory and practice, and this application of chaos theory relates to the method of design testing that I chose to use during this study. As Beebe and Bonevelle note, “the more local, or particular, our observations become, the more varied and complex objects appear to be, whereas more global observations, although more hazy and indistinct, reveal form and order” (41). This is pertinent to the approach I decided to use in testing my particular prototype and relates to my decision to forego usability testing in favor of a user-centered design. In making this choice, I am not removing the input of users regarding the human-computer interface – in fact, I believe my particular approach gathers broader information from users than the type of usability testing I first had in mind.

In its guideline for web design, the U.S. Department of Health and Human Services has published some of the most comprehensive resources and guidelines for website design that I have found to date. Entitled Research-Based Web Design and Usability Guidelines, this
2007 publication pulls together scholarship from a wide variety of sources and disciplines. The chapter on “Usability Testing,” cautions against placing too much emphasis on inspection methods, such as heuristic evaluations or expert reviews, as they “tend to generate large numbers of potential usability ‘problems’ that never turn out to be actual usability problems” (188). The key is to maintain a balanced approach: one that remains user-centered and includes rigorous forms of assessment without trying to anticipate and resolve all potential problems before they happen. Iterative approaches are strongly recommended. As they note, “the more iterations, the better the Web site” (188). The guidelines explain that iterative design “consists of creating paper or computer prototypes, testing the prototypes, and then making changes based on the test results” (189). This is the approach I elected to pursue, with the exception of not implementing standard usability testing at this stage of design. I did make use of feedback from users, though, as I describe further in this section.

In designing the prototype, a set of online focus groups sessions provided some insight into the expectations of users, both on the tutoring and the tutored sides. I relied more on the creation of personas and the feedback from expert users than on data that I might have gathered implementing a standard usability test method (Cooper, Goodwin, Carpenter). As a human-computer interface designer, I am committed to conducting usability testing within the implementation of the final design stages, but relying on them at the early stages of development would, I believe, be counter-productive. As Kim Goodwin observes in Designing for the Digital Age, while usability testing is good for uncovering

---

14 Recently, UX Magazine contributor Dana Chiswell (co-author of the Handbook of Usability Testing, 2nd ed.) said, “And as far as I know, there’s nothing like the resource NCI created at usability.gov,” where the above resource Research-Based Web Design and Usability Guidelines may be found.
problems in a finished design, it is not so practical for understanding “what to design or how it should behave” (57), which is what my case study does.

After the focus group period ended, I used the responses and discussions from the listserv to complete a high-fidelity wire-frame. However, every user and every writing center is unique. As mentioned previously, each writing center has a specific institutional context within which its program develops and operates. Add into this mix the reality that visual texts, as much or more so than alphabetic texts, have the potential of being interpreted by viewers in a variety of ways over which the designer of the visual text has no control, and it is clear that one could conduct hundreds of usability tests and experience different user experiences and different results each time. However, such exhaustive testing, while commendable and something that I believe would benefit the composition and writing center studies fields in general, was beyond the scope of this research project.

Another factor influencing my decision to focus more on user-centered design and less on usability testing is that the focus of usability testing generally relates to how an application is used by someone – researching outcomes like how quickly a novice learns features of a software application, numbers and types of errors, and how long it takes someone to accomplish a set of tasks or execute a particular function. Those outcomes are only marginally connected to the goals of an online writing tutoring session, though the sooner participants of a session can begin to focus on writing instead of accessing a particular chat program and becoming comfortable with the interface, the better. But as mentioned at the outset of this section, the wide range of variables within the target population, some within the control of the user and some outside user control, as well as the learning-centered focus of the writing center interface, means that the results of usability
testing would also be highly varied and not generalizable. As Kim Goodwin notes, “testing isn't that worthwhile as an upfront research technique, because, in many cases, the design will change so significantly that the results of testing the prior design are of little value” (56). I am not arguing that usability studies are unsuited to the development of human-computer interfaces; I am arguing that the promise of usability studies or tests to deliver data that may control or improve the design of a writing center website is illusory, giving the impression of designing for a universe of users when in reality the design is simply adjusted to the needs of particular individuals.

Part I: Visual Rhetorical Analyses - Online Tutoring Websites

Because this research looks at the specific interface of writing center websites and writers, this dissertation includes in-depth analyses of four writing center websites, although over the course of time, I visited dozens of writing center websites, ranging from high school to international locations. The analyses and results from them are presented in Chapter Five. Among the criteria for selection was that the website be easily accessible and that an archive of its interface history be available. The first criterion was achieved by selecting from among the United States' writing centers listed on the International Writing Center Association's (IWCA's) website, as the publication of a URL on that site is voluntary and achieved by applying to the IWCA webmaster. Thus, the sites listed there have opened themselves up to public scrutiny. The second criterion was achieved by researching the Internet activity of the sites and selecting those sites that had extensive website captures via the Wayback machine. The sites selected for review were (listed here in chronological order), Missouri University's Writery (55 captures since 1998), the Online Writing Lab (OWL) at Purdue (734 captures
The visual rhetorical analysis of each writing center website made use of the tools of visual rhetoric, which is why visual rhetoric is treated here as a set of tools, not a field or theoretical approach. Just as a builder will assemble a full tool kit from an assortment of items, so I selected tools from a variety of established scholarship on visual rhetoric and technical communication. As my literature review in Chapter Two shows, many people contributed in different ways to the development of my visual rhetorical toolkit: Chiswell, Cooper, Goodwin, Hill and Helmers, Hocks, Nielson, Schneiderman and Plaisant, Wysocki, and more. From the research I did into each component of the toolkit, I developed the following list of features that I chose to examine. As I discuss in the results of my analyses in Chapter Five, these features are grouped into two dimensions, a surface dimension and a conceptual dimension. The following table lists the characteristics of each website that I analyze in Chapter Five, where I analyze the selected websites and report the findings of my analysis (the table appears again in Chapter Five).

*Table 3.1: Characteristics of the Visual Rhetorical Analyses*

<table>
<thead>
<tr>
<th>Characteristics of a Writing Center Website Visual Rhetorical Analysis</th>
<th>Surface Dimension</th>
<th>Conceptual Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alignment</strong></td>
<td></td>
<td>Audience Stance (includes accessibility design)</td>
</tr>
<tr>
<td><strong>Repetition of elements</strong></td>
<td></td>
<td>Hybridity</td>
</tr>
<tr>
<td><strong>Use of Color; Color Scheme</strong></td>
<td></td>
<td>Transparency</td>
</tr>
<tr>
<td><strong>Typography</strong></td>
<td></td>
<td>Metaphor or Conceptual Model Used</td>
</tr>
<tr>
<td><strong>Contrast</strong></td>
<td></td>
<td>Mission Statement Provided</td>
</tr>
<tr>
<td><strong>Use of white space</strong></td>
<td></td>
<td>Interactivity</td>
</tr>
<tr>
<td><strong>Icons and Hyperlinks</strong></td>
<td></td>
<td>Directive Elements</td>
</tr>
<tr>
<td><strong>Navigation Menus and Cues</strong></td>
<td></td>
<td>Elements that Invite Exploration</td>
</tr>
<tr>
<td><strong>Chunking of elements</strong></td>
<td></td>
<td>Explicit reference to virtual writing community</td>
</tr>
</tbody>
</table>
Part II: Surveys and Focus Groups

The target population for all of the research instruments was students who had either visited or worked in the Georgia State Writing Studio, and since visiting the Writing Studio is not mandatory, the initial target population was self-selected and hence voluntary. For the tutor group, anyone who had tutored in the Writing Studio over the past two years (including current tutors) received an invitation to respond to the initial survey. Apart from the requirement that the student writers group consist of students who had visited the Writing Studio multiple times, there was no other criteria applied for the initial e-mail sent out inviting student writer recipients to take the initial survey. The focus groups were formed of respondents to the initial surveys.

Surveys of Writing Studio Tutors and Student Writers

I recruited discussion participants by sending a survey response request via e-mail (see Appendix C) out to present and former graduate student administrators and tutors for the Tutors Focus Group, with the final question asking if the respondent would be willing to participate in an online focus group during one week between August 15 – October 1, 2010. For the Student Writers Focus Group, I recruited discussion participants by sending out an e-mail invitation to take an online tutoring session survey (see Appendix D) to the e-mail list of 146 tutees who had visited the Georgia State Writing Studio at least six times in the last two years (AY 2008/2009 and AY 2009/2010); the last question on the survey asked respondents if they would be willing to participate in an online focus group during the same time as the Tutors Group. For both focus groups, having participated in an online tutoring session (as either tutor or tutee) was not a requirement, as tutors and tutees alike still have expectations and perceptions concerning online tutoring sessions, and it was those
expectations and perceptions that this research sought to explicate and use in a creative and constructive fashion.

**Online Focus Groups**

In their book *A Research Primer for Technical Communication: Methods, Exemplars, and Analyses*, Michael Hughes and George Hayhoe note that, though rarer than other forms of research in technical communication, the qualitative research report is nonetheless a valuable tool for research in this field (86). The model I follow in my research project is the one described by Hughes and Hayhoe in their chapter on analyzing qualitative reports, where the model they use is Greg Wilson and Julie Dyke Ford's article of May 2003, “The Big Chill: Seven Technical Communicators Talk Ten Years After Their Master's Program.” Because of the challenges involved in getting their focus group together in one physical space at one time, Wilson and Ford chose to hold their focus group sessions online. They did this by setting up a listserv for the exclusive use of the focus group. They selected participants by first sending out a survey to the target population, and the last survey question asked survey respondents if they would be willing to participate in an online focus group (qtd. in Hughes and Hayhoe). I recruited discussion participants using the same e-mail process that I described in the preceding section on surveys; the last question asked if they would be willing to participate in an online focus group. If they responded in the affirmative, then they were asked to provide their e-mail addresses, so I could contact them once I had made arrangements for the focus group sessions.

Once I received answers back from the survey respondents, I was able to build my invitee list. As the initial invitee list depended on the frequency of Writing Studio visits, no demographic information other than gender was available or used in the construction of the
initial invitee list. However, as each survey contained a small demographic section, the final focus group invitee list contained representatives from various ethnic and gender groups.

The listserv focus groups generated discussions for both sides of the tutoring equation: the tutor/administrator side and the tutee side. While the purpose of the Tutors Focus Group was to generate discussion about tutor experiences along with their expectations of online tutoring session outcomes, the purpose of the Student Writers Focus listserv was to generate discussion among students about their perceptions and experiences of either online tutoring sessions or the online writing studio web space. The listserv discussions for both groups took place between August 15, 2010, and October 1, 2010.

Similar to the listserv conversations used by Wilson and Ford, the text of the focus group listservs referenced in this dissertation (and found in Appendices G and H) was edited for length and “to remove off-topic discussions and references to specific people and organizations” (157). The initial two questions for both focus groups were the same: What metaphors or images come to mind when you think of the Georgia State Writing Studio? What are your expectations from an online tutoring session? From those two questions, the questions diverged, depending on the conversational development that took place. Here are some additional questions that I had in my interview question bank:

- Given the definition of rhetoric as “using all available means of persuasion,” do you find elements of the Writing Studio online tutoring session pages persuasive? Rhetorical? Why do you answer the way you do?
- In what ways should the Writing Studio online tutoring session pages support the academic work of students? What benefits should students find there? What challenges and obstacles should not be found there?
Does the design of the web pages for Writing Studio online tutoring sessions facilitate teaching and learning about writing?

What metaphors not only represent the teaching and learning taking place today, but respect and accommodate people from diverse cultures and backgrounds?

What are the elements of successful online communities? Does the design of the interface for Writing Studio online tutoring sessions facilitate building a sense of community?

Is it possible to apply a conversational model to an interface for online tutoring, and if yes, what pedagogy should inform such a model?

I initiated the discussion by posting the first question to the list and asking that everyone in the group post an answer to the question and then discuss and react to the comments made by the other respondents. The question sparked an initial flurry of responses and comments, and when the traffic on the listserv fell off, I deemed it a good time to post another question. As I wanted to maintain the open and flexible structure of a focus group, I did not try to moderate or contribute to the list; I just asked the questions, occasionally sending out reminders if certain people seemed to be absent for an extended period.

Transcripts of the online focus groups are included in this research as Appendices G and H. I report on the conversations of the online focus groups and discuss their applications in my design process in Chapter Four.

Part III: Iterative Design Strategies

Iterative design makes use of many strategies, ranging from focus groups and questionnaires to developing project personas, review by subject matter experts, and conducting usability tests (Cooper, Chiswell, Goodwin, Shneiderman and Plaisant).
According to the web design guidelines published by the U.S. Government, “Iterative design consists of creating paper or computer prototypes, testing the prototypes, and then making changes based on the test results” (USDHH 189). The University of North Carolina Online Writing Center made use of these design strategies, noting, that now, “In its third iteration, the application becomes more robust through modifications based on usability, focus groups, and tutor input” (University of North Carolina). With the prototype for this dissertation, the design went through several iterations, and I made use of the aforementioned surveys and focus groups, developed project personas to use in conjunction with the design, and then held several interviews with subject matter experts (see appendices I, J, and K). These methods shaped the final prototype design presented in Chapter Five.

Project Personas

As this particular project focuses on the design and development of a high-fidelity wireframe, with actual implementation left up to future administrators of the Writing Studio, I chose to focus on user-centered design instead of trying to come up with a “universal user” generated by a usability test or tests. A key part of the design process is the use of personas. Made popular by HCI researcher Alan Cooper and developed further by Kim Goodwin, personas, properly developed, contribute significantly to a successful website design. Goodwin devotes a chapter to the use of personas in her design handbook, as does Cooper in his third edition of About Face. They both note that persona profiles should be as fully developed as possible, using photos of real people if such are available. While Goodwin recommends selecting photos of people actively engaged in their work (280-81), I chose photos of people looking directly into the camera. Why? In my mind, I wanted to ensure that I kept thinking of the personas as real student writers, sitting across the table
from a real tutor. In that situation, eye contact an important feature. And if one is tutoring online, the student writer looks directly at the computer keyboard and screen. In both instances, they face forward and look ahead. For this project, I developed four personas; Chapter Four includes the full profile of each persona along with more rationale.

Subject Matter Experts

In their chapter on “Evaluating Interface Designs,” textbook authors Ben Shneiderman and Catherine Plaisant discuss the value of having formal interface evaluations carried out by formal expert reviews, and this is the method that I chose to use in the evaluation of the prototype interface. Applicable to this evaluative method are principles of consistency, recognizing the needs of diverse users at varying levels of ability or dis-ability, ensuring that users receive acknowledgement and a sense of closure when actions/sessions are completed, and providing access points for both novice and experienced users in order to give users as much control as possible over interface actions (134-38).

Using subject matter experts, while a valid contribution to the design process, nonetheless requires a balanced recognition of what they can and cannot provide. Interface designers agree that subject matter experts are expert, not in design, but in the field for which the design is being developed. Alan Cooper describes them as “experts on the domain within which the product will operate” but that they may “represent a somewhat skewed perspective” (54). Thus, this means that they may not be the best source to consult when designing a site that will have a high volume of novice or inexperienced users. Also, while they may have excellent ideas on using a website, they may suggest impractical or complex solutions that do little to enhance the experience of users. However, since the Writing Studio
is a place for tutor activities as well as student writers, I wanted to involve both tutor and
tutee as subject matter experts. I report on the SME interviews in Chapter Four, and I
discuss how their feedback was used in both Chapters Four and Five.

Conclusion

As this chapter makes clear, for a successful case study in the design of the Writing
Studio website prototype, I needed to draw on several methodological strands, pulling as
needed from critical pedagogy and critical theories of technology, incorporating Baba’s
ecological approach for community building and Brown’s design research methodology. All
of these methodologies were implemented from a foundation of user-centered design
methodology. These various interdisciplinary methodologies helped me to keep an open
mind and be receptive to the suggestions of the focus group participants and subject matter
experts.

Although it took some time for me to articulate and map out my methods, the final
three-part methods approach that I chose supported the design process very well, and I
believe they made the final design prototype one that supports the outcomes of interactivity,
collaboration, community, and conversation that I initially proposed in my research plan.
The next step is for me to report on the results of the case study, which I do now in Chapter
Four.
CHAPTER FOUR: DESIGNING FOR INTERACTIVITY, COLLABORATION, AND CONVERSATION

For this dissertation, my primary research objective was to design a writing center website that promoted interactivity, collaboration, community, and conversation while incorporating elements that supported specific pedagogical aims. To lay a solid foundation for the prototype, I mapped out a design plan that consisted of three main parts: visual rhetorical analyses, surveys and focus groups, and iterative design strategies. Each one of the parts contributed in substantive ways to the design of the prototype website. Additionally, a personal design journal provided a space for me to explore ideas and record observations from each of the three main stages of the prototype design.

First, I selected four writing center websites to analyze in-depth, using the tools of visual rhetorical analysis that I described in Chapter Three. The objective of the visual analyses was not quantitative in nature (e.g., 23% of the writing center websites analyzed include an interactive chat window); I chose instead to perform the equivalent of a close reading on specific elements of the sites I selected. The purpose of my analyses was to help me understand the effect of the design decisions I would make in regards to my research foci of interactivity, collaboration, community, and conversation; this purpose influenced the writing center websites I chose to analyze. Two of the sites, The Writery at University of Missouri and The Writing Studio of Colorado State University, have published information on the development and history of their online writing spaces (Harper; Hochman). The Writing Studio at Colorado State is exclusively online (it is connected to but independent of the Colorado State Writing Center), and The Writery at Missouri links to the Online Writery, its online tutoring web portal. The other site is one of the most famous (and thus, perhaps most analyzed) websites in the world of writing center work: the OWL at Purdue, which, like The Writery, links to its online OWL; the final site is the current Georgia State
Writing Studio site, including its Online Tutoring page, and the focus of my dissertation. I report on these analyses further in Chapter Five.

Following the visual rhetorical analyses, I designed two surveys: one for student writers and one for tutors from the Writing Studio. Once the surveys were complete, I held online focus groups, again having a student writer group and a tutor group. After gathering information from the surveys and focus group participants, I developed four personas following the guidelines introduced by interface designer Alan Cooper in his foundational book *The Inmates Are Running the Asylum*, published in 1999, and developed and elaborated upon in greater detail by Kim Goodwin in her 2009 book, *Designing for the Digital Age*. Choosing to focus on iterative design for the prototype, I also identified and asked a couple of subject-matter experts (SMEs) from the pool of focus-group participants to provide expert feedback about the website and how it might be used in online tutoring; following their observations, I went back and reworked certain aspects of my design. From all of these activities, I gained insight into the different ways each group thinks of and uses the human-computer interface of the Writing Studio website. Those insights contributed to the first draft of the prototype design.

After the first-draft prototype was complete, I considered conducting a set of usability tests. But the first draft was just that, a draft. In the same way that writing teachers avoid focusing on surface errors and lower-order concerns while their students are still in the drafting stage (while the writing would still be subject to potentially major changes), I determined that conducting usability tests on a prototype was premature and would most likely be inconclusive. While usability testing would reveal how specific sets of tutor/tutee interact with the website, such testing would be reporting on how users interacted with the
surface features, which were still subject to change. Also, the uniqueness of each tutoring session is an identifying characteristic of writing center work, and the features of the prototype that I sought to incorporate do not lend themselves to the quantitative reporting that generally accompanies usability tests. Yet, some form of feedback is essential to successful website design, and this is where the iterative design strategies of personas and subject matter experts facilitated improvements in the prototype design that is the outcome of this dissertation.

In this chapter, I review the latter two of the three main parts of the design process--surveys and focus groups, and iterative design strategies--noting what was learned, and thus useful, as well as noting what such processes did not contribute to the prototype design. My reason for examining the latter two stages is their focus on human-centered feedback and input, and the visual analyses were part of the design process of my prototype; thus, I weave the visual analyses into the narrative of the prototype design described in Chapter Five.

**Surveys and Focus Groups of Writing Studio Tutors and Student Writers**

In this section, I begin with the surveys that were sent out to student writers and the Writing Studio tutors, and I then follow with a discussion of the online focus groups, which were also divided into student writers and Writing Studio tutors and administrators.

**Survey of Student Writers**

*Student Writers: Demographic Information*

As I mentioned in Chapter Three, the survey sent out to student writers reached 146 invitees. The criteria used for the sample was simple: they should be classified as repeat visitors who had used the Writing Studio’s services a minimum of six times over the past
two years (when the Studio began using the WCOnline registration system and thus was able to capture e-mail addresses of tutees along with frequency of use data). Of those 146 repeat clients, 11 elected to complete the survey. While the sample size was too small to generalize out to the larger population of Georgia State students, the results are certainly worth noting. In this section, in addition to my discussion of what I learned from the responses to the survey, I offer some visual charts that present the responses I received.

The demographics of those who responded are quite interesting. Five of the respondents selected an African American ethnicity, and five of them selected Asian, and the one remaining selected Asian American. This surprised me, in that, based strictly on my own personal experience as a Writing Studio tutor, I expected that at least a portion of the respondent demographic would include some representation from a Caucasian ethnicity. This is one place where the small sample size indicates its limitations, as it would be naïve and wrong to generalize that 100% of Writing Studio tutees were non-Caucasian in ethnicity. Yet, the figures on ethnicity match recent trends in tutoring at Georgia State: non-native speakers of English comprise a significant portion of the users of writing center services, and the percentage of Asian student writers agrees with that. This information was most helpful in constructing the personas I developed as part of my iterative design strategy.

The respondents were almost evenly divided when it came to considering standard English to be their home or native language. Two of the respondents, or 18% of the responding population, spoke 2 or more languages. Eight of the eleven respondents were female. I kept these demographics in mind as I constructed the personas I used while designing the prototype website; as Cooper and Goodwin recommend, personas should
represent real people, not artificial constructs that seek to blend varying user characteristics into a single homogeneous user or group.

**Student Writers: Using the Writing Studio Website and Online Tutoring**

As can be seen from the chart below (Chart 4.1), most students who responded to the survey visit the studio website once or twice a semester. Another interesting response is that no one responded with “Never,” although one student indicated that they visited the site on an almost daily basis (remember that the question was not if they visited the Writing Studio, but the Studio’s website.) And if this was replicated in a larger population, such a response showing familiarity with and regular visits to the website would give even more weight to
the value of investigating the visual rhetoric and pedagogical approaches such websites employ, whether wittingly or unwittingly.

The second question in the survey asked about how students used the Writing Studio tutoring sessions. The majority of students responding to the survey indicated that they visit the Writing Studio with draft in hand (Chart 4.2). Four students, or 36% of the respondents, indicated that they visited the Writing Studio in order to get help in improving their use of Standard English. When asked if they had ever had an online tutoring session, nine of the eleven who responded said that they had never participated in an online tutoring session. Of the two student writers who had participated in online tutoring, both had used e-mail (asynchronous) and chat (synchronous) sessions, as well as phone and instant messaging.
That the students are quite comfortable and at ease in traversing the Internet, the question on Internet usage makes clear (Chart 4.3). The heaviest use is in email messaging, followed by a tie between social networking and checking a website connected to their coursework. One of the student writers did activity connected to an online class on a daily basis, while the majority (seven) reported that they seldom take online classes.

Survey of Writing Studio Tutors

Writing Studio Tutors: Demographic Information

The ratio of tutors who responded to the survey was higher than that of the student writers, and given the number of responses, while it would be presumptuous to generalize to the larger corps of all writing tutors universally, it is possible to generalize out to the larger
body of Georgia State Writing Studio tutors. Survey invitations were sent out to 25 tutors who met the criteria of having been a tutor or administrator of a writing center during the past two years, and of those 25, nine persons took the survey. When asked how frequently they visited the writing studio website, eight of the nine responded that they checked the website every day (see Chart 4.4); the same number indicated that they had participated in an online tutoring session. Since the Writing Studio moved to using the online registration system of The Richco’s WCOnline software in 2008, it makes sense that the tutors visited the site so frequently. Given that the survey invitation was sent out via e-mail (itself an online form of communication), it is perhaps not surprising that almost 90% of the respondents said they had tutored someone online. Also, the invitation sent out specifically mentioned online tutoring and the website design of the Writing Studio, so this may be an instance where the wording of the survey and its invitation influenced the respondents, drawing in those tutors whose interests lay in that particular direction. At the same time, the percentage of tutors who had tutored online may also be taken as an indication of the increasing use of this particular venue for tutoring.

Chart 4.4 Website usage and online tutoring
Writing Studio Tutors: Using the Writing Studio Website and Online Tutoring

Of the tutors who had tutored online, the majority of them had experience with synchronous sessions using real-time chat sessions, although the various modes and mediums used in online tutoring ranged from e-mail and real-time chat sessions to phone calls and texting (see Chart 4.5). Also, as the survey results show, tutoring was about equally divided between synchronous, or real-time sessions (89%) and email, or asynchronous, sessions (78%). The policy of the Writing Studio at Georgia State encourages tutors to respond to the most immediate online need, whether that is email or real-time tutoring, and thus those responding to the survey were equally experienced with both asynchronous and synchronous tutoring.
Finally, the survey showed that the tutors, many of whom are situated within the Net Generation described by Tapscott, shared many of the same Internet usage habits as the student writers (see Chart 4.6, below). They all indicated that they use email on a daily basis, and they participate in social networking to the same degree. Although they use the Internet for research, most of them seldom take classes or get their assignments online.

![Chart 4.6 Internet Usage: Tutors](image)

**Online Focus Groups**

**Overview**

The online focus groups represented both sides of tutoring session participants. One group, identified as the tutor group, consisted of writing tutors and administrators of the
Writing Studio; the second focus group, identified as the student writers group, consisted of student writers who had initiated a minimum of six tutoring sessions over the past two years. The focus group sessions began Monday, September 27, 2010, with me welcoming participants to the group and reviewing the procedures for the session. I wanted to give people time to reflect on the questions, look at the writing studio’s current website, and respond at a time of their own choosing. Thus, I structured the focus group to remain live for ten days, and on days two through seven, I posted a question or set of related questions each day. At the end of the first seven days, I kept the listserv open and invited everyone to review and make final responses over the last three days. This gave participants the opportunity to respond to comments or questions made by their fellow group members. The initial question was the same for both groups, but questions then diverged in order to facilitate focused discussion of questions relating to the group’s particular frame of reference (tutor or tutored). In the next two sections, I review the specific questions and report on the results from the focus groups.

*Online Focus Group: Student Writers*

The selection of the student writers group followed the procedure outlined above, but the results and thus the outcomes were much more limited. Of the 146 student writers who received an invitation to take the online survey and possibly volunteer to be part of an online focus group to discuss online tutoring and the Writing Studio website, only seven people responded affirmatively, and only three of those seven actually participated in the online focus group. The resulting small sample generated some interesting observations, but from my point of view, the observations had as much validity as if I had conducted four usability study sessions: the information was specific to each respondent. Thus, I include
some of the comments from the writers group, and of course their transcripts are part of the appendices of this work, but they should be seen more in the nature of historical artifacts generated by my research and not as contributing significantly to the development of the prototype.

Among the writers group, Wednesday’s set of questions generated the most response from the participants. The question set sent out Wednesday, September 29, was:

*What do you look for when deciding whether or not to choose an online tutoring session or a face-to-face one? Would you use the online tutoring sessions more often if you could see the person you are working with? Why or why not? If you could join with other writers online to discuss your writing, would you do so? Why or why not?*

I then added: Please visit the Writing Studio online tutoring session pages at [http://www.writingstudio.gsu.edu](http://www.writingstudio.gsu.edu) (follow the links, explore the pages).

I present some of the more pertinent responses here, and I have edited them only for grammar and punctuation in order to facilitate reading (for full transcript, see Appendix H).

**Respondent 1:** “The biggest deciding factor for me deciding between online/face-to-face sessions is whether or not I think I’ll be able to get enough criticism to give me an idea of whether or not to continue on the path my paper’s currently going. I’m sort of biased towards face-to-face in that regard, especially since in person, the tutor could point to what they feel needs work, whereas in an online session they could only refer to the area; it’s a little thing but it makes a surprising difference to me. I am ambivalent about seeing the tutor in online sessions. I wouldn’t mind joining with other writers in online sessions; I could appreciate multiple views on a paper that I could see at the same time instead of making multiple face-to-face sessions.”

**Respondent 2:** “I personally prefer face-to-face because you can pick up a lot from a person’s body language that you cannot just by chatting online. I like face-to-face because it is easier to ask questions and get a better understanding of what I might need to do to correct my writing.

As far using the online tutoring more if I could see the person, [it] depends all on how much tech I am going to need to do that. If it is too cumbersome, I will not use it. I am too used to user-friendly interfaces. If I have to download this, and then click on that, and then add this, and then I still have to click on this, I will not go through all that trouble.

I would like to have work looked at by others because [then] it is not just one person’s idea of what it should look like or sound like. Also, if everyone is confused about the same part, [then that] means that you will need to make corrections. Everybody can’t be wrong.”
**Respondent 3:** “I am a little bit different. I might prefer an online tutoring session because I ask more questions when I am writing [them] than when I am speaking. Seeing the writing you suggest makes me clear and [it] stays longer in my mind.

To me, being able to see person online is not necessary since it is typing anyway. However, it would be great for someone who like the face-to-face conversation. On the other hand, if it needed additional equipment just like was said, it'll be too complicated and take much longer time for someone who is not good at technology.

I would love to have other writers discuss my writing. Different people do not have the same opinion. Though that information or corrections might confuse some people, it would still be good information to think of for other papers. [. . .] More people can see more mistakes on the paper we are writing. Because of different ideas, I think a writer can use a discussion which corrects so the mistake[s] can be clearer. Similar to group study, people can speak out and discuss what, why and how to correct it.

Several observations made by these student writers are worth noting. They all agree that if there is too much technology to work through, then their interest in online tutoring would decline: they would find such obstacles counter-productive to learning and improving their writing. Two of the three respondents thought that body language was an integral part of a tutoring session; one of them noting that “it's a little thing but it makes a surprising difference to me.” The third respondent is not a native speaker of English, and thus says that online tutoring is effective both in asking questions and in getting feedback, saying, “I ask more questions when I am writing… [s]eeing the writing you suggest makes me clear and [it] stays longer in my mind.” For this person asking questions is easier when they can be submitted to the tutor in written form, and receiving feedback in written form is better for this writer because of the ability to save the transcript of the chat session and reference it later to be sure that the suggestions have been clearly understood. A final observation that came on the last day from this participant was that the interface faded from consciousness and became irrelevant once the session began: “I didn't see any distract[ing] design that interfered with my session. [. . .] I don't really remember how it look[ed]. I just think it is
simply like the Yahoo or MSN chat.” That comment is on target for this user, though, given that the current Writing Studio synchronous online tutoring sessions take place using Microsoft’s Live Messenger chat program.

**Online Focus Group: Tutors**

As mentioned in the Methods section of Chapter Three, for the tutor group, anyone who had tutored in the Writing Studio over the past two years (including current tutors) was invited to be part of the online focus group. The process began with them being invited to take a survey; one question in the survey asked them if they would be willing to take part in the online focus group that would be held over a period of one week. If they were willing to participate, they submitted their email addresses as part of their survey responses. Eight tutors of the twenty-five tutors who qualified responded affirmatively to the invitation to be part of an online focus group whose focus would be on the writing center website and online tutoring sessions; of those eight, six actually participated in the online focus group. Although given the focus, having participated in online tutoring was not a requirement of being a part of the focus group itself – the expectations and perceptions about online tutoring would, I felt, be as helpful in the design of the Writing Studio prototype as would practical experience in online tutoring. Fortuitously, the composition of the group was blended: the online focus group ranged from no online tutoring experience to tutors who had a high level of experience with online tutoring; it also ranged from people with little to no interest in website design to a few who had extensive experience with website design.

Collectively, the tutors provided the sample from which the subject matter experts were selected for evaluating the high-fidelity (HF) prototype. The tutor group was more prolific in their responses and participation in the online focus group, and they contributed
substantive comments over the course of their online sessions. Running concurrently with the student writers group, but within a different listserv, the tutors responded to questions relating to online tutoring and the writing studio website interfaces; some spoke from the perspective of expectation while others spoke from a perspective of experience. As a result, their responses were influential in the design of the high-fidelity prototype. I present some of their responses here, with minimal editing for grammar and punctuation.

The focus group began with me asking about the metaphors and images that the tutors associated with the Writing Studio – both face-to-face (f2f) and online. Many of them expressed their affinity for the metaphor that currently guides the Georgia State f2f tutoring space: the writing studio. What came out of the discussions of images and metaphors was a contrast between the perceived openness, or absence of institutional conformity, of the f2f space and the more defined, utilitarian nature of the online space that reflects the look and feel of the University’s Internet home page, thus imparting a more institutional feel to the Writing Studio Website. One tutor described the contrast this way:

I associate the physical writing studio with the coffee shop/art lounge metaphor. The design of the space itself reflects a calming atmosphere that is distinctly not institutional. The few components that do reflect institutionality are hidden well enough not to be distracting from the overall environment.

The online space I associate with a much more utilitarian sensibility. This is partly due to the interface itself--it's difficult to engineer an interface that remediates a coffee shop because the overall interface of most of the internet is utilitarian (usability principles are sometimes antithetical to traditional aesthetics, but maybe not always). Added to this reality is the fact that the particular interface of Write/Chat is based on the university's Microsoft communication system -- one that is purposefully not customizable.

As for the website, I think it reflects the sensibilities of both the online and physical tutoring spaces, though it certainly privileges the usable, utilitarian sensibility of the online space (because it is itself an online space). [. . .]For me, small talk, off-topic discussion, and personal bonding do not belong in an
online session. It has a utilitarian motivation, and once the goals and tasks associated with that motivation are complete, the session should end.

Although the student writers did not seem to pay much attention to the workings or the representations of the interface (which was, actually, a measure of successful design, in that they would only have noticed such things if they had encountered problems or obstacles), the tutors were much more conscious of the website as a site of community practice and ongoing activity. One tutor, J, expresses something that my research has reinforced: online tutoring is, and should be, different from the tutoring that takes place in physical settings. Wrote J:

> When I look at the site, I can see the connection to the physical space [...] but I can also see it trying (perhaps starting?) to become its own entity, separate of the physical space. I think this pull away from the physical is reflective of online tutoring. Our practice shifts so much when we're online. I mean, some things remain the same, but the tone of the conversation, the content *to a degree*--these things shift to reflect the medium.

**Iterative Design Strategies**

An iterative design strategy makes use of several different resources, each of which offers constructive and usable feedback and input about the design. The resources I chose to integrate were the use of personas and subject matter experts (SMEs). I had one SME from the tutor side and one from the student writer side. The tutor SME provided me with useful insights into how the prototype might be used by tutors, while the student SME shared ideas about how the prototype might be perceived or used by a more general student population. As Cooper and Goodwin point out in their respective works, SMEs are experts in a particular area or topic, not necessarily experts in design. In my prototype design, the SMEs functioned as user experts, drawing on their experiences with tutoring to inform their feedback (SME interviews may be found in Appendices I and J).
Personas

For this project, I developed four personas, drawing both from the demographics provided by the survey respondents and from my own experience of working as a tutor in the Writing Studio. For a full description of each persona, each of which follows the guidelines set forth by Cooper and Goodwin, refer to Appendix K. The first persona is Brian, a male native-English-speaking undergraduate and a biology major who plans on applying for medical school; the second persona is Ching-li, a female graduate student in the Andrew Young School of International Policy’s international economics program whose first language is Korean (English is her third language). Brian, a Georgia resident, qualifies for and receives funding from the Hope scholarship; he works part-time as a pizza-delivery person and is taking a full course load of academic work, while Ching-li is attending graduate school on an international scholarship she obtained from her home university in South Korea; she plans to return to there after obtaining her doctorate in international economics.

Table 4.1 - Writing Studio Prototype Personas

<table>
<thead>
<tr>
<th>Persona</th>
<th>Age</th>
<th>Major/Field</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brian</td>
<td>early-20s</td>
<td>biology major, full-time student</td>
<td>biology student</td>
<td>plans on applying for medical school</td>
</tr>
<tr>
<td>Ching-li</td>
<td>late-20s</td>
<td>grad student, South Korean</td>
<td>grad student</td>
<td>attending Andrew Young School of International Policy’s international economics program</td>
</tr>
<tr>
<td>Danelle</td>
<td>early-30s</td>
<td>mother, works full-time, nursing major</td>
<td>mother</td>
<td>working full-time as a nurse, mother of two children</td>
</tr>
<tr>
<td>Rashid</td>
<td>mid-20s</td>
<td>Indian, computer science major</td>
<td>computer science major</td>
<td>working part-time as a computer science student</td>
</tr>
</tbody>
</table>

The third persona is Danelle, an African American mother of two children, twin girls. Her husband works for an Atlanta real-estate firm as an appraiser, and Danelle is
enrolled in the nursing program. She hopes to obtain her R.N. certification and work at an area hospital. She also relies on Hope Scholarship funding, and her goal is to keep her GPA at 3.5 or above. Finally, Rashid is an exchange student from India; his undergraduate major is Computer Science. He has been in the United States for two years, and he has just transferred to Georgia State from a local community college, where he graduated with Honors with an associate degree in science. English is not his first language, although he has spoken and written British English from the time he began school as a child in India.

When I began design work on the prototype, I kept these four personas in mind as potential users of the online tutoring website and the online tutoring options Georgia State’s Writing Studio offers. As I worked on the website, I stopped periodically and asked the following questions, based on Alan Cooper’s recommendations in his book *AboutFace*:

What would Brian, Ching-li, Rashid, or Danelle want the website to do? How would the website fit in with Ching-li or Rashid’s normal workflow or daily activities? How comfortable would those of the persona group be with the technological aspects of the website interface, and how would what they already use factor in to how they used the site? What visual and aesthetic styles found in the website interface would appeal to these users? (78)

By asking these questions, I could envision how real people might interact with the website, and repeating these questions at regular intervals was most helpful. For example, when designing the section of the page that hosts the Quick Links, these questions helped me to select links and resources that would be useful to this diverse group of users. Asking these questions also helped me select the best placement for information that is sometimes difficult for new visitors to find: the location and the hours of operation for the Writing Studio. I discovered, as Goodwin notes, that personas “help prevent self-referential thinking, in which designers make decisions based on their own preferences or usage patterns” (232).
Subject Matter Experts

Both SMEs offered insights that I would not have garnered otherwise. For example, the student writer SME noted that the textual components of the prototype were still too wordy. She reminded me that the site needed to capture the attention of students quickly, that the words used need to be brief and to the point, and that anything that seemed as if it were “talking down” to students would probably be better if revised for brevity and clarity. The introduction to the Chat window was too ambiguous: what I thought of as a non-directive way of inviting students to ask brief questions was too complex and actually above the comprehension of many, especially non-native speakers of English. These observations motivated me to return to the prototype and streamline the headings that introduced various elements of the site.

The observations from the tutor SME were equally valuable. One of the first things she noticed was the placement of the invitation to the Virtual Writing Community (VWC): it was over on the right side as if not a part of the regular activity of the Writing Studio. Yet, she queried, if the VWC was to be an ongoing feature of the Writing Studio online site, shouldn't it be over with the other activities listed on the left-hand side of the web page? Setting it off gave it an aura of possible separation from the Studio virtual space - a place not integrated into the normal activities of the Writing Studio website. Once I had moved the link and text for the VWC over to the left side with the other activities of the Writing Studio, I could see the validity of that observation. Both SMEs noted that the initial design I made placing information about hours and location in the center of the page felt awkward. Moving it over to the right side of the page made better use of the F scan pattern that most users’ eyes follow when looking at digital screens (Nielsen, “F-Shaped Pattern”).
Conclusions

One of the more important conclusions I reached as a result of contemplating the results of the surveys and focus groups is that successful website design must match the needs of each group of users, who approach the online tutoring space with vastly different expectations. The student writers, concerned with primarily fulfilling a specific assignment (e.g., a narrative essay) or goal (e.g., a personal statement or resume), wanted their interaction with the site to be seamless and transparent, in the sense conveyed by such scholars as Wysocki, Bolter, and Hocks: the interface must ‘disappear’ from consciousness and be nothing more than a vehicle, or conveyance, for accomplishing their goals. In a reflection of the highly digital nature of our current environment, the remediation of print into hypertextual content has changed what factors affect the degree of transparency. Now, instead of alphabetic chunks of text enhancing transparency, it actually detracts from, or diminishes, transparency. The more users are forced to read, rather than scan content, the less transparent a digital space becomes.

In contrast to the student writers, tutors as a group were much more conscious of the rhetorical and pedagogical implications of their activity in the “electronic contact zone” (Selfe and Selfe; Severino). Again, speaking of the tutors in the collective sense, this group recognizes the need to engage student writers in ways that would make them better writers, not merely “fix” a broken paper (North). Regardless of whether the setting was in the physical space or in the virtual space, the tutors were immersed in, and supportive of, the
mission statement of their tutoring space and wanted to be sure that they transferred as much of the conversational model of tutoring into their tutoring practice as possible.  

I began this research believing that I integrated and used the simultaneous points of view gathered from my different roles at Georgia State: student, teacher, tutor, and administrator. By the time I reached the point of undertaking the actual design process, though, I approached the role more as a tutor and administrator and less of a student. However, taking myself through this process revealed the tensions between these roles, and these roles contributed in various ways to the design process. The surveys and the focus groups brought student concerns to the fore. As a student, I wanted quick and easy access to tutoring services, and I wanted to schedule tutoring sessions at a time when I needed them. As someone familiar with technology, I understand the place and space of online conversations, and so participating in an online tutoring session is worthwhile and comes down to a matter of convenience and time. Which is more convenient for me as a student? In this, I also draw on the characteristics of the personas I created: each of them would have, in some degree, some of the motivations and needs that I have as a student and what might suit them one day would be inconvenient the next day.

Throughout the entire process, I kept notes to chart my progress. Those notes reveal some of the tensions I have just described. At the same time, they illuminate the ways in which my awareness of pedagogy, my recognition of the different audiences, and the

15 On the About page of the current Writing Studio site, the mission statement reads: “The mission of the Georgia State Writing Studio is to enhance undergraduate and graduate student writing by encouraging all writers to participate in regular conversation about the writing process and their academic work. We believe that talking about ideas and the art of writing with knowledgeable readers creates the ideal learning environment for practicing personal expression, persuasion, and critical thinking, all of which are vital to succeeding in the arts of academic and professional writing and communication. We support a community where writers, readers, and teachers all learn from each other, by responding to each other’s texts with engaged conversation.” (http://www.writingstudio.gsu.edu/about.html)
affordances offered by the different genres of text, audio, and video contributed to the design of the prototype. Knowing that some of the audience would be teachers, tutors, and graduate students made it sensible to retain the textual components that provided background, context, and explanation for some of the features on the website. At the same time, realizing that the majority of unique visitors (different from number of visits) to the website would be student writers, it made sense to clearly identify when a link would take one to a densely textual page. Simply being able to offer students choices for the way in which they received information supported the less-directive, more exploratory pedagogical aims of the Writing Studio. For example, students can learn about the Studio by reading about it in book style, viewing the virtual tour that is posted on YouTube, or by listening to a podcast from the Writing Studio’s iTunesU site. Learning to manage the tensions between these roles – which reflect real-world situations – was an invaluable lesson that I gained from this work.
CHAPTER FIVE: DESIGNING THE PROTOTYPE

The High-Fidelity (HF) Prototype

In this chapter, I report on the outcomes from designing the Writing Studio interface prototype. Was the interface design successful? Why did I, as designer of the prototype, make certain decisions, and what theories or praxis influenced those decisions? What lessons can be learned from the research and the design process? I also map out the design process of the Writing Studio's interface prototype, discussing how the consideration of visual rhetoric and pedagogical attributes enhanced the outcome of the prototype.

Interface designer Joel Reyes offers this definition of a wireframe along with a solid rationale for working with one:

“A wireframe in essence, is a visual representation, guide, and basic element structure of a website’s interface design. Wireframes are usually the product of an idea that’s later reproduced on paper (or screen) so that they can preserve and maintain the consistency of visual similarities throughout a websites design. Not only that, but wireframing allows us to save valuable time and money. Deciding to create a website without planning, many times results in a very poorly functional interface. This will ultimately drive users away from your website, and tarnish the quality of your brand.” (1)

A high-fidelity wireframe prototype is a fully functional set of web pages; in the initial stages of the design, I used a program designed for use in web design: iPlotz. However, because I had worked extensively with the current iteration of the Writing Studio website as part of my work as both tutor and administrator in the Studio, I ultimately found it easier to take the existing shell and revise it to incorporate the interactive digital technologies that support the outcomes of interactivity, collaboration, community, and

16 Readers may examine the prototype at http://www.ajmyatt.com/Prototype.
conversation (www.ajmyatt.com/Prototype). Also, I wanted to retain the use of the university’s template for web pages, knowing that the Writing Studio personnel had decided to keep their scheme based on that template and its associated CSS style sheets. The prototype reworks the home page of the current Studio website, and I explain the features of it in the final section of this chapter. After discussing the visual rhetorical analyses of the four sites I selected, I begin with a screen shot of the Writing Studio website from the summer of 2010, along with my visual rhetorical analysis of the site, and move into a discussion of the interactive elements that I wanted to include and my rationale for making such choices.

The design of the prototype takes into consideration both dimensions of website analysis that I explicate further in this chapter: the surface dimension and the conceptual dimension. In the prototype, the audience is invited to become active participants in the features of the main page for the Writing Studio. By it use of the school colors and by its adherence to the university guidelines for style and presentation, the site reassures visitors that it is part of the Georgia State community. Conversation, even sound, is integrated into the web page, indicating a high degree of hybridity as sound, video, and text work together to make meaning for visitors (Hocks “Understanding”). Given the ubiquity of YouTube videos and the interactive nature of online gaming, the participatory nature of the website is more transparent than some might expect. And by leaving control of the website in the hands (and eyes and ears) of the user, the website moves away from directive pedagogy towards one that relies on the collaboration between the user and the Writing Studio personnel represented by the human-computer interface, whose teaching and learning styles
contributed to the design of the site by means of their responses in surveys, focus groups, and subject matter expert reviews.

An early part of my research was to apply the tools of visual rhetoric to each of four websites, conducting a visual rhetorical analysis of each site, using the visual rhetorical tools that I discussed in Chapter Three, Methods and Methodologies. Thus this chapter begins with the results of the visual rhetorical analyses that I performed on each of the four sites; I then move into a discussion of the interactive digital technologies that I wanted to include in the redesign of the Writing Studio website, and I end with a review of the finished prototype.

I begin by examining each writing center’s home page, using an approach based on visual rhetoric and its use of visual design principles like contrast, repetition, alignment, and proximity. This necessitates looking at any connections between the university’s website to determine whether the site’s mission statement, including its location, plays a pedagogical role as it explains to visitors and users the way its institutional directors perceive it.

**Visual Rhetorical Analyses: Online Tutoring Websites**

In order to achieve the depth I wanted, I looked at each writing center website from two vantage points: surface and conceptual; I define these vantage points, or dimensions, further in this section. Among the criteria for selection was that the website be well-known, easily accessible, offer online tutoring, and that an archive of its interface history be available. The first criterion was achieved by selecting from among the United States’ writing centers listed on the International Writing Center Association’s (IWCA’s) website, as the publication of a URL on that site is voluntary and achieved by applying to the IWCA webmaster. Thus, the sites listed there have opened themselves up to public scrutiny. The
second criterion was achieved by doing a Google search and following the links that were returned as a result, and the third criterion was achieved by visiting each writing center’s website. Although including the history of website development was not part of my proposed project and, in reality, lies outside the scope of this dissertation, researching the Internet activity of the sites and selecting those sites that had extensive website captures via the Wayback machine provided two benefits: assurance that these websites were not themselves newly developed and that they had been public for a long time. The sites selected for review were Missouri University’s Writery (55 captures since 1998), the Online Writing Lab (OWL) at Purdue (734 captures since 1998), Colorado State’s Writing Studio (239 captures since 2000), and The Writing Studio at Georgia State University (39 captures since February 2005). The sites are listed in chronological order here, but the visual analyses are conducted and presented alphabetically.

The visual rhetorical analysis incorporates concepts that have been recognized as part of the visual rhetoric of new media. I think of conducting a visual rhetorical analysis in two dimensions: the surface dimension and the underlying conceptual dimension. This awareness, which I had not articulated at the beginning of my research, developed as my analysis of the writing center websites took place. I began by looking at the standard elements of website design -- alignment, use of color, typographical elements, navigational menus and cues, placement of elements (use of chunking, white space, and repetition) -- and found that they were inadequate to the challenge of expressing elements of interactivity, pedagogy, collaboration, and community. Wanting to express more than surface elements, I developed what I refer to as the conceptual dimension. Thus, I began analyzing in the two dimensions I mentioned at the beginning of this section. Although the two dimensions
combine to become a single interface, I found it most productive to begin by looking at the surface dimensions. The visual rhetorical analysis incorporates concepts that have been recognized as part of the visual rhetoric of new media. Then in selecting the aspects of visual rhetoric to examine, I chose to use those I discussed in Chapter Two’s literature review: audience stance, hybridity, and transparency (Hocks, Wysocki, Bolter), as well as other features drawn from work in interactive website design, such as aesthetics (Greenzweig), the conceptual model chosen (Breuch, Stolterman and Wiberg), and community building (Baba, Murphy, Palloff and Pratt). I explain each of the terms and how I used them in my visual rhetorical analyses in the introduction to the Results section of this chapter.

Thus, in performing a visual rhetorical analysis, I found that using these dimensions gave me a way to begin “talking about the rhetorical and visual features of Web-based digital documents together, the contexts for designing these documents as visual arguments, and the potential impact of these designs on audiences, particularly through the use of interface designs and interactivity” (Hocks “Understanding” 643). In doing this, I drew on some of the aspects of gestalt theory, often used in art and psychology. Conveying the sense that “the whole is more than the sum of its parts,” the word gestalt is a German word that conveys a sense of the whole (Saw). The process of the visual rhetorical analysis helped me to understand how certain element and concepts from both dimensions join together to impart a whole message to a user (Greenzweig). Gestalt theory also helps to explain why the first impressions of visitors to websites are so influential in how users perceive the site. As art teacher James Saw notes, gestalt theory as used in design draws on surface features like closure, continuity, similarity, proximity, and alignment, which is why, though I find the
theory relevant and helpful, I do not include it as a separate element in either dimension (Saw; see also Horn).

Textual rhetorical analysis is productive and should be part of any complete analysis of a website, as Lori Hughes aptly demonstrates in a dissertation she wrote that examines how various writing centers engage with aspects of technical communication. We also recognize that “[s]ince the appearance of hypertext and other interactive new media, [...] digital writing environments make it difficult to separate words from visuals or privilege one over the other” (Hocks “Understanding” 629-30), and though I focus on the visual, my intent is not to privilege the visual form over the textual. However, my research focused on using the tools of visual rhetoric, and thus I give little attention to textual rhetorical analysis. I agree that “those of us who teach writing online find that we must help our students pay attention to the rhetorical features of these highly visual digital environments” (Hocks “Understanding” 631). And certainly, the teaching of writing regularly happens during tutoring sessions, both in face-to-face and online settings. And where teaching happens, pedagogy is present, whether explicitly or not. But in the scholarship of writing center studies, explicit recognition of pedagogical aims as well as applying visual rhetoric to the design of writing center websites, once one begins to search for it, is scarce, and my work here addresses that opportunity. While there is a plethora of scholarship from various fields on website design, human-computer interface design, and designing for interactivity, I found little connecting such work to the design of writing center websites.¹⁷

¹⁷ The most notable works I found that explicitly address writing center website design are the foundational *Taking Flight with OWLs* by Inman and Sewell in 2000, Breuch’s “The Idea(s) of an Online Writing Center” and her blog of 2007, Rusty Carpenter’s “Consultations without Bodies: Technology, Virtual Space, and the Writing Center,” and two dissertations: Doug Dangler’s (2004) and Lori Hughes’ (2009). Certainly, other works mention writing center website design, but as a corollary to their work, not as the focus of it.
In this section, I present the results of the visual rhetorical analyses that I carried out on the four writing center websites introduced earlier. The visual rhetorical analysis begins with an analysis of the overall composition.\(^{18}\) When performing a visual rhetorical analysis, it is always helpful to first analyze the overall statement of the visual text, and then break it down into the individual elements that have been either used or ignored in the design of the page. Often, the analysis of the individual elements reveals relevant information that may alter the initial response to the visual text, and such inspection may tease out certain aspects of the design that should be taken into consideration. For all of the analyses that I enter here to demonstrate the value of including visual rhetorical analyses as part of the design of writing center websites, I begin with a comparison of the writing center website to the institution’s home page. Often, a writing center website will reproduce the visual design of the institutional home page or use a template guided by policy. After a discussion of the home pages, I move into a consideration of the individual elements, keeping my focus on aspects of online tutoring and interactive digital technologies.

The conceptual dimension includes more than the features relating to audience stance, hybridity, and transparency (Hocks). Those characteristics are a starting point, but also important are the metaphor(s) or conceptual model(s) used, whether or not a mission statement is provided, whether the site offers visitors interactivity, the use of directive elements as well as an inspection of the elements that invite exploration, and whether or not

---

\(^{18}\) All of these screen captures were gathered on August 21, 2010. As is the case with most dynamic compositions, the sites may still be the same as they were in August, or they may have implemented drastic changes. This is the primary reason that one of my criteria was that the site be one that was indexed on the Wayback Machine (www.waybackmachine.org), as this site provides a history of screen captures of websites in various points in time.
the website makes explicit reference to virtual writing community. The following table (Table 5.1) lists the characteristics of each website that I analyzed.

**Table 5.1: Characteristics of the Visual Rhetorical Analyses**

<table>
<thead>
<tr>
<th><strong>Surface Dimension</strong></th>
<th><strong>Conceptual Dimension</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alignment</td>
<td>Audience Stance (includes accessibility design)</td>
</tr>
<tr>
<td>Repetition of elements</td>
<td>Hybridity</td>
</tr>
<tr>
<td>Use of Color; Color Scheme</td>
<td>Transparency</td>
</tr>
<tr>
<td>Typography</td>
<td>Metaphor or Conceptual Model Used</td>
</tr>
<tr>
<td>Contrast</td>
<td>Mission Statement Provided</td>
</tr>
<tr>
<td>Use of white space</td>
<td>Interactivity</td>
</tr>
<tr>
<td>Icons and Hyperlinks</td>
<td>Directive Elements</td>
</tr>
<tr>
<td>Navigation Menus and Cues</td>
<td>Elements that Invite Exploration</td>
</tr>
<tr>
<td>Chunking of elements</td>
<td>Explicit reference to virtual writing community</td>
</tr>
</tbody>
</table>

The visual rhetorical analysis is not just an evaluation of the visual effectiveness of the website, which is highly subjective for the most part. That falls within the field of website design, technical communication, even document design, but not all visual objects are rhetorical. However, inasmuch as writing center websites are representations of specific sites of academic activity, then it follows that there are rhetorical aspects that bear analysis on the web pages. Thus, I mapped characteristics that, when seen on the web page(s) of writing centers, would help to explain the rhetorical outcomes and effects of the websites. In my study, I first looked at the overall site design from a technical communicator's point of view, and I then examined the more aesthetic, or conceptual, dimensions of the site. The site's mission statement, including its location, plays a pedagogical role as it explains to visitors and users the way its institutional directors perceive it (Hughes).
The Writing Center, Colorado State University (http://writingcenter.colostate.edu/)

The analysis for Colorado State begins with a visit to the university home page, found below as Figure 5.1.

![Figure 5.1 Colorado State University Home Page](image)

The official colors of Colorado State are green and gold, and the dominant color on the home page is green with touches of gold (Colorado State). The home page also establishes navigational expectations for visitors: there is no left navigation menu, and persistent links are on the top right of the top banner. Expected links such as “More About” and “Resources” are on the right-hand side of the page, and this pattern is repeated on the Writing Studio page, to which we will come shortly. Following the established parameters of my analysis plan, I found the link to the Writing Center and followed it. The page, represented here as Figure 5.2, repeats the color scheme established by the university home.
page, but presents only the minimal amount of information – just enough to help students get information about location, hours, and types of sessions. To be fair, the site notes that a new website is under development.

The next thing I did was review the online tutoring component of this website. The basic, no-frills design of the site uses contrast to divide the site into sections. This page uses no breadcrumbs and offers visitors no way to link back to other parts of the university website. The only link is one for submitting a draft via e-mail. With one typeface used, emphasis is transmitted by means of font size and bolding. The alignment of the yellow box is left, while the alignment of the text in the center of the page is centered, not unpleasant but a trifle weak in its conformity. However, given that the focus of my research is on the
online tutoring website, I spent little time on the Writing Center page and followed the link “*Send a Draft to a Consultant*” to discover more about the way in which the online tutoring worked. That screen capture is entered as Figure 5.3, following.

![Figure 5.3 Colorado State University Writing Studio Screen Shot](image)

At this point, the layout and design of the Writing Center pages change. The top banner is a shot of the Rocky Mountains, with a horizontal navigation menu immediately below the shot. The persistent links found on the university home page move left, but they are still on the topmost section of the banner area. Research revealed that this page is actually part of the Writing Studio of Colorado State University, a site set up to provide
support for writing endeavors using interactive digital technologies both for teachers and students. In 2006, the Writing Studio was a central, unifying feature of a CCCC presentation focusing on teaching writing with the tools of the Writing Studio space. Will Hochman published this report on the panel, posted on a CSU web page:

Mike Palmquist explained that his Web-based Writing Studio project grew out of Colorado State's OWL, Writing@CSU (http://writing.colostate.edu), which he describes as an OWL that extends access to course resources. To develop the Studio, Palmquist and his collaborators asked what they could do to support a more student-centered, more interactive writing and learning space. Palmquist observed in a study with his colleagues at Colorado State that student discourse about writing in [online] writing classes was more on task than that in f2f classes taught by the same instructors. This observation shaped his efforts to build a writing environment the supports student writers in the act of composing. The Studio also has a course-management system that provides a number of resources that he described as similar to WebCt and Blackboard, but instead of the courseware being centered on lecture classes, it's centered on writing classes. (Hochman 1)

This site, then, is something of a hybrid. Not totally a writing center (there is actually a link to the Writing Center in the horizontal navigation bar), it is nonetheless a website that supports online tutoring of writing by offering to respond to submissions via email, as Figure 5.3 shows. Given its focus on community building in a virtual space, I chose to analyze the Writing Studio website home page using the same visual analytical tools I used for the home page, looking at both the surface and conceptual dimensions. The screen shot of the CSU Writing Studio is Figure 5.4 on the next page.
Figure 5.4 Colorado State University’s Writing Studio

The surface dimension of the website could be stronger. For example, the typography is uniform and does not make use of the contrast that could be achieved were a serif font used for headings, retaining the sans serif font it currently uses for text and navigation information. It features a straightforward design approach, with left aligned elements and pages that center in a browser window. Text is chunked together, and necessary access points are easy to find. The color scheme matches the university home page, and the repetition of the gold color in the use of headings helps visitors quickly see how the page is organized. White space is used to good effect, and the navigational menus and cues are easy to understand and find. Text provides the main source of information about the site.
Still, this site has a lot going on. The navigation bar at the top is positioned where web users would expect to find it, and the three boxes on the right of the page use borders to group similar information together. A box for logging into the site is at the top, making it easy for users to log in. The next box, in the middle, offers quick links as well as news and updates – again, this information is located in an expected place. Finally, the bottom box gathers and constrains resources in a way that makes it easy for visitors as well as Colorado State students to follow paths important to them. Writers are offered a variety of digital genres (referred to as tools on the website) to explore, such as “blogs, wikis, [and] ePortfolios.” The site, writing.colostate.edu, is a portal for other sites, such as Writing Studio Classes and Teaching Resources. The use of icons and images that are familiar to users - such as the banner image of the mountains and the thumbnail photo used as an icon to represent the CSU writing center - establishes an identity for the site and gives it credibility, as does its harmony with keeping the same color scheme as the university and writing center home pages.

The conceptual dimension explores more aesthetic or abstract concepts. What is the stance of the site towards its audience? With its clearly stated intention of supporting writers, the inclusion of resources for writers and links to places for writers to get help with their writing projects indicates a strong awareness of the target audience. This awareness is tempered by some ambiguity, though, in its use (or lack of use) of either metaphors or a conceptual model. When I first studied the page, I wondered about the rhetorical implications of the vista of the mountain range; perhaps a guiding metaphor was one of exploration, of traversing open pathways where no one else has trod. This perception was somewhat reinforced by the icon for visiting related sites, featuring steps that lead ever
upward. Overall, though, I found no strong conceptual or metaphorical model in the design, as the concept of visitor as explorer was inconsistent across the site.

Not all of the icons make sense (at least, to me as a new visitor to the space). The easiest icons to understand are those for Work on Your Writing, and Visit CSU’s Campus Writing Center. The others leave me somewhat puzzled as to the connection between the visual selected and the actual link. For example, the icon for viewing Classes is that of gears meshing together, the icon for Teach Writing, is a link in a chain (I think). The other two icons are at least somewhat related to their links: Learn to Write is represented by an open laptop computer and the Visit Related Sites features what I believe is a set of steps ascending a mountainside (although I think using the word “explore” in place of “visit” would make more sense with the metaphor embedded in this icon). And the link to open-access textbooks is that of fingers on a keyboard – again, this icon lacks a strong connection to what it represents.
However, one of the links on this site leads one to an external site that is controlled by Ad-click; the site is reached by following the link to “Visit Related Sites,” which is posted on the main page of the Writing Studio. Once there, if one follows the link “CSU Writing Project,” one is taken to csuwritingproject.org, which is no longer under the institutional umbrella and has in fact been appropriated by a third party web ad generator. The audience has been forgotten, and the door left open for unexpected, even unwelcome, activity.

Transparency on the site is somewhat uneven. As we advance into the digital age, remediation of earlier web tools happens as older technology becomes revamped. An example is the now common use of search boxes on individual websites. Given the ubiquity of search boxes on Internet websites, the presence of a Google custom search box is an expected feature of the digital environment. It is transparent in the sense of now being an expected part of a website – it would be the lack of one that would decrease transparency for the user. The use of a standard navigation bar at the top of the page as well as the use of clear links makes the digital environment somewhat transparent. Yet, because the icons and hyperlinks are ambiguous and somewhat uncertain, visitors remain aware that they are in dynamic, not static, environment. The site is not wholly transparent in nature.

In looking for pedagogical elements, I began by searching for a mission statement but was unable to locate one. There is an informative statement at the bottom of the Writing Studio site, though, telling visitors that the site is open to all visitors; in fact, writing submissions are accepted from anyone who has an email address. Although reference is made to blogs, wikis, and ePortfolios, all of which offer a degree of interactivity, the main

---

The text beneath the link says, “The Colorado State University Writing Project (CSUWP) is a community dedicated to providing meaningful professional development for teachers and writing opportunities for students in northern Colorado.” However, the end result is definitely unfriendly, as ad windows open up in separate browser windows, one on top of another.
page itself does not feature interactive digital technologies. Writers who wish to make use of any blog, wiki, or ePortfolio space must register before accessing those features, which is an easy process, as I found when I registered myself on the site. Writers may submit their writing to consultants via email (there is a submission page), but they are asked to allow 5 days for a response, and face-to-face sessions take priority. Exploration is accepted but not invited. The overall impression is directive, through the use of words like learn, view, and visit. While the icons offer choices, visitors are told what to do in imperative statements. Setting up a password-protected account is easy, though, and opens up access to the interactive digital technologies mentioned earlier.

From the information on the web page, one would expect to find support for a virtual writing community. The potential for community comes across in statements like, “More than 5,000 classes have been created to support writers. Is your school using the Studio?” The overall focus of the site, though, is not on a community of writers or even a place for online tutoring sessions, but is on content management; the tools mentioned are components of the content management systems used by the Writing Studio. This site would certainly merit further attention as part of research into alternatives to standard Course Management Systems (CMSs) or as part of more sustained research into virtual writing communities, but given the explicit focus of this project on writing center websites and related online tutoring websites, I explored no further on this site, restricting my analysis to the writing center website and the one page it links to that provides an option for students to submit writing projects via email. No synchronous tutoring is offered.
The Writing Studio, Georgia State University (http://www.writingstudio.gsu.edu)

As with my analysis of Colorado State's Writing Center, I began my analysis of the Georgia State Writing Studio by visiting the university’s home page, where I noted the use of the school colors of blue and white (see Figure 5.6).

*Figure 5.6 Georgia State University Home Page*

As can be seen from the screen shot of the Writing Studio’s home page (Figure 5.7), it retains the same color scheme and general layout, though the current iteration of the site uses two columns instead of three. The page is centered within the browser window, and the alignment is strongly left-oriented. The page was designed to feature the most needed elements in the space above the fold, or in the prime real estate of any web page, which is the information displayed when a page first loads into a browser window. As with the
university home page, red is used as a contrasting element, and repetition of headings maintains consistency and keeps elements organized on the home page.

Figure 5.7 The Writing Studio of Georgia State University Home Page
The university publishes a style guide that governs websites as well as other promotional material; the Writing Studio’s ethos is thus bound up in the Georgia State identity. The logo of the Writing Studio and the logo for Online Tutoring are designed in familiar colors that the audience will also recognize as within the university community. The Write/Chat logo is a hyperlinked image; following the link leads one to the Online Tutoring page. The logo Conversations on Writing is a repeat of the Writing Studio’s tag line and not a link leading anywhere. Although the text at the top of the page says, “we offer space for conversation, coffee, and writers by creating a welcoming community where graduate and undergraduate students can practice the art of writing,” following the links (conversation and Read more) makes it clear that this reference to community is to the physical writing space. In itself that is a good thing, of course, but visitors who are, in a sense, visiting from a virtual place and are perhaps in search of a virtual space to converse with other writers will not find that here.

Hyperlinks are the only aspects of hybridity on the site. The hyperlinks take visitors to other pages in the site or to the web-based application used by the Studio for its online appointment management system. For the most part, pages are static. There are icons representing Facebook and Twitter on the home page, and visitors are invited to either “Follow us on Twitter!” or “Friend us on Facebook!” The links lead people to those sites, although the activities there are more social in nature than overtly educational.

Transparency on the site is somewhat uneven. Given the ubiquity of search boxes on Internet websites, the presence of a Google custom search box is an expected feature of the digital environment. The use of a standard navigation bar at the top of the page as well as the use of clear links makes the digital environment somewhat transparent. The dense
alphabetic textuality of the site, though, is a point of resistance, as few student writers take the time to read the text.

While there is no explicit mission statement posted on the site pages, the opening text might be taken to be one. However, if one selects the navigational link “About the Writing Studio,” a list of options opens up. One of the options, Welcome, contains a subheading that reads, “Our Mission.” Based on the conversations with the student participants in the focus group, few visitors take the time to read or explore the site beyond the home page. The only interactivity on the main page is the hyperlinks, which come in the form of standard links and hyperlinked images (Write/Chat logo, and the Twitter and Facebook icons).

The overall guidance offered is ambivalent. Few directives are given, beyond the statement, “Choose one of the options below to schedule an appointment with a Writing Studio tutor.” The page reads as if a conscious effort was made to avoid being directive, but in the absence of invitation to explore or questions that prompt choices, the site becomes a static interface providing information but little more than that.

The page for online tutoring (Figure 5.8) is even more one-dimensional, featuring primarily alphabetic text that informs student writers how to arrange or begin an online tutoring session. At the bottom of the page, below the space of a standard browser window,20 is a link to instructions for first-time users of the online tutoring feature; it leads to a series of screen shots that show writers what to expect when they schedule an online tutoring session. There is no sense of an online community of writers, the lack of which contributed to my initial research questions. While exploration is accepted, it is not invited,

20 Most browser windows now range from 624x480 pixels to 1024x780 pixels, though variances on either side of those dimensions are still quite common. Also, it is worth noting that the iPhone is 480x320 pixels.
as the small font size of the navigation bar at the top of the pages makes it difficult for older eyes to read it.

Figure 5.8 The Writing Studio at Georgia State, Online Tutoring Page
The Writing Center, University of Missouri (https://writery.missouri.edu/)

As with all of the sites I examine in this chapter, each writing center website acts as a place to provide information on the different types of tutoring offered as well as being a portal to other pages connected to the writing center. In the case of the UM Writing Center, its identity has undergone a few changes since its inception as a unit of the university’s Learning Center, which was established in 1976. A year later, the Writing Center became an
official division of the Learning Center, headed by Doug Hunt (Harper 1). In 1994, the Learning Center received enough funding to implement an online writing center, which became known as the Online Writery, as it is still referred to today (Harper 1). Given its length of operation, it is understandable that the Writing Center and the Online Writery have their own identity apart from the home page of the university. The current version of the university home page is shown in Figure 5.9, and it contrasts clearly with the design of the Writing Center website, as seen in Figure 5.11 on page 142. The official school colors are black and gold; the Writery's primary color is blue with touches of white and black.

The University of Missouri Writing Center has a strong conceptual model, that of a compass. This is not the first conceptual model used by the Missouri Writing Center: Lee-Ann Kastman Breuch references the Writery in her 2006 *Writing Center Journal* article on
conceptual models. At that time, the concept, or metaphor, of preference was that of a café ("Ideas of an Online"). She shares an image with readers taken from a screen shot taken sometime in late 2004 or early 2005 (Figure 5.10), indicating a long-standing interest in providing visitors to the site with a conceptual model to relate to. Although this model is no longer seen on the website, the site still uses a concept familiar with most people: the compass. Visitors are greeted with this information:

> At the Writing Center we believe that every piece of writing has its own topography, its own values that the tutor must understand before undertaking to help the writer fix it. As if by using a compass, our tutors orient themselves in a student's work, enabling them to guide writers through successful revisions to reach a product that conveys the writer's own ideas and voice. Make an appointment or visit us online if you want help taking your paper to a new level. ("Missouri Writing Center")

The site still hosts a movie to acquaint visitors with its services, as it did in 2004, but the underlying metaphor is one that invites visitors to the site to find their own way to what they need. The underlying pedagogy here is certainly not directive or dispensatory. This is reminiscent of critical and feminist pedagogies that encourage visitors to use their internal awareness of what they need to find their way, or perhaps to solve for themselves the problem of where they should go and what they should do. As can be seen from the images in Figures 5.11 and 5.12, the website invites student writers to explore the site, and like the Georgia State Writing Studio, does not try to direct students into one path or another. One of the options is for the "Online Writery," and following this link leads to the web page designed for online tutoring (Figure 5.12). At the time of this writing, the online writing center offers only asynchronous tutoring, advising students that "Papers can be submitted by clicking on the link above. One of our trained tutors will read and respond electronically to
each paper as soon as possible with comments and suggestions. The student will receive the
tutor's response by e-mail” (“Online Writery”).
One of the features most appealing about the Missouri Writing Center website is its simplicity. The home page acts more as a portal and less as a collection of elements. Such an interface design puts the responsibility for the path(s) taken onto users of the site and in this way avoids directing them. However, the portal arrangement might also be more time-consuming for students, who may not be familiar with the site or with what the writing center does, thus creating indecision or frustration on the part of such users. One of the observations made by a participant in the student writer focus group was that the more clicks it took to get to a needed destination, the more impatient she became at having to drill down to where she wanted to be.

I personally am drawn to the simplicity of websites like the Missouri Writing Center. However, it is important to note that using a portal, as this site does, may result in students not exploring other resources that are available through or within the writing center website space. For example, students may become so accustomed to going to the “Make an Appointment” link that they fail to realize that there are numerous other resources available to them via the Resources link – resources that would support them in their writing activities. Another consideration is that many students are accustomed to and expect something along the lines of their iPhone apps: During the design process, I discovered that although I personally thought there might be too much going on in the prototype design, the users who gave me feedback on the design did not perceive it that way.
The official colors of Purdue University are gold and black ("Purdue University"); these colors are used in the design of the home page, as Figure 5.13 shows, and avoided in the OWL home page (see Figure 5.14). The OWL at Purdue traces its roots back to 1995, and its consistent use of the Purdue OWL has become a brand well-recognized in its own right. Thus, I was not surprised to find that the home page of the Writing Center differs significantly from the university's home page. The OWL at Purdue home page serves as a portal to at least two other well-known and well-used sites: the OWL Writing Lab and the Online Writing Lab (see Figures 5.15 and 5.16 respectively). With its emphasis on imparting
information, such as posting the schedule of open hours in the most visible location of the web page and directing users to its numerous handouts and reference pages, the site reflects a current-traditional pedagogical approach. Color on the writing center sites becomes a container and a unifying element. Active links at the top of the page (which contain links often found in footers of web pages) feature a matching green link when a mouse hovers over them. Main headings are green, as is the navigational menu on the left of the screen.

The map is an important feature of the Writing Lab site, since face-to-face tutoring is strongly encouraged. There is almost no interactivity on the writing center website itself, although a careful read of the site (in other words, scanning down to the bottom of the page, below the map) leads one to an invitation to visit the Writing Lab’s MySpace page (which was set up in 2007) and which, if one follows the link, reveals much more activity. The OWL at Purdue is more of a resource than a shared communal space – its primary claim
being one of hosting a varied and authoritative collection of resources, including MLA and APA style guides that are often the first link returned when Internet searches are made using relevant key words like “MLA style guide” or “how to cite sources APA”. The page for the Purdue Writing Lab links off of the OWL at Purdue, one of the most famous of academic writing center websites. If asked, many undergraduates often reply that they first learned about the OWL at Purdue while still in high school.

The navigational menu on the left of the writing lab home page (which is the
standard placement in most American-designed web pages) groups links together in close proximity, enclosing them in one area; the links are similar in nature, occupy a common region, and have a straightforward hierarchy that offers viewers directional continuity. The thick green rounded full border (reminiscent of a clipboard or notepad) enclosing the textual content of the webpage offers closure to readers of this visual and verbal text, indicating a completeness of information. While there is no explicit invitation to interactivity beyond the links in the navigational menu, the page does alert users to the existence of the OWL at Purdue in both top and left navigational menus. The CSS style sheet pulls in an image for a page header for all but text-only browsers, and the image is the widely-recognized Writing Lab pencil. The same arrangement is kept for the OWL at Purdue page, with the change in color (from green to gold) and logo (From pencil to owl) being the major differences.

There are few other visual elements that stand out; the contrast is that between the green accents, the white background, and the black typeface. The strong left alignment of the text and the page is balanced by the centering of the page within the browser window and the horizontal lines that segment the page. The alignment harmonizes with a more traditional approach to pedagogy: the current-traditional, product-oriented order that such pedagogy invokes, whether real or imagined.
While branding is certainly evident, it is an internal branding (the OWL goes back at least as far as 1995, perhaps earlier) and not connected to the Purdue home page. Little mention is made of community or interactivity, although, as mentioned earlier, the Writing Lab page links to a MySpace webpage (outdated as of the time of the screen shots taken in September 2010). The “online” tutoring consists of email exchanges, and there is no evidence of community building strategies. The material is heavily textual and directive.

Moving deeper into the second dimension of aesthetic or conceptual features, one finds that interactive technology is minimal; there is a link to a grammar blog, hyperlinks are included in the navigation menu, and there is a brief form for submitting brief questions to OWL email tutors (no synchronous tutoring is available, only email, and that appears to be strictly controlled). Here’s an excerpt from the OWL email page: “Do you have a short
**writing-related question?** Please note that OWL Mail tutors are unable to look at entire papers.” The emphasis is on short, one might even say non-dialogic, interchanges.

The OWL at Purdue is a great example of the usefulness of a current-traditional pedagogy. It says clearly to users, “We are experts; here is the information you need, and remember to come back when you need additional information.” However, the site itself does not support self-learning and exploration. We as a society are moving away from dispensed knowledge and the traditional classroom setting for learning, though many people, including some educators, remain uneasy at the idea that students might actually take control of their own learning. Designing and having an interactive website, one that offers choices and encourages students to explore different paths, may seem (indeed, may very well be) time-consuming, messy, and chaotic. However, these qualities also indicate dynamic, not static, environments, and the pedagogical mission of the Writing Studio at Georgia State is one that seeks to encourage learning through exploration and yes, even play. Thus, including this website in my visual rhetorical analyses was most helpful in assisting me to articulate the need for dynamic, interactive interfaces that avoid directive dispensation of information.
The narratives that accompany my visual rhetorical analyses were not carried out by using a checklist, but at the same time, it was important that I examine each one consistently. I found the following table helpful, and as it summarizes all of the elements I examined, I include it here (Table 5.2).

**Table 5.2: Visual Rhetorical Analysis – Website Design Features**

<table>
<thead>
<tr>
<th>Website Feature Design</th>
<th>Colorado State</th>
<th>Georgia State</th>
<th>Missouri U’s Writery</th>
<th>Purdue OWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Dimension</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color(s)</td>
<td>Institutional</td>
<td>3 colors, school colors</td>
<td>Unique, blue/black</td>
<td>2, subdued</td>
</tr>
<tr>
<td>Images/Icons</td>
<td>No</td>
<td>Yes, logos</td>
<td>Yes</td>
<td>Only the OWL</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Some</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Contrast</td>
<td>Yes</td>
<td>Yes, in headings</td>
<td>Moderate</td>
<td>Yes</td>
</tr>
<tr>
<td>Repetition</td>
<td>Yes</td>
<td>Yes, in headings</td>
<td>Moderate</td>
<td>Yes</td>
</tr>
<tr>
<td>Page Alignment to browser window</td>
<td>Centered</td>
<td>Centered</td>
<td>Center</td>
<td>Center</td>
</tr>
<tr>
<td>Content Alignment</td>
<td>Weak left, 2 sections, main section centered</td>
<td>Strongly left; Twitter, Facebook icons centered</td>
<td>Centered</td>
<td>Left, 2 sections</td>
</tr>
<tr>
<td>Chunking</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Conceptual Dimension</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mission Statement</td>
<td>No</td>
<td>Begins, links to</td>
<td>Yes but not explicit</td>
<td>No</td>
</tr>
<tr>
<td>Interactivity</td>
<td>Only via hyperlinks</td>
<td>Only via hyperlinks</td>
<td>Yes</td>
<td>Only via hyperlinks</td>
</tr>
<tr>
<td>Online Tutoring</td>
<td>Yes, via email</td>
<td>Yes, both</td>
<td>Yes</td>
<td>Email only</td>
</tr>
<tr>
<td>Key Words?</td>
<td>Consultant, writing process</td>
<td>Sessions, Writing, conversations</td>
<td>Writing, guide, revisions, voice, online</td>
<td>Writing, resources</td>
</tr>
<tr>
<td>Directive?</td>
<td>Some; “send a draft”</td>
<td>Combination</td>
<td>Combination</td>
<td>Yes</td>
</tr>
<tr>
<td>Invites Exploration?</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Has a community?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Links to a VWC?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Interactive Features</td>
<td>No</td>
<td>Facebook, Twitter</td>
<td>One video</td>
<td>No</td>
</tr>
<tr>
<td>Target audience</td>
<td>Students</td>
<td>Students, Tutors</td>
<td>Students, Faculty, Staff</td>
<td>Students, anyone</td>
</tr>
<tr>
<td>Multimodal?</td>
<td>No</td>
<td>No</td>
<td>Slightly</td>
<td>No</td>
</tr>
<tr>
<td>Textually Dense?</td>
<td>Not really, minimal</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
The Prototype Design

I wanted the prototype to reflect the visual rhetorical principles and elements that I have explored in this dissertation; I also wanted the site to reflect more explicitly the pedagogical paradigm of the Georgia State Writing Studio: a social constructionist, process-oriented pedagogy. This pedagogy features an open, collaborative approach, one in which the learner is an active participant in the making of knowledge. One way to incorporate this pedagogy into a website is to offer choices to the user and to use questions to assist the user to select the path he or she follows (Figure 5.17), which is what I did with the top-left area, generally held to be that part of a web page that users look at first. In the visual rhetorical analyses that I did, I noticed that most of the websites I examined issued terse, directive

![Figure 5.17 Writing Studio Prototype: Upper Left Section](image-url)
instructions in a manner strongly reminiscent of current-traditional pedagogy: *Click here. Follow this link. Read more here. Listen to our mission statement.* These directives are used partly, I am sure, to economize the valuable space of a web page, partly to compensate for the dominant tendency of most users to scan web pages rather than read them, and partly because there is a tendency among most designers and developers to think of users as clueless wanderers who need guidance. Therefore, much information found on writing center websites is imparted in imperative declarations. However, in the top left area of the prototype, visitors are asked questions to help them select the path they want. This non-directive approach harmonizes well with the Writing Studio’s pedagogy. Before continuing on to other specific elements, I make a brief examination of the top banner area of the website (seen below as Figure 5.18).

![Figure 5.18 Writing Studio Prototype: Top Banner](image)

An aspect of website design that visitors to the page may not fully articulate to themselves is the placement of elements that identify the site as part of a larger institution; this is often referred to as branding. With this prototype, I chose to maintain the strong integration with the Georgia State official CSS style sheet for its web pages.²¹ Thus, the banner that forms the header of the Writing Studio home, or index, page and the area of the footer of the page are controlled by the style sheet and reflect the color scheme and layout

²¹ The style sheet may be viewed at http://www.gsu.edu/main.css.
of the main university pages (Figure 5.18, above), assuring visitors that they remain within the university's domain.

In the prototype, I relied on questions designed to get visitors thinking about the type of session they needed, and offered choices accordingly. Taking advantage of users' tendency to scan in an F pattern (Nielsen, Shneiderman and Plaisant), I placed this chunk of information in the upper left section of the website. Most people, upon arriving at the site, will process these four options before moving on to something else: Physical, or face-to-face (f2f) tutoring, online tutoring, tutoring by email, or participation in the virtual writing community. However, the site is personalized by photos of actual tutors and tutoring activity, which helps to bridge the interface between digital space and physical space.

In order to balance the needs of new and returning visitors, readers of the site should be able to easily access features they are familiar with. Thus, as users scan in the F pattern, they find placed prominently at the top of the page, center, the “Welcome to the Writing Studio!” greeting (see Figure 5.19). Below the greeting, returning student writers are given a link that will take them straight to the online scheduler.

The rhetoric here is subtle—visitors are assumed to be, not incompetent scribblers, but writers who know what they need. By featuring prominently in the top center of the web
page, returning clients who simply want to make an appointment can easily accomplish the
task they need without further exploration of the website.

Taking advantage of the normal scan pattern, both informative and interactive
features show up on the top right of the page. At the utmost top right is the important
information giving location of the Writing Studio and its telephone number (Figure 5.20).
Immediately below that is an embedded YouTube video inviting viewers to take a virtual
tour of the website (Figure 5.21). Below these two items are the well-recognized social
networking icons of Twitter and Facebook (Figure 5.23).

A normal scan will take viewers back to the center left of the page. On the left and
still above the fold, viewers can see the beginning of the interactive chat box that may be
used if visitors have a brief question (Figure 5.22).22 In setting up the interactive chat box, I
wanted to avoid using directive language, hence my use of visual rhetoric to emphasize
“small” in the invitation, “Need a quick answer to a small question? Ask now…” –
hopefully visitors to the page would
understand that this is not a tutor’s chat
window (for a regular tutoring session)
but a place to host a brief exchange on
writing. However, upon reviewing
the comments of the subject matter experts (SMEs), I realized that what might appear
obvious to me was not necessarily as clear to student writers, most of whom do not have

22 For more information on the design and development of the interactive chat box, see Appendix L.
English as a first language. I wanted to keep the visual cue, though, so the final iteration of the prototype says: “Need a quick answer to a small question? Ask here…”

When a visitor scans the center of the page, he or she will find important information for using the website: the hours for both face-to-face and online tutoring, and a hyperlinked image (Figure 5.24) that will take them to the Online Tutoring page. These are elements that most visitors to a page are accustomed to finding, and their purpose is to provide returning visitors easy access to additional information as well as to provide current information about the hours available for tutoring sessions. In response to the feedback from the subject matter experts, I incorporated a small section of Quick Links; this type of feature is one that experienced web consumers look for when visiting a site (Figure 5.25). The type of script selected to perform the Quick Links feature supports screen readers; some scripts, such as those that have auto-complete functions, are unsupportive of assistive technologies for people who have disabilities or challenges that impede their interaction with computer interfaces.
An important aspect of website design, regardless of audience, is to design for accessibility. For this reason, some elements of the prototype are more aural than visual, such as the feature on the bottom right that invites students to listen to Writing Studio podcasts, and the virtual tour that has voiceover in addition to the photos that comprise the current version of the virtual tour. Across from the chat window is a link to an iTunes podcast made by tutors of the Writing Studio that helps students know what to expect when they visit the Studio for a tutoring session (Figure 5.26). Also, keeping the needs of vision-impaired visitors in mind, all images and links make use of the “title” attribute in web design, which causes a text box to show up when a mouse hovers over the link or image. Such text boxes will be read by screen readers, providing important information such visitors might otherwise not get.

One of the aspects important to my design is the inclusion of a link to the virtual writing community. As set up in the prototype, this is a link that leads to a forum where users can post their work, comment on each other’s work, and converse even on non-writing related subjects should they choose to do so. As indicated in some of the examples I mentioned in Chapter Two showed, real community building only happens with regular and sustained commitment from the members of the community. For a writing center to support the conversations that take place in forum settings, an investment of time and energy, primarily from tutors, would be necessary. As Sarah Steiner of the Pullen Library at Georgia State mentioned during an interview, people are excited and impressed upon discovering a “real person” on the other end of a chat screen, whether in the form of the brief chat box or the more lengthy and complex forum that may set up by groups an interests. Thus, I do recommend that this be a moderated board in the sense that someone should check the
forum each day, and the hours the board will be supervised by tutors should be clearly visible. This will require an investment from the Writing Studio staff in the form of tutor involvement and participation in the discussions that may be ongoing in the VWC. This is a decision that each writing center must make on its own, taking into consideration the resources that they have to support such work. I believe that this is not only important, but essential if we want to move writing center work into a position of centrality – to become a virtual gathering place – for student writers.

In the image below (Figure 5.27), all of the previous elements are drawn together to form the writing center website design prototype. This page is based on the template used by the university home page. Text is left-aligned, and white space separates distinct sections. Icons are relevant to the minimal text that introduces each choice. At least 80% of the page displays in a small browser window, and both new and experienced writers are welcomed. The use of interactive features increases the transparency for many student writers, and the chat window provides a link to a real person. When the chat is offline, visitors have the option of emailing a question that will be answered once the tutors are signed back on and monitoring its activity. As mentioned during my review of each of the elements, each design decision was made by considering factors of pedagogy, audience needs, and accessibility in addition to the standard design principles of website design. The placement of icons and images imparts a less textual and more visual feel to the page, while the arrangement of the sections supports the standard F scan pattern most people use when first encountering a webpage.
Although this might seem to be stating the obvious, designing a writing center website is an exercise in finding balance: balance between users who simply want to accomplish a task and users who are genuinely interested in advancing their writing and learning from other writers or who may be interested in conversing about their writing using the format of an online forum. Thus, investing the time to design interactive and pedagogically sound elements for a writing center website requires designers to be aware of...
the diversity of those who will use the site. Student writers who only want access to a tutoring session, whether online or in person, need to be able to quickly locate the links that take them to the online scheduler, and if necessary, also find important information like location, hours, and in the case of online tutoring, instructions for having a successful tutoring session.

**Lessons Learned from the Prototype Design**

In considering the contributions of the visual rhetorical analyses, I found them helpful on several levels. It is instructive to consider the wide range of options for writing center website design, and researching the various ways the sites introduce online tutoring sessions is most helpful. One feature that surprised me was the difficulty in finding writing center websites that offer synchronous online tutoring sessions. Of course there are writing centers that incorporate online synchronous writing sessions (a noteworthy example is the site at Texas State University San Marcos); it is interesting, though, that a Google search using the term “writing center online tutoring chat session” returns for-profit tutoring sites in the top two positions in the paid ads slot. The next slot, the first unpaid one, returns the TSU San Marcos website, and I was surprised (and gratified) to find the Writing Studio at Georgia State was the fourth-listed return (see Appendix M for the screen shot).

My research convinces me that writing center scholarship needs to include more research and conversation about writing center website design. I initially was interested in only the aspect of virtual writing communities and online synchronous tutoring. Yet, the successful integration of such features depends largely on the design of the website as well as on the resources available to support ongoing virtual activities. As I continued my research, I realized that writing center website design is an aspect of writing center work
that is underdeveloped. I wonder what would happen if the International Writing Center Association began awarding recognition to the most innovative, or most pedagogically sound, writing center website each month? As someone who combines technical communication with writing center studies, I think such publicity would go far to raise awareness of the importance of writing center website design. A good model to follow is the Web Site of the Month award given by The Association of College and Research Libraries (ACRL), a division of the American Library Association. Each month, the association selects a college library website that represents “unique and usable designs;” the site becomes part of an archive of website award winners dating back to January 2005. The writing center community would do well to emulate that practice.

When I began this dissertation, I sought for previously articulated guides for writing center website design but found none. I did find some good advice and concrete suggestions from a few sources, but what led me to consider library website design was based on several factors: the interdisciplinary nature of writing center work encouraged me to look for guidance in places other than humanities-oriented websites. Also, in most institutions, the library and the writing center work together, as both have the common goal of assisting students in their assignments. Libraries support research, and writing centers support writing; most assignments combine the two endeavors. They also have audiences in common, as both libraries and writing centers in general offer their services to the university community at large; they have potentially the entire university as their universe of users.

The set of guidelines posted on the aforementioned ACRL are:

1. Ease of access -- timely connection with a relatively quick load of graphics
2. Content -- useful and relevant, containing breadth and depth, and characterized by accuracy
3. Currency -- an indication of the last update of the site
4. Design -- an eye-catching and appealing overall look, effective use of graphics related to a page's theme, and consistent layout
5. Navigation -- features such as a link back to the home page, site search capability, and site layout. (“College Library”)

To the preceding guidelines, I add an awareness of the underlying conceptual model, an integration of sound pedagogical principles, and options for flexibility of communication. The purposeful integration of interactive digital technologies supports these essential elements. All of these guidelines taken together guided the design and development of the prototype design I present above; I strongly believe the inclusion of these elements must be part of a successful prototype design for writing center websites (see Figure 5.27).
CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

In this dissertation, I have explored the ways in which human-computer interfaces (HCIs) of writing center websites may evolve along with interactive digital technologies to become sites of activity, becoming virtual spaces that are virtual places of active learning. By recognizing that all websites are imbued to some degree with ideological influences, by considering the pedagogical effect of the elements placed within the HCI of writing center websites, and by integrating the principles underlying the third paradigm of HCI design (dynamic and flexible interfaces that support aesthetic activities), I designed an interactive writing center website that invites students to enter the virtual space and become part of an active learning community (Harrison, Sengers, Tatar).

In this final chapter, I answer the research questions that I raised in the first chapter, bringing together the various strands of my findings from the methods of inquiry I introduced in Chapter Three and reported on in Chapters Four and Five by means of surveys, focus groups, subject-matter experts, and the visual rhetorical analyses of four well-known websites. After responding to the research questions and noting the implications of this research to the fields of visual rhetoric and writing center studies, I discuss the limitations of this study, examining the specific challenges that arose as my research unfolded. The limitations, though, reveal opportunities for further research, as does the case study. Thus, I end this chapter by presenting opportunities for further research and study.

Addressing the Research Questions

I began this project by contrasting the current website of the Georgia State Writing Studio with the prototype that I developed in response to my use of a visual rhetorical analysis combined with a pedagogical analysis of the website. In order to ensure that I
looked at the needed components of a case study, I articulated certain specific questions that shaped the design process of the Writing Studio website prototype and directed my research; I discuss these questions in the following sections.

**Visual Rhetorical Analyses**

A question that began this project was, “Of what benefit is it to conduct visual rhetorical analyses of writing center websites? How will a visual rhetorical approach improve the design of such sites and add benefits to users?” As the analyses that I discussed in Chapter Five show, my first attempt at such an analysis focused on what might well be described as surface features. Such surface features are based on an analysis of well-accepted web design characteristics as typeface, placement and use of images and logos, and color; surface features were also examined as to alignment, contrast, repetition, and proximity. Additionally, I gave attention to the gestalt features (in which the whole is of more interest than the individual elements) that function as visual language syntax: proximity, similarity, common region, connectedness, directional continuity, and closure (Horn, Say). An unexpected result was the realization that examining these features is beneficial only if we are thinking of web pages as static, flat interfaces that serve as boundaries or clear demarcations between user and machine. Such an analysis fails to reveal the more complex nuances of virtual spaces as places of potential and dynamic, ongoing activity. Thus, I added in additional layers of analysis, taking as a starting point Kumpf’s concept of metavisual discourse, and then explicating more abstract features like degree of interactivity, audience stance, degree of transparency, and hybridity (Hocks). (I discuss the pedagogical analysis in a subsequent section, following.) Engaging in visual rhetorical analyses that go beyond surface features prompted me to think through the design of the interactive features
that I wanted to incorporate into the prototype interface. For example, when embedding the chat feature in the virtual space, I had to achieve a balance between the needs of users to have a transparent interface while at the same time maintaining and promoting active learning pedagogical elements, including the collaborative online tutoring page(s). Through the analyses that I carried out on the four writing center websites well-known among the writing center community, it became clear that adding in the more abstract characteristics of visual rhetoric and pedagogy to the design process enriched the design of the prototype that I submit as part of this dissertation. (The final prototype design is presented as Figure 6.1.)

Figure 6.1 Prototype of Georgia State Writing Studio Website Design
My second question asked, “How do users react to the interfaces of writing center websites? Must interface design be constrained for “transparency”? When is transparency a positive aspect of interface design? When is it a negative aspect?” As the responses of the student writers showed, the primary concern of student writers is to get the help they need in advancing their individual writing projects. For them, the more transparent a web page is, the easier it is for them to interact with the features of the site, using it productively. However, my research emphasizes that designers of academic websites must realize that for most of those considered as part of the Net Generation, the book and elements of its form are no longer the baseline for establishing transparency. For students who have grown up as members of a digital culture, networked interaction is a part of their everyday life, and the more interfaces resemble the cell phone apps, iPod apps, and networked applications (including cloud computing) they use daily, the more transparent the interface becomes to them, and they are now the primary users we design writing center websites for. Thus, the prototype incorporates the familiar interactive elements of a chat window, a YouTube virtual tour of the writing studio space, a link for listening to podcasts, and the familiar icons of Twitter and Facebook – all without academic jargon. Additionally, the website invites students to explore the virtual space beyond the interface by linking to a forum for writers: a place where student writers can post their writing and discuss it with others who have similar interests.

Transparency for student users is a benefit: it eases their path through the structure and hyperlinks of the website. For first-time visitors to the site, or first-time users of online tutoring, the transparency of the website supports their navigation of the site as they make appointments and work with tutors online. What complicates matters is that, at this point in
time, transparency for some (especially for those who are of the pre-digital generation and who learned to read B.C., before computers) is a lack of transparency for others (like most current students). Additionally, the ubiquity of the human-computer interface, the World Wide Web, and the Internet has influenced transparency for the Net Generation: now, the more a website looks and feels like a book or library, the less transparent it is for those born digital, while the more it resembles a set of mobile phone apps, the more transparent it is.

Benefits and Limitations of Metaphors and Conceptual Models

In my third question, I examined this question: “If the metaphors that currently shape the human-computer interface are obsolete, as Eble argues, how do we select ones that not only represent the teaching and learning taking place today, but that respect and accommodate people from diverse cultures and backgrounds?” Although this question did not garner much interest from the student writers group, it did generate quite a bit of discussion among the tutors group. The tutors shared a common appreciation of being able to express the work they did in metaphorical language. The metaphors ranged from conversation and coffee, to a café, to a womb, and to a mothership. Given the important work that the tutors do, and the misconceptions they often encounter when talking with people who don’t really know what tutors do, metaphors bridge the cognitive gap and help listeners and those unfamiliar with writing center practice to connect to the work done in both the face-to-face and the virtual space of the writing center. It’s noteworthy, though, that not one of the tutors thought of an office, or a desktop, and any other facet of contemporary computer GUIs: in fact, one tutor liked the way the studio metaphor set aside the institutional connection of the writing studio.
The question I asked, though, was not *what*, but *how*. How do we come up with metaphors that represent us without duplicating existing hegemonic structures? I believe that the metaphors the tutors offered in response to my question are actually manifestations of conceptual models rather than metaphors in the strictest sense, which is why the studio concept works so well for the Georgia State tutoring spaces. The concept of the Studio – a place that welcomes conversation, experimentation, performance (when appropriate), and the exchange of ideas – all of these concepts are fostered by expanding the static idea of metaphor into the expanded notion of a conceptual model. And the models that the tutors discussed are venues that open up spaces for people from diverse cultures and backgrounds and accommodate their diversity in learning as well as culture and background.

Student writers, though, draw on conceptual models that come from their current habits of communication. For example, conceptual models that work for some (such as a library or a traditional desktop) are unfamiliar to members of the Net Generation, for whom a conceptual model might very well be the latest in mobile applications as seen in a mobile phone interface. Another popular conceptual model for this generation is the social networking site. These evolutions in social patterns influenced the design of the prototype.

**Fostering the Conversational Model**

Finally, I asked, “Is it possible to apply a conversational model to an interface for online tutoring, and if yes, what pedagogy should inform such a model?” This became an important question as I connected pedagogy theory and practice to writing center website design. In one respect, recent advances in computer and Internet technologies made my work in designing for conversation easier. Collaboration has become a normal mode of operation, and employers seek out people who have experience with collaborative learning
and working experiences. Thus, in order to foster a more conversational feel to the writing studio’s website, I selected elements that opened up a virtual space and place for exchanging conversation, such as the integrated chat window that handles brief questions from visitors and the writer’s forum that serves to introduce the virtual writing community. As one of the tutors noted in a survey response, past tutoring sessions have included land-line phones, cell phones, texting, and instant messaging in addition to the more (now traditional) chat interface. Recognizing that all of the foregoing features support conversation makes it possible to resituate some of those technologies into writing center website design, thus making it possible to develop an online tutoring model that follows the conversational model of asking questions, reading aloud, answering questions, brainstorming, and the like.

The answer is not quite so simple when it comes to selecting a pedagogical model. Several considerations come into play here. As the visual rhetorical analyses showed, writing center websites are generally (though of course there are exceptions) a combination of pedagogical approaches and do not have one monolithic pedagogy that dominates the design of the site. Actually, this mirrors most teaching pedagogy; seldom does a teacher use only one pedagogy, but selects approaches based on the needs of the students. In a related observation, most writing centers themselves reflect no one specific pedagogy, but a combination of pedagogies, so it makes sense that the websites that represent their work would also demonstrate a blend of pedagogies. And, finally, associating pedagogy with writing center website design is, quite frankly, something I have seldom found mentioned in other scholarly literature, thus it is safe to say that this is not currently a visible aspect of writing center website design. I argue, though, that it should be. We recognize that most writing centers manifest a certain pedagogical paradigm, and care and attention should be
given to the design of the virtual interfaces that represent and re-present writing center websites to their academic and public communities of users.

My case study revealed that the most beneficial way to incorporate pedagogical awareness into the website design was to consider the pedagogical implications of each element as it was designed. I began by adding in a final layer to my visual rhetorical analysis of certain writing center websites: the pedagogical outcomes specific aspects of writing center websites supported – such as the current-traditional feature of many writing center websites in providing directive attention to handouts that seek to dispense, or deposit, knowledge to a user, or that seek to implement a one-direction flow of information (with website as authority and user as a passive recipient). Thus, many Resources pages feature primarily elements that could be said to be current-traditional in approach: handouts, podcasts to listen to, links to the OWL at Purdue and other writing centers, a list of the Top Twenty grammar mistakes, and we could continue on.

The recognition that a certain feature, such as a handouts section, is a manifestation of current-traditional pedagogy does not necessarily mean that the entire website is current-traditional; what is important, however, is to understand which types of elements or characteristics support specific types of pedagogy. For example, a link on the Resources page that takes student writers to the popular Wordle website is a move that invites experimentation and constructive playfulness from the student: a feature of more open pedagogies like feminist pedagogy or active learning pedagogy. On a “Learning by Doing” tab, presenting students with a problem and asking them to solve it and then providing them an opportunity to compare their answers to answers provided by more experienced writers is an example of using critical pedagogy’s problem-solving approach. And inviting students to
become part of a collaborative virtual writing community where learning is shared by both experienced and inexperienced writers is more indicative of a social-constructionist approach to pedagogy. None of these pedagogical approaches necessarily excludes the other: each has a place in the design of an effective and interactive writing center website.

Limitations of the Study

The limitations of this study, revealed as the project developed and deepened, are, in my opinion, several. One aspect of the limitations is a result of the challenge of conducting this specific research off campus and from a distance. The project as originally conceived was to have been carried out on the Georgia State campus whilst I was living near Atlanta. Moving to another state, while rewarding in a professional sense, complicated the way in which, for example, the focus groups were structured. While I was pleased by the size of the focus group for tutors, the smaller size and general disinclination to participate of the student writers group was disappointing.

At the same time, the wide variety of designs for writing center websites, though I had speculated that such would exist, is nonetheless daunting in the real lived experience. I return to this in my discussion for further research opportunities, for taking the time to do an analysis of hundreds of websites instead of just a few would yield some rich and revealing connections between writing center websites, pedagogy, and the development of virtual writing communities. As I worked my way through this project, I became convinced that conducting usability tests in the search for the universal user that would make it possible to offer pedagogically sound and consistent development and design strategies was impractical and perhaps an impediment to developing a strong and interactive writing center website. Thus, I did not conduct any usability test, but instead advocate the inclusion of
website questions in all of the follow-up surveys and questionnaires used in writing center tutoring sessions – most especially those sent to student writers who have chosen an online tutoring solution. A second limitation to the acknowledged idiosyncratic nature of writing centers is just that: it would take resources and time beyond the scope of this dissertation to compile quantitative data for comparative analysis of the visual and pedagogical rhetorical aspects of writing center websites.

A potential limitation comes from the lack of scholarly (or frankly, any other type of) research on either the pedagogical implications of writing center website design or the study of the visual rhetoric of writing center websites. Given the body of work that has been devoted to the design of writing center physical spaces, I found the lack of attention given to writing center website design somewhat daunting, to say the least. While I am pleased to be able to contribute to this important aspect of academic website design, it would have been most beneficial to have been able to compare my work to others carried out for similar purposes.

**Recommendations and Implications for Writing Center Studies**

My research reinforces the voices of scholars who call for sustained attention to planning for online writing tutoring sessions and thus, by extension, call for careful attention to writing center website design. When it comes to planning for online tutoring sessions, obtaining adequate input from various stakeholders and potential users is of the utmost importance. In *Wiring the Writing Center*, Stuart Blythe provides four different types of research models to choose from, varying from simple to complex, noting somewhat wryly that even though the optimum situation would provide sufficient time for robust usability research, what often happens is that writing center directors get notice of available money
and resources that usually have a deadline attached to them. However, even in a short period of time, it is possible to pull together a focus group of students and tutors, and have them, at the very least, talk their way through some mock sessions, perhaps even using computers and replicating the planned structure. Although Blythe discusses surveys, questionnaires, and other tools for usability research, I favor the focus group. Yes, they can be “messy,” as Blythe points out when describing the first focus group he set up, but they can yield important insights into the particular needs of the institutional setting in which online tutoring will occur (106-10). The major implication of my research is the value of allotting time for planning the design of writing center websites in addition to planning for the virtual space of the online writing tutoring sessions themselves.

The steps leading up to the successful design and implementation of a writing center website should be the same for both existing and new sites. Planning should begin with the use of surveys and/or questionnaires, in order to establish a baseline demographic of users and in order to gather information not only about the ways in which the community plan to use the site, but also to gather information about the perceptions and expectations of the community for the website. These basic first steps are essential to developing a website that considers the universe of users and not a universal user.

Following the basic planning stages, or even as part of those stages, developing personas and their narratives is an excellent way to keep the needs of users in mind throughout the design process. Folding in the feedback from subject matter experts and continuing to gather needs through the use of focus groups and interviews should also be essential parts of the writing center website design process. And once the design progresses
beyond the prototype stage, usability tests should be held to observe the ease with which required tasks are completed.

Another important early step is to consider how much the writing center website wants to reflect the institutional brand. This consideration takes into account both current website design of the university home page as well as any history the site might have. For example, the Purdue OWL has retained its look over an extended period of time. As the university's main page has changed, the OWL has not. It remains the same, so that visitors who used the site in November of 2005 feel as comfortable and at home using the site in November of 2010. This is decision that must be made within each writing center’s idiosyncratic environment, but it should be made early, as it affects subsequent design.

Following the surveys and decisions about branding, focus groups are a logical next step. They can be difficult to manage, at times, and given our societal trend toward constant movement, it can be challenging to assemble people together in one place and time. While the model of online focus group I chose turned out to be less than ideal for what I wanted to accomplish, the existence of virtual meeting places (like Wimba or Elluminate) and online group chat sessions (such as are possible with Microsoft’s Live Messenger) make it possible to arrange a virtual meeting in real time: this is the venue I plan to use in my future research, and I recommend it as a viable alternative to physical focus groups, which are great if they can be arranged. However, the expectations for the two groups should remain distinct: the responses I got from the tutor focus group were very different from the student writers. Keeping these groups separate and distinct in nature assists in designing a website that meets the needs of both groups.
When it comes to the selection of the components and elements of the website, the conversational model, ease of collaboration, and expectation of interactivity on the part of users should be kept in mind. These features support a process-oriented, constructionist pedagogy, and wherever possible these elements should be incorporated into the design of the website. As noted in the section addressing pedagogy in writing center website design, by giving careful consideration to each element of a page, be it a hyperlink or a chat window, the pedagogical mission of the writing center can be supported in the website design. Care should also be given to the visual, surface aspects of the site: if color choice is an option (if following an institutional template, this may not be possible) are the colors used properly and with an understanding of how they may be interpreted? In reality, this question should be asked of all visual elements on the page. Are design principles like alignment, ease of navigation, proximity, and so on used effectively? Given the importance of the writing center website, I recommend that, if at all possible, designers come from the fields of technical communication, visual rhetoric, or digital rhetoric. These fields contribute to our understanding of human-computer interface design and designing for interactivity.

A final recommendation is that follow-up surveys sent to student writers include questions about how they perceive and use the writing center website. If online tutoring is part of the work of the writing center, questions pertaining to online tutoring are of great value. Occasional investment should be made in sending out institution-wide surveys, asking the community for feedback on the current site and perhaps about any desired changes. Tutors should be regularly surveyed in order to retain their investment in the website and to ensure that they also feel connected to the virtual space. Keeping these lines of
communication open will greatly assist the development person or team as they seek to design useful sites that harmonize with the pedagogical mission of the writing center.

**Directions for Further Research**

In future research, I plan to implement two strategies to garner a more representative sample: offering a small incentive to respondents and drawing from a larger pool of the student population should expand the student base that participates in surveys. Additionally, I advocate that the inclusion of questions about writing center websites and online tutoring become routine parts of the surveys we ask student writers to complete at the end of tutoring sessions.

The opportunities for further research in the area of writing center website design are numerous. For those interested in history of writing centers, several sites that I reviewed have a history of their online writing tutoring programs. Integral to those programs are the writing center websites that accompany the design and implementation of online tutoring programs. A study of such archival material would yield a rich tapestry revealing the complex and dynamic nature of writing center work; I believe such studies would also reveal and tease out some of the rhetoric associated with writing centers as well as foregrounding the rhetorical choices made as the sites evolve along with the physical spaces they are connected to. A great research tool exists in the form of the Wayback Machine (available at waybackmachine.org), which is an archive of “snapshots” of World Wide Web sites at various points in time. It would be illuminating to trace out the development and evolution of writing center websites over the years, seeing, for example, how they change as technology changes. Other research might take the heuristic chart that I made here and undertake a study of not just a few websites but hundreds, thus looking quantitatively at
either the design of writing center websites or the type of online tutoring offered, yielding
data that will be valuable for writing centers as they work to develop or refine their own
websites.

Another opportunity, and one that I spent little time on in this dissertation, is to
explore ways in which asynchronous tutoring, such as email and papers posted to a content
management system like Blackboard, could incorporate aspects of the conversational model
that I connect to synchronous sessions. Of the websites I visited, almost all of them offered
tutoring by email, and given the ease of synchronous exchanges now available, I believe it
would be rewarding to tease out some of the theories and practices that make this method
of tutoring still highly popular.

Our institutional context affects the latitude of how and by what means we will
implement online tutoring; it also has a direct bearing on the design of writing center
websites. Although it is tempting to include technical specifications as part of this
discussion, most often writing center administrators have little to no control over the
technology that is purchased. The most important feature, and one which should remain the
same whether sessions take place in online or face-to-face (f2f) sessions, is that writing
tutorials be conversational and dialogic, use questions to help the writer remain firmly in
control of the text, and recognize when writers need encouragement to come in to have a
f2f session. Just as f2f sessions may not suit all writers and the particular needs they have,
online sessions will not suit all writers or be able to fulfill various needs they may have. A
successful implementation will recognize that cyberspace is a separate place, and thus will
certainly have unique characteristics that set it apart from f2f tutoring. In both venues,
though, the student writer remains central to the mission and goals of the writing center.
The information gathered from this research project is richly complex: writing center websites are as unique as their institutional settings. However, just as practitioners of teaching benefit from the knowledge, understanding, and application of pedagogy in their work, and just as the knowledge, understanding, and application of visual rhetoric facilitates increased awareness of the power of imagery and the interplay of text and image, so too does our knowledge, understanding and awareness of both of these fields—visual rhetoric and pedagogy—enrich the design and implementation of writing center websites. If readers of this work take this one concept with them from their reading of it, then this project has been of value and successful. More than that, it opens up rich vistas yet to be explored, as activity continues apace within the interface.
WORKS CITED


Bell, Lisa Eastmond. “Preserving the Rhetorical Nature of Tutoring When Going Online.” Murphy and Stay 351-358.


Murphy, Christina. “On Not “Bowling Alone” in the Writing Center, or Why Peer Tutoring is an Essential Community for Writers and for Higher Education.” Murphy and Stay 271-279.

---. “The Writing Center and Social Constructionist Theory.” Barnett and Blumner 110-123.


Reyes, Joel. “15 Quality Web-Based Applications to Create Mock-Ups and Wireframes.” *Spyrestudios*. Web. 05 July 2010.


Steiner, Sarah. Personal correspondence. 29 Oct. 2010. E-mail.


APPENDIX A: TUTORS SURVEY/FOCUS GROUP CONSENT FORM

Georgia State University
Department of English

Informed Consent: Focus Group A, Tutors

Title: Within the Interface: Tutoring and Conversing within a Virtual Writing Community

Principal Investigator: Mary Hocks
Alice Myatt

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to record and analyze the design and development of an interactive interface that acts as a point of contact for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio. Part of the design and development relies on the opinions and feedback about The Writing Studio’s current website; such opinions and feedback will be generated by means of an online focus group.

You are invited to participate because you are or have been an administrator or tutor of a writing center at Georgia State University.

A total of 6 to 8 participants will be recruited for a virtual focus group. Guidelines developed for successful focus groups indicate that the number of participants should be between 6 (six) and 12 (twelve). In order to meet the minimum requirement, at least 24 (twenty-four) individuals will receive invitations.

Because many of the people receiving this invitation face geographic or time constraints, the focus groups will take place online via the Internet. You will be asked to join a listserv specifically designed for this research, and you will be asked to provide a user name and password. The user name you select should not be your personal name; in this way, the confidentiality of your comments and participation will be preserved.

Participants of the virtual focus groups may also be asked to return near the end of this study for a follow-up virtual focus group session to discuss the interactive interface designed and developed following the first focus group. However, your participation in this virtual focus group does not obligate you to participate in any follow-up online focus group sessions that may be held. Your participation is voluntary and you may decide not to participate at any time during the research.

Participation will require approximately 2 (two) to 4 (four) hours of your time over a two-week period between August 15 and October 15, 2010. It will not be necessary for
you to be online at the same time as all other participants of the virtual focus group, although a schedule of online meeting times will be provided to you. Participation is voluntary, but the input you provide will be a significant contribution to the development of user-centered writing center website design and development.

II. **Procedures:**

If you decide to participate in the virtual focus group, you will participate in a virtual (online) focus study: the research begins with a focus study having the goal of identifying the features that make a writing center website user-centered from administrator and tutor points of view, and which promotes conversational exchanges on writing. If you participate in this research, you may be invited to participate in additional research opportunities, and at that time, you will be provided with forms of consent for any future research participation. This consent form applies only to this survey and the online focus group that will be active for a two-week period between August 15 and October 15, 2010.

In order to ensure accurate reporting of the online focus session, session transcripts will be saved. The session transcripts will be kept in digital format for an indefinite period of time, as the discussion results will become part of Alice Myatt’s dissertation.

During the course of the study, participants will be asked to interact with the researcher, Alice Myatt, and with other members of the focus group. The focus group will meet in an online listserv space that will be set up and maintained by the researcher, Alice Myatt.

III. **Risks:**

In this study, you will not have any more risks than you would in a normal day of life.

IV. **Benefits:**

Participation in this study may not benefit you personally. Overall, we hope to gain information about the design, development, and implementation of an interactive interface that acts as a contact point for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio, and your participation will assist in the selection of which technology is the most suitable for a virtual writing community and will contribute significantly to the design of the Writing Studio human-computer interface. This research will contribute significantly to the body of research for writing center studies.
V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to complete this survey or be in the online focus group study. If you decide to be in the study and then change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

I. Confidentiality:

We will keep your records private to the extent allowed by law. Dr. Mary Hocks, director of this research, and Alice Myatt, the primary student researcher, will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board and/or the Office for Human Research Protection (OHRP). We will use your self-provided listserv user name rather than your name on study records. The information you provide will be stored on a password- and firewall-protected computer belonging to Alice Myatt. Your name and other facts that might point to you will not appear when we present this study or publish its results unless you specifically grant us such permission by giving us your signed authorization. The findings will be summarized and reported in group form. You will not be identified personally.

Because of the open and informal nature of focus groups, there is limited confidentiality for this study. No guarantees of confidentiality can be other than the ones made by the researcher, noted above.

This research project includes opportunities for you to participate in later phases of this study. If you wish to receive an invitation for future participation opportunities, select CONTACT ME at the end of this form, and your e-mail address will be saved in a file that will reside on the password- and firewall-protected computer belonging to Alice Myatt.

 VII. Contact Persons:

Contact Dr. Mary Hocks at mhocks@gsu.edu or Alice Myatt at 662-436-7682 / amyatt1@gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

If you send a request to Alice Myatt at amyatt1@gsu.edu, we will e-mail you a copy of this consent form to keep. Please note: if you wish to return a signed copy of this form, please print out, sign, and mail this form back to Alice Myatt, PO Box 3463, University, MS 38677.
If you are willing to volunteer for this research and participate in an online focus group from which session transcripts will be taken, please select YES from the box below. If you do not wish to volunteer for this online focus group, you may either select NO from the box below or select the SUBMIT icon at the bottom of this page. NOTE: If you wish to be contacted for later phases of the study, please select CONTACT ME from the boxes listed below.

_____________________________________________  __________________
Participant                                                                 Date

_____________________________________________  __________________
Principal Investigator or Researcher Obtaining Consent  Date

☐ YES, I would like to participate in this online focus group.
☐ NO, I do not wish to participate in this online focus group.
☐ CONTACT ME FOR FUTURE PARTICIPATION OPPORTUNITIES
Title: **Within the Interface: Tutoring and Conversing within a Virtual Writing Community**

Principal Investigator: Mary Hocks  
Alice Myatt

I. **Purpose:**

You are invited to participate in a survey about the Georgia State writing center as part of my research study. The purpose of the study is to record and analyze the design and development of an interactive interface that acts as a point of contact for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio. Part of the design and development relies on the opinions and feedback about The Writing Studio's current website; such opinions and feedback will be generated by means of an online focus group.

You are invited to participate because you are or have been an administrator or tutor of a writing center at Georgia State University.

A total of 6 to 8 participants will be recruited for a virtual focus group. Guidelines developed for successful focus groups indicate that the number of participants should be between 6 (six) and 12 (twelve). In order to meet the minimum requirement, at least 24 (twenty-four) individuals will receive invitations. In order to identify people who would like to participate in this study, we are asking you to complete a brief survey.

Your participation is voluntary and you may decide not to participate at any time during the research. If you elect to complete this survey, you will have the opportunity to submit your e-mail address in order that we may contact you regarding the virtual focus group, and we will also use your e-mail address in order to send you information about the virtual focus group and how to join the group.

This brief survey will take approximately 10 minutes or less of your time. Participation is voluntary, but the input you provide will be a significant contribution to the development of user-centered writing center website design and development.

II. **Procedures:**

If you decide to respond to this online survey request, you may be invited to participate in additional research opportunities, and at that time, you will be
provided with forms of consent for any future research participation. This consent form applies only to this survey, which will be open for responses between August 15, 2010 and September 1, 2010, or for a period of at least two weeks from the date that appears on the e-mail message we sent you.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may not benefit you personally. Overall, we hope to gain information about the design, development, and implementation of an interactive interface that acts as a contact point for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio, and your participation will assist in the selection of which technology is the most suitable for a virtual writing community and will contribute significantly to the design of the Writing Studio human-computer interface. This research will contribute significantly to the body of research for writing center studies.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to complete this survey. If you decide to be in the study and then change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

I. Confidentiality:

We will keep your records private to the extent allowed by law. Dr. Mary Hocks, director of this research, and Alice Myatt, the primary student researcher, will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board and/or the Office for Human Research Protection (OHRP). The information you provide will be stored on a password- and firewall-protected computer belonging to Alice Myatt. Your name and other facts that might point to you will not appear when we present this study or publish its results unless you specifically grant us such permission by giving us your signed authorization. The findings will be summarized and reported in group form. You will not be identified personally.

This research project includes opportunities for you to participate in later phases of this study. If you wish to receive an invitation for future participation opportunities, select CONTACT ME at the end of the survey (including your e-mail address), and your e-mail
address will be saved in a file that will reside on the password- and firewall-protected computer belonging to Alice Myatt.

VII. Contact Persons:

Contact Dr. Mary Hocks at mhocks@gsu.edu or Alice Myatt at 662-436-7682 / amyatt1@gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

If you send a request to Alice Myatt at amyatt1@gsu.edu, we will e-mail you a copy of this consent form to keep. *Please note: if you wish to return a signed copy of this form, please print out, sign, and mail this form back to Alice Myatt, PO Box 3463, University, MS 38677.*

If you are willing to volunteer for this research and participate in this survey, please use the link provided in this message to access the online survey. Your continuing on to the survey indicates that you have read and agreed to the conditions specified in this consent form.

______________________________________________ ___________________
Participant Date

______________________________________ _______________
Principal Investigator or Researcher Obtaining Consent Date
APPENDIX B: STUDENT WRITERS SURVEY/FOCUS GROUP CONSENT FORM

Georgia State University
Department of English

Informed Consent: Focus Group B, Students

Title: Within the Interface: Tutoring and Conversing within a Virtual Writing Community

Principal Investigator: Mary Hocks
Alice Myatt

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to record and analyze the design and development of an interactive interface that acts as a point of contact for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio. Part of the design and development relies on the opinions and feedback about The Writing Studio’s current website; such opinions and feedback will be generated by means of an online focus group.

You are invited to participate because you are or have been student who has made used the writing center at Georgia State University, known as The Writing Studio, multiple times over the past year(s).

A total of 10 to 12 participants will be recruited for this virtual focus group. Guidelines developed for successful focus groups indicate that the number of participants should be between 6 (six) and 12 (twelve). In order to meet the minimum requirement, up to 48 (forty-eight) individuals will receive invitations, or as many people as respond to this survey.

Because many of the people receiving this invitation face geographic or time constraints, the focus groups will take place online via the Internet. You will be asked to join a listserv specifically designed for this research, and you will be asked to provide a user name and password. The user name you select should not be your personal name; in this way, the confidentiality of your comments and participation will be preserved.

Participants of the virtual focus groups may also be asked to return near the end of this study for a follow-up virtual focus group session to discuss the interactive interface designed and developed following the first focus group. However, your participation in this virtual focus group does not obligate you to participate in any follow-up online focus group sessions that may be held. Your participation is voluntary and you may decide not to participate at any time during the research.
Participation will require approximately 2 (two) hours of your time over a two-week period between August 15 and October 15, 2010. It will not be necessary for you to be online at the same time as all other participants of the virtual focus group, although a schedule of online meeting times will be provided to you. Participation is voluntary, but the input you provide will be a significant contribution to the development of user-centered writing center website design and development.

II. Procedures:

If you decide to participate in the virtual focus group, you will participate in a virtual (online) focus study: the research begins with a focus study having the goal of identifying the features that make a writing center website user-centered from administrator and tutor points of view, and which promotes conversational exchanges on writing. If you participate in this research, you may be invited to participate in additional research opportunities, and at that time, you will be provided with forms of consent for any future research participation. This consent form applies only to this survey and the online focus group that will be active for a two-week period between August 15 and October 15, 2010.

In order to ensure accurate reporting of the online focus session, session transcripts will be saved. The session transcripts will be kept in digital format for an indefinite period of time, as the discussion results will become part of Alice Myatt’s dissertation.

During the course of the study, participants will be asked to interact with the researcher, Alice Myatt, and with other members of the focus group. The focus group will meet in an online listserv space that will be set up and maintained by the researcher, Alice Myatt.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may not benefit you personally. Overall, we hope to gain information about the design, development, and implementation of an interactive interface that acts as a contact point for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio, and your participation will assist in the selection of which technology is the most suitable for a virtual writing community and will contribute significantly to the design of the Writing Studio human-computer interface. This research will contribute significantly to the body of research for writing center studies.
V. **Voluntary Participation and Withdrawal:**

Participation in research is voluntary. You do not have to complete this survey or be in the online focus group study. If you decide to be in the study and then change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

I. **Confidentiality:**

We will keep your records private to the extent allowed by law. Dr. Mary Hocks, director of this research, and Alice Myatt, the primary student researcher, will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board and/or the Office for Human Research Protection (OHRP). We will use your self-provided listserv username rather than your name on study records. The information you provide will be stored on a password- and firewall-protected computer belonging to Alice Myatt. Your name and other facts that might point to you will not appear when we present this study or publish its results unless you specifically grant us such permission by giving us your signed authorization. The findings will be summarized and reported in group form. You will not be identified personally.

Because of the open and informal nature of focus groups, there is limited confidentiality for this study. No guarantees of confidentiality can be other than the ones made by the researcher, noted above.

This research project includes opportunities for you to participate in later phases of this study. If you wish to receive an invitation for future participation opportunities, select CONTACT ME at the end of this form, and your e-mail address will be saved in a file that will reside on the password- and firewall-protected computer belonging to Alice Myatt.

VII. **Contact Persons:**

Contact Dr. Mary Hocks at mhocks@gsu.edu or Alice Myatt at 662-436-7682 / amyatt1@gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. **Copy of Consent Form to Subject:**

If you send a request to Alice Myatt at amyatt1@gsu.edu, we will e-mail you a copy of this consent form to keep. Please note: if you wish to return a signed copy of this form, please print out, sign, and mail this form back to Alice Myatt, PO Box 3463, University, MS 38677.
If you are willing to volunteer for this research and participate in an online focus group from which session transcripts will be taken, please select YES from the box below. If you do not wish to volunteer for this online focus group, you may either select NO from the box below or select the SUBMIT icon at the bottom of this page. NOTE: If you wish to be contacted for later phases of the study, please select CONTACT ME from the boxes listed below.

__________________________________________________________________________
Participant ___________________________ Date

__________________________________________________________________________
Principal Investigator or Researcher Obtaining Consent ___________________________ Date

☐ YES, I would like to participate in the online focus group.
☐ NO, I do not wish to participate in the online focus group.
☐ CONTACT ME FOR FUTURE PARTICIPATION OPPORTUNITIES
Title: **Within the Interface: Tutoring and Conversing within a Virtual Writing Community**

Principal Investigator: Mary Hocks
Alice Myatt

I. **Purpose:**

You are invited to participate in a survey about the Georgia State writing center as part of my research study. The purpose of the study is to record and analyze the design and development of an interactive interface that acts as a point of contact for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio. Part of the design and development relies on the opinions and feedback about The Writing Studio's current website; such opinions and feedback will be generated by means of an online focus group.

You are invited to participate because you are or have been student who has made used the writing center at Georgia State University, known as The Writing Studio, multiple times over the past year(s).

A total of 10 to 12 participants will be recruited for this virtual focus group. Guidelines developed for successful focus groups indicate that the number of participants should be between 6 (six) and 12 (twelve). In order to meet the minimum requirement, up to 48 (forty-eight) individuals will receive invitations, or as many people as respond to this survey.

Your participation is voluntary and you may decide not to participate at any time during the research. If you elect to complete this survey, you will have the opportunity to submit your e-mail address in order that we may contact you regarding the virtual focus group, and we will also use your e-mail address in order to send you information about the virtual focus group and how to join the group.

This brief survey will take approximately 10 minutes or less of your time. Participation is voluntary, but the input you provide will be a significant contribution to the development of user-centered writing center website design and development.

II. **Procedures:**

If you decide to respond to this online survey request, you may be invited to participate in additional research opportunities, and at that time, you will be provided with forms of consent for any future research participation. This consent
form applies only to this survey, which will be open for responses between August 15, 2010 and September 1, 2010, or for a period of at least two weeks from the date that appears on the e-mail message we sent you.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may not benefit you personally. Overall, we hope to gain information about the design, development, and implementation of an interactive interface that acts as a contact point for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio, and your participation will assist in the selection of which technology is the most suitable for a virtual writing community and will contribute significantly to the design of the Writing Studio human-computer interface. This research will contribute significantly to the body of research for writing center studies.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to complete this survey. If you decide to be in the study and then change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

I. Confidentiality:

We will keep your records private to the extent allowed by law. Dr. Mary Hocks, director of this research, and Alice Myatt, the primary student researcher, will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board and/or the Office for Human Research Protection (OHRP). The information you provide will be stored on a password- and firewall-protected computer belonging to Alice Myatt. Your name and other facts that might point to you will not appear when we present this study or publish its results unless you specifically grant us such permission by giving us your signed authorization. The findings will be summarized and reported in group form. You will not be identified personally.

This research project includes opportunities for you to participate in later phases of this study. If you wish to receive an invitation for future participation opportunities, select CONTACT ME at the end of the survey (including your e-mail address), and your e-mail address will be saved in a file that will reside on the password- and firewall-protected computer belonging to Alice Myatt.
VII. Contact Persons:

Contact Dr. Mary Hocks at mhocks@gsu.edu or Alice Myatt at 662-436-7682 / amyatt1@gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

If you send a request to Alice Myatt at amyatt1@gsu.edu, we will e-mail you a copy of this consent form to keep. Please note: if you wish to return a signed copy of this form, please print out, sign, and mail this form back to Alice Myatt, PO Box 3463, University, MS 38677.

If you are willing to volunteer for this research and participate in this survey, please use the link provided in this message to access the online survey. Your continuing on to the survey indicates that you have read and agreed to the conditions specified in this consent form.

____________________________________________  __________________
Participant                                       Date

____________________________________________  __________________
Principal Investigator or Researcher Obtaining Consent Date
APPENDIX C: TUTORS EMAIL INVITATION

You are invited to apply to participate in a focus group as part of a research study conducted by Alice Myatt under the direction of Dr. Mary Hocks. The focus group will be held online in the form of a listserv discussion held during a two-week period between August 15 and October 15, 2010.

You have been invited to apply because you are or have been either a tutor or an administrator of The Writing Studio at Georgia State University.

The research questions under discussion relate to the design and development of an interactive interface for a virtual writing community that connects to and supports the online tutoring sessions of The Writing Studio at Georgia State. Your opinions and feedback concerning the Writing Studio website will benefit the composition studies and writing center studies communities at large and also benefit the work you do in the future as it connects to the teaching of writing, digital and visual rhetorics, and writing centers.

The consent form that informs you about this research is attached to this email. Please direct any questions to Dr. Mary Hocks or Alice Myatt at engajm@langate.gsu.edu or by calling Alice at 662-436-7682.

In order to be considered for participation in the virtual focus group, please complete a brief online survey at http://www.surveymonkey.com/s/DDG73IJX. Continuing on to the online survey indicates your acceptance of the attached consent form. Thank you!
APPENDIX D: STUDENT WRITERS EMAIL INVITATION

You are invited to apply to participate in a focus group as part of a research study conducted by Alice Myatt under the direction of Dr. Mary Hocks. The focus group will be held online in the form of a listserv discussion held during a two-week period between August 15 and October 15, 2010.

You have been invited to apply because you are or have been a student or alumnus of Georgia State University who has had tutoring sessions with one of the tutors from The Writing Studio.

The research questions under discussion relate to the design and development of an interactive interface for a virtual writing community that connects to and supports the online tutoring sessions of The Writing Studio at Georgia State. Your opinions and feedback concerning the Writing Studio website will benefit future students who use online tutoring sessions at The Writing Studio as well as benefiting the composition studies and writing center studies communities at large.

The consent form that informs you about this research is attached to this email. Please direct any questions to Dr. Mary Hocks or Alice Myatt at engajm@langate.gsu.edu or by calling Alice at 662-436-7682.

In order to be considered for inclusion in the virtual focus group, please complete a brief online survey at http://www.surveymonkey.com/s/DDG5LRM. Continuing on to the online survey indicates your acceptance of the attached consent form. Thank you!
APPENDIX E: TUTOR SURVEY INSTRUMENT

Within the Interface: Tutors

1. Welcome to Within the Interface Survey

Georgia State University, Department of English
Informed Consent: Within the Interface: Tutoring and Conversing within a Virtual Writing Community

Principal Investigators: Mary Hocks, Alice Myatt

I. Purpose:
You are invited to participate in a research study. The purpose of the study is to record and analyze the design and development of an interactive interface that acts as a point of contact for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio. Part of the design and development relies on the opinions and feedback about the Writing Studio's current website; such opinions and feedback will be generated by means of an online focus group.

You are invited to participate because you are or have been an administrator or tutor of a writing center at Georgia State University.

A total of 6 to 8 participants will be recruited for a virtual focus group. Guidelines developed for successful focus groups indicate that the number of participants should be between 6 (six) and 12 (twelve). In order to meet the minimum requirement, at least 24 (twenty-four) individuals will receive invitations.

Because many of the people receiving this invitation face geographic or time constraints, the focus groups will take place online via the Internet. You will be asked to join a listserv specifically designed for this research, and you will be asked to provide a user name and password. The user name you select should not be your personal name. In this way, the anonymity of your comments and participation will be preserved.

Participants of the virtual focus groups may also be asked to return near the end of this study for a follow-up virtual focus group session to discuss the interactive interface designed and developed following the first focus group. However, your participation in this virtual focus group does not obligate you to participate in any follow-up online focus group sessions that may be held. Your participation is voluntary and you may decide not to participate at any time during the research.

Participation will require approximately 2 (two) hours of your time over the period between August 15 and October 15, 2010. It will not be necessary for you to be online at the same time as all other participants of the virtual focus group, although a schedule of online meeting times will be provided to you. Participation is voluntary, but the input you provide will be a significant contribution to the development of user-centered writing center website design and development.

II. Procedures:

If you decide to participate in the virtual focus group, you will participate in a virtual (online) focus study; the research begins with a focus study having the goal of identifying the features that make a writing center website user-centered from administrator and tutor points of view, and which promotes conversational exchanges on writing. If you participate in this research, you may be invited to participate in additional research opportunities, and at that time, you will be provided with forms of consent for any future research participation. This consent form applies only to this study and the online focus group that will be active between August 15 and October 15, 2010.

In order to ensure accurate reporting of the online focus session, session transcripts will be saved. The session transcripts will be kept in digital format for an indefinite period of time, as the discussion results will become part of Alice Myatt’s dissertation.

During the course of the study, participants will be asked to interact with the researcher, Alice Myatt, and with other members of the focus group. The focus group will meet in an online listserv space that will be set up and maintained by the researcher, Alice Myatt.

(This consent form continues on the next page.)
Within the Interface: Tutors

2. Consent form continuation

III. Risks:
In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:
Participation in this study may not benefit you personally. Overall, we hope to gain information about the design, development, and implementation of an interactive interface that acts as a contact point for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University’s Writing Studio, and your participation will assist in the selection of which technology is the most suitable for a virtual writing community and will contribute significantly to the design of the Writing Studio human-computer interface. This research will contribute significantly to the body of research for writing center studies.

V. Voluntary Participation and Withdrawal:
Participation in research is voluntary. You do not have to complete this survey or be in the online focus group study. If you decide to be in the study and then change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

I. Confidentiality:
We will keep your records private to the extent allowed by law. Dr. Mary Hocks, director of this research, and Alice Myatt, the primary student researcher, will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use your self-provided listserve user name rather than your name on study records. The information you provide will be stored on a password- and firewall-protected computer belonging to Alice Myatt. Your name and other facts that might point to you will not appear when we present this study or publish its results unless you specifically grant us such permission by giving us your signed authorization. The findings will be summarized and reported in group form. You will not be identified personally.

Because of the open and informal nature of focus groups, there is limited confidentiality for this study. No guarantees of confidentiality can be other than the ones made by the researcher, noted above.

This research project includes opportunities for you to participate in later phases of this study. If you wish to receive an invitation for future participation opportunities, select CONTACT ME at the end of this form, and your e-mail address will be saved in a file that will reside on the password- and firewall-protected computer belonging to Alice Myatt.

VI. Contact Persons:
Contact Dr. Mary Hocks at mhoecs@gsu.edu or Alice Myatt at 662-436-7682 / amyatt1@gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VII. Copy of Consent Form to Subject:
If you send a request to Alice Myatt at amyatt1@gsu.edu, we will e-mail you a copy of this consent form to keep. If you are willing to volunteer for this research and participate in an online focus group from which session transcripts will be taken, please continue on to the survey. If you do not wish to volunteer for this online focus group, you may either select NO from the box in question 7 below or select the SUBMIT icon at the end of this survey. NOTE: If you wish to be contacted for later phases of the study, please provide your email address when asked to do so.

Alice Myatt, Principal Investigator
Within the Interface: A Brief Tutor Survey (2010)

1. Our records indicate that, over the past two years, you have been a tutor or an administrator of the Writing Studio at Georgia State. During this time, how often have you visited the Writing Studio's website: www.writingstudio.gsu.edu?
   - None
   - Some (maybe once or twice a semester)
   - Regularly (once or twice a month)
   - Often (once or twice a week)
   - Always (I have to check it almost every day)

Would you like to add a comment? Do so here:

2. Please select the best description of your role in the Writing Studio.
   - I'm a tutor only, I perform no administrative duties
   - I'm a tutor and an administrator; I do both in equal amounts
   - I'm a tutor and an administrator; I do more tutoring that administrative work
   - I'm a tutor and an administrator; I do more administrative work than tutoring
   - I'm an administrator, I don't do any tutoring

Would you like to make a comment? Do so here:

3. Have you ever tutored someone online?
   - No
   - Yes
   - Other

Other (please specify)
4. If you have tutored someone online before, which of the following formats have you used? Choose all that apply. (If the answer to 3 above was no, choose N/A from the list below.)

- N/A
- E-mail response (student sends in writing; you respond via e-mail)
- Real-time chat (using a chat application like Live Messenger, Yahoo! chat, or Pidgin)
- Phone conversation
- Instant messaging
- Text messaging
- A combination of the above during individual sessions

Add a comment here if you wish:

5. About you: Please select the answer that best describes you.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Academic Standing</th>
<th>Ethnic Background</th>
<th>Major</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Choose from each of the following categories:

For “Ethnic Background,” if you choose “Other,” please enter it here:

6. Please tell us about how often and in what ways you use the Internet. Select all that apply.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Seldom; maybe once a month</th>
<th>Some; maybe once a week</th>
<th>Regularly; almost every day</th>
<th>Always; every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social networking (Facebook, LinkedIn, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-mail messaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>News and Information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching videos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Streaming music or videos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taking classes online</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I get assignments from ULearn or another course management system (e.g., MyComLab or Canvas)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Please tell us about how often and in what ways you use the internet. Select all that apply.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Seldom, maybe once a month</th>
<th>Some, maybe once a week</th>
<th>Regularly, almost every day</th>
<th>Always, every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social networking (Facebook, LinkedIn, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email messaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>News and Information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching videos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Streaming music or videos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taking classes online</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I get assignments from Ulasm or another course management system (e.g., MyCompLab or CompClass)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. My research looks into the ways we interact with writing center websites. While participation in this study may not benefit you personally, your experience with the Georgia State Writing Studio website will be valuable to the design and development of an improved writing center website. Overall, we hope to gain information about the design, development, and implementation of an interactive interface that acts as a contact point for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio, and your participation will assist in the selection of which technology is the most suitable for a virtual writing community and will contribute significantly to the design of the Writing Studio human-computer interface. This research will contribute significantly to the body of research for writing center studies.

Would you like to participate in an online focus group? As indicated in the introduction to this survey, if you participate, you will be entered into a dedicated listserv group that will be active for a two-week period between August 15 and October 15. Although there is no minimum or maximum amount of time required for this activity, you will likely be online for 2 to 4 hours during this period.

Would you be willing to be part of this online focus group?

- [ ] No
- [ ] Yes

Make a comment here:

[Comment field]

If your answer to the above question is yes, and you are willing to participate in this online research focus group, please provide an email address so that we may contact you. This will also be the email address we use to set up the listserv.

If you do not wish to participate in the online research focus group, thank you for taking this survey, and you should continue on to the SUBMIT button.

[Email field]
APPENDIX F: STUDENT WRITER SURVEY INSTRUMENT

Page 1

Within the Interface: Students

Georgia State University, Department of English

Informed Consent: Within the Interface: Tutoring and Conversing within a Virtual Writing Community
Principal Investigators: Mary Hocks, Alice Myatt

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to record and analyze the design and development of an interactive interface that acts as a point of contact for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University’s Writing Studio. Part of the design and development relies on the opinions and feedback about The Writing Studio’s current website; such opinions and feedback will be generated by means of an online focus group.

You are invited to participate because you are or have been student who has made the writing center at Georgia State University, known as The Writing Studio, multiple times over the past year(s). A total of 10 to 12 participants will be recruited for this virtual focus group. Guidelines developed for successful focus groups indicate that the number of participants should be between 6 (six) and 12 (twelve). In order to meet the minimum requirement, up to 48 (forty-eight) individuals will receive invitations, or as many people as respond to this survey.

Because many of the people receiving this invitation face geographic or time constraints, the focus groups will take place online via the Internet. You will be asked to join a listserv specifically designed for this research, and you will be asked to provide a user name and password. The user name you select should not be your personal name; in this way, the anonymity of your comments and participation will be preserved.

Participants of the virtual focus groups may also be asked to return near the end of this study for a follow-up virtual focus group session to discuss the interactive interface designed and developed following the first focus group. However, your participation in this virtual focus group does not obligate you to participate in any follow-up online focus group sessions that may be held. Your participation is voluntary and you may decide not to participate at any time during the research.

Participation will require approximately 2 (two) to 4 (four) hours of your time over the period between August 15 and October 15, 2010. It will not be necessary for you to be online at the same time as all other participants of the virtual focus group, although a schedule of online meeting times will be provided to you. Participation is voluntary, but the input you provide will be a significant contribution to the development of user-centered writing center website design and development.

II. Procedures:

If you decide to participate in the virtual focus group, you will participate in a virtual (online) focus study: the research begins with a focus study having the goal of identifying the features that make a writing center website user-centered from administrator and tutor points of view, and which promotes conversational exchanges on writing. If you participate in this research, you may be invited to participate in additional research opportunities, and at that time, you will be provided with forms of consent for any future research participation. This consent form applies only to this survey and the online focus group that will be active between August 15 and October 15, 2010.

In order to ensure accurate reporting of the online focus session, session transcripts will be saved. The session transcripts will be kept in digital format for an indefinite period of time, as the discussion results will become part of Alice Myatt’s dissertation. (This consent form continues on the next page.)
III. Risks:
In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:
Participation in this study may not benefit you personally. Overall, we hope to gain information about the design, development, and implementation of an interactive interface that acts as a contact point for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University's Writing Studio, and your participation will assist in the selection of which technology is the most suitable for a virtual writing community and will contribute significantly to the design of the Writing Studio human-computer interface. This research will contribute significantly to the body of research for writing center studies.

V. Voluntary Participation and Withdrawal:
Participation in research is voluntary. You do not have to complete this survey or be in the online focus group study. If you decide to be in the study and then change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:
We will keep your records private to the extent allowed by law. Dr. Mary Hocks, director of this research, and Alice Myatt, the primary student researcher, will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use your self-provided listserv user name rather than your name on study records. The information you provide will be stored on a password- and firewall-protected computer belonging to Alice Myatt. Your name and other facts that might point to you will not appear when we present this study or publish its results unless you specifically grant us such permission by giving us your signed authorization. The findings will be summarized and reported in group form. You will not be identified personally. Because of the open and informal nature of focus groups, there is limited confidentiality for this study. No guarantees of confidentiality can be other than the ones made by the researcher, noted above. This research project includes opportunities for you to participate in later phases of this study. If you wish to receive an invitation for future participation opportunities, select CONTACT ME at the end of this form, and your e-mail address will be saved in a file that will reside on the password- and firewall-protected computer belonging to Alice Myatt.

VII. Contact Persons:
Contact Dr. Mary Hocks at mhocks@gsu.edu or Alice Myatt at 662-436-7682 / amyatt1@gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:
If you send a request to Alice Myatt at amyatt1@gsu.edu, we will e-mail you a copy of this consent form to keep. If you are willing to volunteer for this research and participate in an online focus group from which session transcripts will be taken, please continue on to the survey. If you do not wish to volunteer for this online focus group, you may either select NO from the box in question 7 below or select the SUBMIT icon at the end of this survey. NOTE: If you wish to be contacted for later phases of the study, please provide your email address when asked to do so.

Alice Myatt, Principal Investigator
Within the Interface: Students

3. Within the Interface (2010)

Within the Interface: A Brief Tutor Survey (2010)

* 1. Our records indicate that, over the past two years, you have been a visitor to the Writing Studio at Georgia State multiple times. During this time, how often have you visited the Writing Studio’s website: www.writingstudio.gsu.edu?

- None
- Some (maybe once or twice a semester)
- Regularly (once or twice a month)
- Often (once or twice a week)
- Always (I have to check it almost every day)

Would you like to add a comment? Do so here.

* 2. Please select the best description of your use of the Writing Studio.

- I go at the beginning of an assignment; I like to brainstorm with a tutor
- I usually visit the writing center when I have a draft to discuss
- I only go to the writing center when I have a problem with my writing
- I like to talk about my writing, and I enjoy talking with tutors about my writing
- I only go to the writing center because my teacher tells me to
- I have problems with using standard English, and the tutors at the writing center help me with that
- All of the above!
- None of the above!

Would you like to make a comment? Do so here.
Within the Interface: Students

3. Have you ever had an online session with a writing tutor?
   - No
   - Yes
   - Other
   
   Other (please specify)

4. If you have had an online tutoring session before, which of the following formats have you used? Choose all that apply. (If the answer to 3 above was no, choose N/A from the list below.)
   - N/A
   - E-mail response (I send in writing; tutors respond via email)
   - Real-time chat (using a chat application like Live Messenger, Yahoo! chat, or Pidgin)
   - Phone conversation
   - Instant messaging
   - Text messaging
   - A combination of the above during individual sessions

Add a comment here if you wish:

5. About you: Please select the answer that best describes you.

Choose from each of the following categories:

For "Ethnic Background," if you chose "Other," please enter it here
**Within the Interface: Students**

7. My research looks into the ways we interact with writing center websites. While participation in this study may not benefit you personally, your experience with the Georgia State Writing Studio website will be valuable to the design and development of an improved writing center website. Overall, we hope to gain information about the design, development, and implementation of an interactive interface that acts as a contact point for conversational exchanges on writing and writing development, while providing access to the formal structure of online tutoring sessions on the website of Georgia State University’s Writing Studio, and your participation will assist in the selection of which technology is the most suitable for a virtual writing community and will contribute significantly to the design of the Writing Studio human-computer interface. This research will contribute significantly to the body of research for writing center studies.

Would you like to participate in an online focus group? As indicated in the introduction to this survey, if you participate, you will be entered into a dedicated listserv group that will be active for a two-week period between August 15 and October 15. Although there is no minimum or maximum amounts of time required for this activity, you will probably be online for 2 to 4 hours during this period.

Would you be willing to be part of this online focus group?

- No
- Yes

Make a comment here:

8. If your answer to the above question is YES, and you are willing to participate in this online research focus group, please provide an email address so that we may contact you. This will also be the email address we use to set up the listserv.

If you do not wish to participate in the online research focus group, thank you for taking this survey, and you should continue on to the SUBMIT button.
APPENDIX G: SESSION TRANSCRIPTS, TUTORS FOCUS GROUP

Monday, September 27: Initial Welcome

Good evening, everyone.

Thank you for agreeing to participate in my online focus group. Over the course of the next six days, I hope that you’ll share in the discussions about online tutoring and the way in which the Writing Studio website helps and/or hinders our efforts in the conversational tutoring of writing.

This first post is simply a get-acquainted session to be sure that the listserv is working properly.

Please respond to the listserv with a greeting of your own to the rest of us. That’s all we’re doing tonight - saying Hello to each other!

The one thing we need to do is to remember to respond to all of us - imagine that we are all in one huge virtual space, and even though we may come and go over the week, we’ll want to have access to each conversational thread.

Beginning tomorrow evening, I’ll post a question as a starting point, and it will remain open for the rest of the week. Each evening, I’ll post a new question or ask you to continue exploring something that you’ve introduced into the conversation. So by the end of the week, there should be six separate threads that will be active until Sunday evening.

You are each welcome to comment as little or as much as you like, and of course I hope that each of you contribute just as much as you wish!

I’ll be online each evening this week from 8-10 pm Eastern Time (except for Thursday evening). As this is a focus group for you, you won’t / shouldn’t notice me lurking!

I look forward to hearing from all of you and reading your posts.

Most sincerely,

Alice

D: Hello, everyone.

I hope your semester is going well and that you are being good to yourselves. Taking care of our health and our stress level is certainly something that most graduate students/GTAs/tutors don’t do enough. I know I don’t.

Have a terrific evening. I look forward to seeing the questions and responses.

Peace and scholarship

S: Hi all! Thanks Diana! I needed the reminder about stress. I am looking forward to participating as well. Next question? In peace,

J: Hello all! Sorry for the late arrival :)

Tuesday, September 28

Dear Tutors:

One of the primary purposes of a focus group is to gain insights into how stakeholders - those persons who have an interest in an issue or outcome - perceive and work with the issues and/or outcomes. It’s important, though, that I, the researcher, not shape or direct your conversations. So, I’ll ask questions in the hope of starting the conversations, but you are free to respond as you wish. I won’t be joining the conversation unless someone asks me a direct question or seems to be uncertain
about the question I ask. It’s most helpful when you have questions that you’d like to ask your fellow focus group participants, so please do ask questions if you have them. And thank you very much for your time.

You can answer tonight, or you can come back later this week and post replies. Post your reply by selecting the REPLY TO ALL option in whatever email program you are using. If everyone will REPLY TO ALL, then all of us will be included in your responses.

Answer this question without visiting the GSU Writing Studio website: When you think of the Georgia State Writing Studio - the physical OR the Internet space - what metaphors or images come to mind? Why?

Now, please visit the GSU Writing Studio website (writingstudio.gsu.edu) What associations do you make when you look at the Writing Center website?

Finally, what are your expectations from an online tutoring session?

J: “When I think of the Studio, I think of conversation (well, I also think of work, emails, never-ending streams of questions that I’m not too sure how to answer, etc....but I think that’s just left-overs from last year *lol*)....I think conversation is the focal point for me, in relation to the physical studio, the website, online tutoring--all of it. There are several metaphors that come to mind when I think of writing center spaces (both physical and virtual), but conversation sums up the GSU space. I visualize coffee, the brown, tan, and orange walls of the Studio always come to mind, but then I also think of the GSU "stamp" we put on the website last year and how, in the past three years, the website has evolved and continues to change. Change--now there's a metaphor for tutoring! Conversation and change...good stuff!

When I look at the site, I can see the connection to the physical space--the coffee cup logo, the language we chose to use and that which has carried into the new administration, the inclusion of students, faculty, and tutors--but I can also see it trying (perhaps starting?) to become its own entity, separate of the physical space. I think this pull away from the physical is reflective of online tutoring. Our practice shifts so much when we're online. I mean, some things remain the same, but the tone of the conversation, the content *to a degree*--these things shift to reflect the medium. F2F is easier in some ways and more difficult in others....I'm not sure I can appropriately identify the differences as a tutor, but as a writer--I expect a more direct conversation online. I expect to present an isolated, specific piece of writing with a specific question(s) to point the tutor directly at my concerns. Of course, I think I expect this because of the training/education that I participated in over the past two years....”

D: “When I think of the physical space of the Writing Studio, I think of a womb. The space is dark but nurturing, and many beautiful creations are born there! I think of Freud's notion of the heimlich: the womb. The physical space is indeed a home away from home for students (and tutors).

The online space feels like a niche in which one can fit. It also is welcoming, but in a different way. The space is friendly, but in the way of a virtual space, is home in a way that is more of an idea than a room and couch and cup of tea. I think it is a little more reserved than the physical space, but not in a negative way. Perhaps, to some students, the virtual space is more home than the physical one. The students we serve are, at least in the majority, born into the digital generation. Home for them means something altogether different than for someone like me, who grew up in the 70s and 80s, pre-digital native. So maybe a home more like a spaceship egg, mothership, kind of home.

Am I making any sense at all?”

Alice: Yes, and a fascinating line of thought! I appreciate the connection to how students perceive of themselves and this world around them - you are right in pointing out how different this is from the worldview of digital immigrants (like me!). Thank you for sharing those thoughts with us.

S: Yes!
A: (Sorry I’m so late getting to these!) “In general, I associate the physical writing studio with the coffee shop/art lounge metaphor. The design of the space itself reflects a calming atmosphere that is distinctly not institutional. The few components that do reflect institutionality are hidden well enough not to be distracting from the overall environment.

The online space I associate with a much more utilitarian sensibility. This is partly due to the interface itself—it's difficult to engineer an interface that remediates a coffee shop because the overall interface of most of the internet is utilitarian (usability principles are sometimes antithetical to traditional aesthetics, but maybe not always). Added to this reality is the fact that the particular interface of Write/Chat is based on the university's Microsoft communication system—one that is purposefully not customizable.

I don’t think the spaces are antithetical necessarily. Students who use the online space are by definition more interested in efficiency and utility as opposed to atmosphere.

As for the website, I think it reflects the sensibilities of both the online and physical tutoring spaces, though it certainly privileges the usable, utilitarian sensibility of the online space (because it is itself an online space).

My expectations for an online tutoring session correspond to what I said above. For me, small talk, off-topic discussion, and personal bonding do not belong in an online session. It has a utilitarian motivation, and once the goals and tasks associated with that motivation are complete, the session should end.”

S: “Dear All, when I think of the GSU writing studio I feel optimistic that this resource is available to students. I found it especially useful when I taught in the art history department. I sent problem writers and their work showed results, especially if they consulted a writing tutor sequentially. I think of the writing studio as a safety net for both me and my students. For art students who are artists and not writers this resource has literally allowed me to pass successful artists who talk well but write poorly.

As a tutor I think of the Writing Studio as one of the biggest challenges of my academic career. I have a lot of respect for the work tutors do.

When I look at the website I feel comforted knowing this resource is also available to me.

As a writer my expectations of an on-line tutoring session is that someone will read my work and respond to it in a beneficial way. I know not to expect proofreading but hope for substantive advice.”

Alice: Thanks to all of you for your thoughtful responses! And the posts will remain open at least until next Monday, so feel free to return or begin, as you need to, over the weekend. I'll also post questions tonight (Friday) and tomorrow.

O: The metaphors of conversation and the womb certainly fit how I see (or rather feel) the Writing Studio since both highlight the sense of interconnection, even symbiosis among all those who participate. I do also feel maternal towards the Studio, the other tutors, and the students because I want to support them and help them grow. In some ways then, I can see the metaphor of a secret garden representing the Studio, as those who discover it are enchanted and are somehow changed by the experience. Certainly, this is an idealized image of the Studio and there are times when it feels closer to a meat grinder, but I think I’ve gotten better at knowing how to share what I know without it taking everything out of me.

I would also say that conversation is an apt metaphor for the online space, although this conversation may be happening via two tin cans attached by a string. Though I'm using this metaphor to indicate the difficulty of communicating and the tenuous nature of the connection facilitated by technology that may or may not be best suited to the task, I'm not thinking it could also refer to the childlike joy of playing with a new toy and seeing how it works. If only we could encourage students to see it in this way.

The website feels less like a conversation, a womb, a secret garden, or two tin cans attached by a string than my experiences of the Studio(s) and more like a fresh coat of paint on a fence in front of a house that has lots of hidden rooms. I realize this might be an unnecessarily complicated metaphor, but I think it does a good job of
describing the more streamlined visual (non-verbal) representation of the Studio on the website that breaks off into various directions once you move past the main page.

S2: My feelings are pretty close to what everyone else has said so far. When I close my eyes and picture the physical Writing Studio space, I see warm colors, soft lighting, books, coffee cups and little clusters of conversation. I find the Studio to be a haven, a sanctuary of sorts, away from the harsh lighting and rushed pace that consumes the rest of campus. It is a comforting, happy place, where people enter with a load of stress and leave with renewed confidence and a sense of direction.

When I visit the website, I find it (like Andrew said) to be a bit utilitarian. The purpose of the website is very clear and direct, with all the facts laid out in front of you. There is no smiling face to welcome you or the comfortable couch and warm colors to put you at ease. However, the images of coffee cups and notepads, along with the inclusion of informal fonts, add a touch of personality. The new Facebook and Twitter icons add to this feeling of approachability. Like S- mentioned, it is nice to know that the website is available to me whenever I need it. So many students look relieved when I tell them that we offer chat and email tutoring sessions. It is accessible and convenient to them.

**Wednesday, September 29**

Using the classic Aristotelian definition of rhetoric as using all available means of persuasion, do you find elements of the Writing Studio online tutoring session pages persuasive? Do you find them rhetorical? If you do, what are they? Why do you answer the way you do?

A: “In general I associate usability with persuasion. A polished, clear, usable website is always more persuasive than one that is difficult to synthesize. The distribution of images and text, as well as large links and relevant information makes the site not only informative but concise. The main page is designed in a way that most questions students have are answered right there, or they are provided with a direct link to find that information. Using the university's CSS style, as well as incorporating links to the twitter and facebook page discreetly integrate the site with other websites in a way that likewise makes it very usable.

In general, the website is very attractive. I think the hierarchy of information is just right. UCD emphasizes ease of learning, efficiency of use, and memorability. I think most of the Studio site prioritizes these well.”

S: “I must confess the more and more I study literary theory and write at higher levels the less I understand Aristotle's definitions. They fade into the obscurity of writing practice and I am at a loss as how to answer the question. If you are asking if the web site makes sense and that all the bases are covered, the answer is yes.”

D: “I'm going to approach this question by briefly analyzing the first section of the text of the WriteChat page. Here is the text. The analysis follows.

Are you working on a paper for class? Would you like to talk with someone about your ideas to get started? Would you like to get responses from a real reader on a rough draft of your personal statement or other writing project? The tutors at the Writing Studio can assist you in all these endeavors. Our tutors are graduate student writers and writing instructors. We emphasize writing as an art-- an art that students learn through conversation and practice within a community of writers and readers.

Also, please bear in mind that our tutors are teachers of writing, not proofreaders or editors. We do not correct errors, and we do not write for students. We teach students strategies for becoming their own critics and strategies to enhance communication through writing.

In addition to our physical writing studio space in GCB 976, The Writing Studio now works with undergraduate and graduate student writers through Panthermail live chat.

The text begins by proffering several rhetorical questions, then proceeding to answer them. The description of the tutors creates ethos through expertise, and the next one about community creates ethos through goodwill. Defining writing as an art both makes a claim of definition and uses status theory to provide a commonplace: the definition of an abstract term.
The next paragraph both defines from the opposite (another commonplace) and refutes counterarguments stakeholders might have. (The argument, specifically, that tutors are supposed to "fix" papers.) Then, the author establishes the true role of the tutor, or the Writing Studio's counterargument to this false claim.

The last paragraph offers the "dirimens copulatio," or the "Wait! There's more!" argument. This brief conclusion to the section offers the final benefit, that the Panthermail live chat complements the physical space. This isn't a peroration in the trust sense, but it does wrap up the argument effectively.

I think that the site is rhetorical, and this little snippet of text is a good synecdoche for the whole site.”

O: Thanks, D, for that wonderful breakdown! It's even more interesting since the text you analyze was composed by Dr. B_ and I, not just one person. And since I was also the one who organized the text for both the chat and email pages, I can talk a little bit about why I did it the way I did.

I kind of made the assumption that if I put the instructions first, students would be less likely to take a look what they could get out of the session. So, the brief introduction precedes the policies, which precedes the instructions. These second two sections, however, are clearly demarcated with bold headings and lots of white space, so if a student wants to find this information, it won't be hard. Since there have been several instances so far in which students were not aware of the chat and email policies and their session experience suffered as a result, I also wanted to make sure that students at least got a glimpse of the policies before starting the appointment-making process.

I think the larger, maybe more important question is, are students even looking at these pages before making appointments?

Alice: That's a great question, O. I know that, at times, students made appointments for online tutoring, not realizing that they'd made an online appointment, thus they showed up for a f2f. Does that still happen?

O: It does, though not as frequently as before (knocking on wood now!).

S2: Again, I am with S on this one! I am not as familiar with Aristotelian definitions as many of you are. I do, however, find the website to be "persuasive" in that it is very user-friendly and easy to understand. Sorry I can't be of more help with this question!

Alice: Not to worry - most visitors to the site won't be familiar with Aristotelian definitions either! And you make a great connection in noting that ease of understanding and use of the website encourages (persuades) visitors to make use of the site.

Thursday, September 30
Note: When responding, please just reply to the listserv by selecting Reply.
My earlier instructions were incorrect: in order for us all to see each other’s replies, your response needs to be made to the listserv. So just reply to this message, and we’ll all be in the conversation.

In what ways should the Writing Studio online tutoring session pages support the academic work of students? What benefits should students find there? What challenges and obstacles should not be found there?

A: “The Write/Chat program should specifically support non-traditional, non-residential students. The hours and location of the Writing Studio make it a perfect fit for residential students, but even with extended hours it's difficult for some students to make our hours, or to drive downtown on a day that they might not normally do so. Write/Chat is a response to the Studio's mission of being available to the entire population of the university. The online interface gives students who are not present on campus a resource equitable to what's available on campus.
The challenge is of course making sure Write/Chat practices correspond to the pedagogy of the Writing Studio. Because of the nature of the interface and the disembodiment of the participants, it us easy to slip into copy-editing and proofing in an online space (since so much copy work is now done online anyway). It is critical that online tutors are regularly reacquainted with tradition writing center pedagogy.

S: “In any capacity the student needs (except for the usual caveats). Sometimes students need technical support, sometimes an ear to listen to their confusion. I think that in the online environment you do as much as you do in ftf. The most difficult obstacle I had in online tutoring was getting the interface to work properly. I found that I needed to be flexible and willing to work outside the margins in order to understand the needs of online consumers often in a very limited amount of time. Establishing a personal connection or some kind of common ground is a little trickier in the online environment but sometimes extremely efficient. Different obstacles confront you in a ftf than online. I think online is good in some ways b/c the student cannot see you. So many misguided assumptions can be avoided (on both sides) in the anonymity of the online environment.”

Alice: "Thanks for these thoughts, A, and I'd like to extend another question out from a thread I'm interested in: "The challenge is of course making sure Write/Chat practices correspond to the pedagogy of the Writing Studio."

As teachers and tutors, we recognize that even though students may not even know the definition of the word pedagogy or recognize the characteristics of the different pedagogical approaches, they nonetheless respond in similar ways when confronted with a specific instance of pedagogy. For example, students encountering a current-traditional will, generally speaking, be less prone to experiment, be less empowered to explore outside perceived boundaries, etc. Do you think it's possible for students to react similarly to the pedagogical foundations/influences of a writing center website? Do certain forms of design restrict or, alternatively, open up the cognitive learning space of students? I'm not advocating a deterministic approach of technology as driving learning here; it's more that I'm thinking deeply about the way the design of an educational website (such as the Writing Studio website) reflects the pedagogy of the designer(s), whether such was an intent and feature of the design or not.

What's your thinking on this?"

J: “Do you think it's possible for students to react similarly to the pedagogical foundations/influences of a writing center website? Do certain forms of design restrict or, alternatively, open up the cognitive learning space of students?"

“I absolutely believe design impacts students similarly to f2f pedagogy. Also, I think a designer's pedagogy or philosophy absolutely impacts the design itself. For example, looking at different writing center home pages (UNC Asheville, UNC Chapel Hill, GSU, and Purdue, for example), I think it's easy to spot pieces of the center's mission statement and/or pedagogy. It's also easy to recognize if the designers intended the student/faculty/etc to interact with or simply receive from the page. That is, Purdue is the home of the OWL (as we all know...sorry for the Capt Obvious moment. *lol*) and therefore wants the student/faculty/etc to interact with the site. It's intended and expected. UNCAshville is not fully integrated (i.e. the physical site dominates the center's mission and the tech is there only to accentuate it...there is no online tutoring offered and students are expected to use their site only to retrieve info) and this is reflected in their website design. I also think it's interesting to explore how the center views the role of faculty based on their web design. That is, some centers include faculty and faculty needs in their sites while others don't (this, to me, speaks volumes on the position the center sees faculty taking and the depth of the relationship).

There's so much to unpack in this question--I feel like I could type all day! I think this starts to answer the above questions, though...and, like Alice, I don't advocate a deterministic approach and I realize that some of what I've said above can be misconstrued to reflect this very problem. I think there is an undeniable reflection that occurs and that students do interact with and respond to what is reflected whether they are actively aware of it or not, just as they do in the classroom, or in f2f or online tutoring...”

O: I would certainly agree with Juliette that an electronic interface can function as pedagogical practice, though, as with tutoring and teaching face-to-face there are constraints on how the designer incorporates
her/his pedagogy into the interface. Some of these constraints have to do with the general expectations of web users and what kind of interfaces they're used to interacting with, and some of the constraints relate to the unfamiliarity the designer may have with her/his audience. Regarding my first point, I think we're afforded greater flexibility to challenge our audiences' expectations because we can notice it more quickly when they're not catching on/challenging us back. In the online space, the dialogue is not direct. I also mention this because we really don't know, to some extent, who is viewing our website homepage, clicking on the online tutoring links, seeking help in an online environment (or even whether these actions are related for those who visit our website).

D: The Writing Studio's online tutoring session pages should support the academic work of students by giving them a space in which to conduct a conversation about the writing they compose in various disciplines for various purposes. The benefits would include clear and detailed instructions, ease of interface use, tech savvy and pedagogically skillful tutors, and support for questions and concerns. Challenges might include an interface that is not user friendly in terms of navigation or support options, an unwelcoming tone or approach to the appointment setting task, a dearth of tutors, or tutors who were not attuned to the students' needs. I feel awkward answering this last part because I do not want to imply in any way that the GSU site has those challenges. In fact, I guess I haven't encountered a writing center site that has these flaws. Those are just the ones I can imagine.

Friday, October 1
From what I know of your backgrounds, all of us here have participated in online tutoring sessions. Some of you have reflected on online tutoring, and this question asks about the ways in which you have used the conversational model of tutoring to inform your online work. What aspects of the conversational model apply to or work with interfaces for online tutoring?

Do we then have a new model for online tutoring, or just a variation of an existing one? Whether this is a new model or not, what pedagogy do you think should inform online tutoring?

No responses.

Saturday, October 2
First and foremost: I appreciate so much your time and sharing of your thoughts! Your responses have had a positive and enriching effect on my research.

This is the last message I'll post for the focus group. As we end up our session, I thought it best to put all of our conversation into one message. Please review the questions, and if you wish, you are welcome to expand the conversations you find here.

Even though I'm not posting new questions after today, you are welcome to continue posting responses, as you have the time, over the next week. Again, thank you very much for your time.

Feel free to post to this listserv any time from now until the end of the week (10/09).

Tonight, I'm asking you to reflect on the challenges inherent in forming an online community of writers. As tutors working with a specific institution, we share some of the aspects of community – common interests, common jargon, shared goals. However, a recent work on learning in communities notes, “Shared spaces, both real and virtual, provide environments where people with common interests and concerns gather and benefit – the greater the participation, the more valuable the resource. . . . Participants contribute new creations after they gain and benefit from access and participation.”

Setting aside for the moment issues of access, what do you see as obstacles to forming an online community of writers – a virtual space that welcomes any and all writers? Conversely, what opportunities exist for implementing such a virtual space?

No responses.
APPENDIX H: SESSION TRANSCRIPTS, STUDENT WRITERS FOCUS GROUP

Monday, September 27: Initial Welcome
Good evening, everyone.

Thank you for agreeing to participate in my online focus group. Over the course of the next six days, I hope that you'll share in the discussions about online tutoring and the way in which the Writing Studio website helps and/or hinders our efforts in the conversational tutoring of writing.

This first post is simply a get-acquainted session to be sure that the listserv is working properly.

Please respond to the listserv with a greeting of your own to the rest of us. That's all we're doing tonight - saying Hello to each other!

The one thing we need to do is to remember to respond to all of us - imagine that we are all in one huge virtual space, and even though we may come and go over the week, we'll want to have access to each conversational thread.

Beginning tomorrow evening, I'll post a question as a starting point, and it will remain open for the rest of the week. Each evening, I'll post a new question or ask you to continue exploring something that you've introduced into the conversation. So by the end of the week, there should be six separate threads that will be active until Sunday evening.

You are each welcome to comment as little or as much as you like, and of course I hope that each of you contribute just as much as you wish!

I'll be online each evening this week from 8-10 pm Eastern Time (except for Thursday evening). As this is a focus group for you, you won't / shouldn't notice me lurking!

I look forward to hearing from all of you and reading your posts.

Responses:
M: Good evening, Everyone, my name is M-. I am from Cambodia. I speak Khmer (Cambodian language) and Mandarin. I am senior, and will graduate with Accounting/Finance degree next Spring 2011. It is my pleasure to participate in this group of study, and am hopefully to benefit the study.

N: Evening, my name is N- and I am an education master student for middle grades math. I was interested to see what this experience would be like.

Tuesday, September 28
One of the primary purposes of a focus group is to gain insights into how stakeholders - those persons who have an interest in an issue or outcome - perceive and work with the issues and/or outcomes. It's important, though, that I, the researcher, not shape or direct your conversations. So, I'll ask questions in the hope of starting the conversations, but you are free to respond as you wish. I won't be joining the conversation unless someone asks me a direct question or seems to be uncertain about the question I ask.
It's most helpful when you have questions that you'd like to ask your fellow focus group participants, so please do ask questions if you have them. And thank you very much for your time.

You can answer tonight, or you can come back later this week and post replies. Post your reply by selecting the REPLY TO ALL option in whatever email program you are using. If everyone will REPLY TO ALL, then all of us will be included in your responses.

Answer this question without visiting the GSU Writing Studio website: When you think of the Georgia State Writing Studio - the physical OR the Internet space - what metaphors or images come to mind? Why?

Now, please visit the GSU Writing Studio website (writingstudio.gsu.edu)
What associations do you make when you look at the Writing Center website?

Finally, what are your expectations from an online tutoring session?

Responses: None

Wednesday, September 29
What do you look for when deciding whether or not to choose an online tutoring session or a face-to-face one?
Would you use the online tutoring sessions more often if you could see the person you are working with? Why or why not?
If you could join with other writers online to discuss your writing, would you do so? Why or why not?

Please visit the Writing Studio online tutoring session pages at http://www.writingstudio.gsu.edu (follow the links, explore the pages).

Responses:
N: “I personally prefer face to face because you can pick up a lot from a person body language that you can not just by chatting online. I like face to face because it is easier to ask questions and get a better understanding of what I might need to do to correct my writing.

As far using the online tutoring more if I could see the person depends all on how much tech I am going to need to do that. If it is too cumbersome I will not use it. I am too use to user friendly interfaces. If I have to download this, and then click on that, then add this, and then I still have to click on this. I will not go through all that trouble.

I would like to have work looked at by others because it is not just one person's idea of what it should look like or sound like. Also if everyone is confused about the same part means that you will need to make corrections. Everybody can be wrong.”

M: “I am a little bit different. I might prefer online tutoring session because I ask more question when I am writing than when I am speaking. I feel like seeing the writing you suggest make me clear and stay longer in my mind.”
To me, being able to see person online is not necessary since it is typing anyway. However, it would be great for someone who like to the face to face conversation. On the other hand, if it need additional equipment just like N- said, it'll be too complicate and take much longer time for someone who does not good at technology.

I would love to have other writers discuss my writing. Different people do not have the same opinion. Though those information or correction might confuse some people, it still be a good information to think of for other paper. N-, I don't think everyone would have the same mistake. More people can see more mistake on the paper we writing. Because of different idea, I think a writer can a discussion which correct to the mistake can be more clearer. Similar to group study, people can speak out and discuss what, why and how to correct it.

J: “The biggest deciding factor for me deciding between online/face-to-face sessions is whether or not I think I'll be able to get enough criticism to give me an idea of whether or not to continue on the path my paper's currently going. I'm sort of biased towards face-to-face in that regard, especially since in person the tutor could point to what they feel needs work, whereas in an online session they could only refer to the area; it's a little thing but it makes a surprising difference to me. I am ambivalent about seeing the tutor in online sessions. I wouldn't mind joining with other writers in online sessions, I could appreciate multiple views on a paper that I could see at the same time instead of making multiple face-to-face sessions.”

Thursday, September 30
In what ways should the Writing Studio online tutoring session pages support the academic work of students? What benefits should students find there? What challenges and obstacles should not be found there?

Responses: None

Friday, October 1
If you have ever participated in an online writing tutoring session, this question is for you.

If you have participated in an online tutoring session as either tutor or student, did the design of the web page and the session interface interfere with or help advance your session? This may not be something that you thought of at the time, but think back to your time online - what was good about it and what did you wish could have been improved?

Response(s):
M: “I didn't see any distract design that interfered with my session. I apology that I couldn't give input since I don't really remember how it look. I just think it is simply like the Yahoo or MSN chat.”
Saturday, October 2
This is the last message I’ll post for the focus group. Thank you all for your responses. As we end up our session, I thought it best to put all of our conversation into one message. Please review the questions, and if you have the time, respond to as many as you can.

Even though I’m not posting new questions after today, you are welcome to continue posting responses as you have the time. Again, thank you very much for your time. Those who sent me their addresses will be receiving a thank-you note from me very soon.

We’ll end up by taking another look at the GSU Writing Studio website (writingstudio.gsu.edu).
- What do you like about the current Writing Studio website?
- What would you like to see change on the current Writing Studio website?

Response(s): None
APPENDIX I: TRANSCRIPT OF SUBJECT MATTER EXPERT CONVERSATION 1

Alice Myatt says:
Good morning, L--, how are you?
L-- says:
I'm good!!!
How are you?
Alice Myatt says:
I'm well; sitting here with my head full of web design stuff...
Alice Myatt says:
This morning, I just realized that in designing my prototype, I didn’t go in to the supporting pages and change the address of the underlying links. Only the links on the main page are working within my "Prototype" directory.
So links don’t really work; to return to the home page, you’ll need to use the back button, OK?
What browser are you using today?
L-- says:
That’s good... which browser should I use?
Alice Myatt says:
it doesn’t matter, just need to know for the record
theoretically, the site should be the same on all the major browsers
L-- says:
okay. I’m in explorer right now - so I’ll just use Explorer.
Alice Myatt says:
I did get your home phone number, by the way, but if we use this chat window, I can save the chat and thus not have to transcribe our conversation. Is that ok with you?
L-- says:
perfect!
Alice Myatt says:
wonderful.
here’s the URL: http://www.ajmyatt.com/Prototype. If you
If you’ll go there but not click on anything, that will get us started.
I should follow the questions I submitted to the IRB, but of course you are free to discuss anything that you see.
Although I don’t want to influence your opinion, I am able to answer questions you might have. This is one reason I opted for the Subject Matter Expert approach in lieu of doing usability testing - at this stage, I'm still in the design mode.
Here we go: What is your first impression of the website main page?
Hopefully, it loaded for you!
L-- says:
sorry....my explorer stopped responding..lemme catch up for a sec!
Alice Myatt says:
ok
L-- says:
Okay! It’s loaded and overall it looks great...I’ll respond from top to bottom...
in general, I don’t really like the Georgia State part at the top. For me the fonts are too light and too small and even though I’m used to it now, I remember when Ga State first changed it it was difficult for me to read - same goes for our line Writing Studio Home...About the Writing Studio....Student Resources...etc.
Alice Myatt says:
All right, and I have some questions, also, as you go. I'll put one up and only move to the next when you let me know you're ready. You don't necessarily have to answer the question(s), but they'll help us keep going.

L-- says:
The What Type of Session Suits You Best is AWESOME!

Alice Myatt says:
OK, that's good to know. All of that detail is helpful!

Plus, I want to do future research in how to address things like (me) - the aging baby boomer

Just a note: I didn't change much of the wording on the supporting pages; mostly I am looking at the rhetoric - visual and pedagogical - of the front pages (the sense of them, if that helps)

Just from looking at this site, who do you think the site is designed for?

Why do you answer the way so?

L-- says:
Yes - that helps. I was in the middle of typing that visually, using a photograph of a tutor at a computer for the online option and a photo of face to face session is very effective! I'm of the opinion, I suppose, that a photograph of a tutor at a computer would also work in place of the email icon as well....and to answer your questions (sorry! I am just babbling away!) to answer your question.....

The site does look like it is designed for a student...the left part of the site seems to be designed for the first-time user...the right part.

Alice Myatt says:
Well, it's really important to me that you babble away! I'm more interested in your unscripted responses, actually.

The IRB insists on having scripted questions... which in a way I do understand... they manage to the exceptions, you know?

L-- says:
The right side is a little busier and seems to be designed with those who are used to navigating websites...it has all of the necessary components - hours, links, general info, but it is more wordy and less visual.

Alice Myatt says:
ok

L-- says:
More wordy and less visual isn't necessarily a bad thing....

Alice Myatt says:
we should be able to try out the quick chat if you like it's live

L-- says:
cool! Okay!

this is cool!

That is a great feature...I imagine that if the question is out of the scope of the Writing Studio responder, they can suggest that the student make an appointment!

Alice Myatt says:
That's it exactly!

Also, my suggestion is that the WS responder have a couple of handbooks nearby for reference. By looking up and citing a handbook, my hope would be that this reinforces handbook use for students.

L-- says:
nice!

Yep! That's a really exciting feature.
Alice Myatt says:

(This will be better if it goes live - I’ve spoken with people over in the library who will be developing a prototype for me to include - one that actually tracks the questions and provides statistics. This is a freebie, but I’ve found other writing center sites that do use the Meebo, which is free btw)

L-- says:

wow

Alice Myatt says:

Another Q: Without clicking on anything, how many resources do you find on the main page?

L-- says:

okay lemme see...I have a thought too about the VWC but I will come back to that.... hang on a sec!

Alice Myatt says:

sure

L-- says:

okay - I think of resources as tools that I can immediately use to help me accomplish a task - so I see 6. The links to Student and Faculty resources are two....the links to the different types are 3 more, and the instant chat is the 6th.

Alice Myatt says:

Great, thanks!
you’re tracking with me... I am curious about the VWC
Right now the page is very much a first draft
I needed a forum, and I'm sure that in the final version, the forum is something that can be developed with help from our IT dept
Right now it's what it is: a prototype and a free one...

L-- says:

What I was going to write about the VWC is that it may work nicely to feature it as fourth option to the What Type of Session Suits you Best section on the left...
and I think it might work on that side because it kind of follows the train of thought...Okay, here’s where I can go if I want face to face help...here’s where I can go if I want on line or email help...and oh!
Here’s a place I can go if I simply want to workshop or chat with other writers about writing!

Alice Myatt says:

I think that is a great suggestion: I immediately see its value
Plus, that is what I want (and actually a large chunk of the diss...) building in a place for writers to just talk if that’s what they want to do. Thank you!!
It’s quite doable to move the chat window over to where the VWC is now, as I am trying to keep everything in what web designers call ‘prime real estate’: the main screen visitors see when they first arrive at a site.

L-- says:

Sure! I can imagine it working on all kinds of levels....I could post a question about what other 1101 students understand (or don’t understand) about....let’s say...analysis and start a conversation that way. Someone else may start a discussion about why Robert Frost is their favorite American poet....and someone else can try to pick the GSU writing community’s brain about the best way to go about approaching a lit review....
But yeah....i think it would work nicely in the "prime real estate"

Alice Myatt says:

Yes, that’s it. One thing I’ve discovered is that most forums tend to languish without constant attention, but if all of the tutors knew about it and just checked whenever they had time, I think that some interesting conversations could start, you know?

following up on the real estate: I am definitely going to move the VWC over to the What type suits you
best section... but that may push the chat window down below the screen. If it does, that's when I could move the chat window, but only then. If it's still visible, then no need to move it.

Oh, just a thought for you.

following up on the tiny print issue (which I found on MANY writing center websites (being the textual people that we are...)

If you'll just do CONTROL and the + keys, the print on your screen will increase. Give it a try and see what you think.

L-- says:
That makes everything bigger...so it helps me read the text, but it loses, I think, the visual effect of the layout as you (the artist!) intended it.

But it's good to know how to do that!

Alice Myatt says:

the virtual tour is right now borrowed from Duke University. However, I may try to coax a two minute video out of you all before it's uploaded on Nov. 30! I can always dream, anyway. Or I could put up a brief video of me talking about what a virtual tour would do; I think my committee would be ok with that.

Great!

So, to help people who might need that, it would be good to post that little tip somewhere on the page.

L-- says:
Yes...but I'm not sure where...

Alice Myatt says:

What's you're feeling about breadcrumbs on a page... that little line that tells you where you are IN a site..

I know.. it's impossible to put everything on the main page... must... resist... the urge!

L-- says:

mmmm I'm not sure I know what that is. Are there breadcrumbs currently?

Alice Myatt says:

I have them on one sample page.

Let me find the address for you

http://www.ajmyatt.com/Prototype/send_email.html

L-- says:

okay - is it the line at the top Writing Studio Home >> Send email?

Alice Myatt says:

yes

It's part of recommended design - a way of keep visitors fully informed about where they are... if the back (previous) links are hyperlinked, then users don't have to look for/use the navigational menus.

L-- says:

Okay - I have mixed feelings..I think because I expect to be able to use them to help me navigate but often (I think it may be either bestbuy.com or amazon.com) I find that the hyperlinks don't work. So - I think they are REALLY helpful if you can actually use them to help get back and forth and REALLY frustrating if you can't and still feel stuck. Of course, despite using the internet daily, I still fumble around out here.

Alice Myatt says:

well, we all do. and I agree with you: it's frustrating to find links that don't work (which is why I'm sitting here trying to update all the links!) Here's another Q: Do you find the site directive or open? What features support your answer?

L-- says:
I think it is open - but instructive. So, if by directive you mean that the website tells the user what the user must do - it does not do that. It does not say - CLICK HERE TO EMAIL. CLICK HERE TO CHAT. CLICK HERE TO SCHEDULE AN APPOINTMENT. I think the language supports the openness of this on-line environment. For example:
What Type of Session Suits You Best allows the user to explore the options and fully understand what they are.

Alice Myatt says:
Thank you. I know that you have a busy day and I promised to keep this to an hour. This has been most helpful, and perhaps you'll have an hour later on in the week to see a 'new and improved' version of this!

L-- says:
I can't believe it's been an hour!

Alice Myatt says:
Thank you, I take that as a compliment!

L-- says:
okie dokie....can I make one more observation?

Alice Myatt says:
please do

L-- says:
Thanks! okay....Along the lines of the directive versus non directive....
The one part that says Make An Appointment Using our Online Scheduler is somewhat directive - but functional for those who have used the feature before...perhaps it may be effective to create a distinct but highly visible "quick link" area that can take veteran tutees directly to the function they need to perform...?

Then you can explain the Make An Appointment instructions a little more explicitly for newbies

Alice Myatt says:
YES! Thank you... that actually is something I thought about and so I'm pleased that you thought of it also, if it will help for next time, I'll send you the file that has the IRB questions in it. As you'll see in the questions, I'm very interested in the pedagogical implications of the website design, as well as the fostering of community - both of which are rather nebulous and shifty things to try and grasp. I argue that we as writing center practitioners must be aware of both, though.

You don't have to respond to the Qs today, but perhaps if we get together this week after I make changes, it will help ...

L-- says:
Sure! that would be helpful. Lotsa food for thought. My Raging B. "set" schedule is changing this week - and I'm not sure what it is yet....but I'm pretty sure that I'll be free on Wednesday evening?

Alice Myatt says:
That's perfect!

If the file doesn't transfer here in this chat window, I'll send it along via gmail

L-- says:
okie dokie!
APPENDIX J: TRANSCRIPT OF SUBJECT MATTER EXPERT CONVERSATION 2

Alice Myatt says:
Good morning, M--, how are you doing today?

M-- says:
Hi Alice I am here

Alice Myatt says:
Did you enjoy getting an extra hour of sleep?

M-- says:

I hope I didn't have to read up before today?

Alice Myatt says:
golly no

M-- stopped sharing photos

M-- says:
o.k.

Alice Myatt says:
this is very much just you telling me what you think (like don't like) about my redesign.

M-- says:
Tell me then...

Alice Myatt says:
I like the photo!

M-- says:
o.k.

Alice Myatt says:
Where is that?

M-- says:
what photo?

Alice Myatt says:
Somehow you shared a photo with me.

M-- says:
I was trying to upload one but nothing is on this desktop.

Alice Myatt says:
People sitting at a table

M-- says:
sorry.

Alice Myatt says:
hey, that's ok

in my research, I am using stages in designing the website

after each stage, I ask for feedback from a Subject Matter Expert

M-- says:
you mean the writing studio website right?

Alice Myatt says:
Because you and I have used the online way of tutoring several times, I thought you would be a perfect person to give me feedback from the studio point of view.
M-- says:
absolutely.

Alice Myatt says:
but you should go look at my design: http://www/ajmyatt.com/Prototype

M-- says:
great. thats what I was about to ask you.

Alice Myatt says:
Once you are there, I think we can change to typing from that window, but first just don't click on
anything... just look and tell me your thoughts. and it's ok if you don't like something... that is how we
design in stages... get feedback, work a little bit!

M-- says:
Sorry this desktop is too slow and msn wasnt downloading on my mac

Alice Myatt says:
Hey, that's fine... I am comfy cozy and doing fine!

M-- says:
Alice, the link is not opening.
Tried twice

Alice Myatt says:
let me copy/paste the address for you

M-- says:
ok.

Alice Myatt says:
http://www.ajmyatt.com/Prototype/

M-- says:
got it.
Now what do you want me to do?

Alice Myatt says:
Take a moment to look at the page. What is your overall impression of the page?

M-- says:
I cant remember too well how it looked before, can you send me that link as well? or is that not
required?

Alice Myatt says:
sure that will help a lot

M-- says:
Also are we going to discuss only the main page or go into detail coz there are some problems as we
get deeper.

Alice Myatt says:
http://www.writingstudio.gsu.edu
no only the main page for now
I am wanting to set up the "pattern" on the front page before going anywhere else
that is why I don't think this will take too long

M-- says:
First of all I think it looks great for someone like me who has used it or was willing to use it.
However, for students who are young, brash and opinionated at 18 and 19 this site does not state why
you need to use it.

Alice Myatt says:
that is an excellent point, and I am pleased you thought of that!
You stopped sharing photos

M-- says:
Some where on the main page it needs to be emphasized that "Paper due" Dont know how to write one? Something catchy and casual. The website looks nice but too formal.

Alice Myatt says:
all right, that's good observation
the chat window on the bottom left should be functional; I don't know why it isn't.
It was working find yesterday; it is the same chat window the library uses - they made one for us to try out.

M-- says:
This will not appeal to young kids too much. I am nearly 35 and after 2 semesters I know how they think.
Also there needs to be something for International students which will catch their attention.

Alice Myatt says:
Right.. that is an important part of our work

M-- says:
Therefore, for someone like me who studied throughout in English, know English really well but I was so puzzled with paper writing here that I would have quit if you were not around.
Again it has to be an interesting phrase.

Alice Myatt says:
One of the ideas I have is to put some information on paper writing like you describe in the Podcast section.

M-- says:
For Example: And you thought that you always knew English or something like that.

Alice Myatt says:
OK.. yes, something to get the attention!

M-- says:
That sounds great.
Also you could mention:
1. Why is the help needed? Since it helps you with all courses. It is important to write coz" it makes you think well, speak well, analyse and organize thoughts well.
2. Also, mention it takes time and commitment and it is necessary to walk in at campus and take notes while they instruct you.

Alice Myatt says:
Like, What sort of help do you need? Maybe that could be the ? in the podcast area ... then they could choose from the types you mention that is an excellent point!

M-- says:
3. The writing studio will not write your paper but will help you to put your thoughts into a good perspective.

Alice Myatt says:
How to get the most from your session.

M-- says:
Am I wrong Alice?

Alice Myatt says:
No you are not wrong at all
this is the sort of feedback I need to hear (see)

M-- says:

Also, on the main there is nothing that says: Campus times dont work for you? A lot of older students int he 20's and 30's like are working and come 2 days a week and have back to back classes. Therefore the online session is perfect and infact very very personal. Maybe you can have the instructor set up a webcam and a lot of students who have Mac's already have the compatibility on the Mac.

Alice Myatt says:

Right. that's a good point. Right now we are not getting many people doing online tutoring, and it may be, like you said, not clear that there are alternatives to the campus times... this is very helpful, M--

M-- says:

Mention things like from a C or a D to an A. Those are the students who will come to you. The ones who make an A dont need you and the ones who make a B are not very ambitious people is what I have noticed. They are content with what they have and hence wont come to you.

Alice Myatt says:

Yes, we have noticed that.

M-- says:

Therefore amongst American students tackle the C & D ones and try to emphasize that if their C or D moves to an A that means they are becoming good writers an with help from you they can do so in other non English course too.

Lay stress on Non Englich courses since most kids do not care about 1101.....which is terrible.

Alice Myatt says:

They just want to get through it!

M-- says:

The international students will come to you even if they make an A. Someone like me who did well in India but could not understand the system.

Most students are reluctant to getting online help since they say they dont know how to do it. Therefore all professors need to emphasize the writing studio. Every subject professor needs to do it.....if you can get your dept to something like a 2 point paper or quiz or something for which it is easy but you have to either visit the studio or be online.

If they do it then you will have a big group.

Again, for 2 points everyone wont bother since they are lazy but the good kids will also look at it.

Alice Myatt says:

I appreciate very much your observations! They will be most helpful as I work on this design.

M-- says:

Also emphasize help with resume writing.

Alice Myatt says:

Yes, good point.

M-- says:

Eg The medical and nursing students are usually very serious and they need help.

Alice Myatt says:

Yes, so we could perhaps strengthen the quantity and quality of handouts, too, so that students could download some guides to use if no one is available to help them.

M-- says:

so maybe put help with resume or medicine statement of purpose. Try to find out when do kids take the TEAS exams for nursing....most apply for fall semester and by when are the pre med students supposed to take thr MCAT's....that way you can tweak the website a little for them. Likewise, the LSAT for law etc.

Sorry Alice I feel like I am being too critical...you know so much and here I am giving you some honest
feedback.

Alice Myatt says:

No this is not critical

this is a reflection of what students need, and that is what we need to know

I am thinking of other ways to get more student feedback, like posting a link to our survey on the bottom of the page

M-- says:

Also, the points that I mentioned like saying in a subtle way about take help is advance, each day take 30 minutes only for 3-4 days and if you forget since there is a lot on your mind then login and go online. Late night timings etc are available too. That way when you play safe the English Dept wont get mad at you and will agree to what you are saying but at the same time you are talking the students language.

Alice Myatt says:

I don't want to hold you up; you have some good points and I am learning a lot from listening to you.

M-- says:

Under that quick answer link also say Paper due already? We are here to help? Walk in or book an online slot now? If not you can also email us.

Alice Myatt says:

I would like to take what you've said and work with this page.

M-- says:

Mention that online chat is very personal and indept and give students examples...like I could write how I benefitted and how I would have definately made a C+ without your help.

ok can I tell you more?

Alice Myatt says:

Now that you know sort of what I am trying to do, when i get an update and the connecting pages done, perhaps you would just take a look at your convenience and just send me some email feedback.

of course you may!

M-- says:

sure I will do that anytime.

Alice Myatt says:

you may say more now

M-- says:

I prefer doing it online than email

Alice Myatt says:

i just didn't want to hog you

M-- says:

is that ok?

Since we are chatting I feel like we are discussing.

Alice Myatt says:

an american saying - be greedy with your time!

yes, I like the chat.

I am going to try to get the chat window working

I found out a possible explanation for it being off line

M-- says:

Oh no Alice. I told you I will help you always. Only if I have an exam the next then I will need another day or two.

Also, the webpage looks very boring and dull and almost me go away.

Alice Myatt says:
Yes, well, I will be working on this for another month before I must complete my research.
I hope you mean the old one!
M-- says:
If Jim my professor had not pushed for the website then I would be put off by the way it looks...drab and boring and this is for a 35 year old so imagine a zesty, partying 18 year old.
Alice Myatt says:
good points!
Remember that I am designing a prototype and so this will be a recommendation for them but I can't make them use it... but we will make a good case for it
M-- says:
Don't emphasize that walk in is personal etc coz that way you are killing your own brand which is online service.
Ok. What do you mean by Fall hours? Sep-Nov etc what months and dates?
Alice Myatt says:
well the main page has to support both, but perhaps we could make it easier for kids to get to the online page, and then make the online page better
This time period is known as the fall semester, then next semester will be spring semester
M-- says:
Yes, the online page needs to look exciting and intriguing for a 18 year old. Right now it is meant for professors and above.
Alice Myatt says:
ha ha what we call "teacher to teacher"
M-- says:
Eg. Bottom right corner..."Writing a personal statement" is lost...one cannot even see it.
Yes... it is teacher to teacher.
Alice Myatt says:
Yes, the main challenge of a web designer is putting information on what we call "prime real estate"
M-- says:
When I open your website and if it takes me 10 minutes to understand what the front page is trying to tell, then there is a problem.
Alice Myatt says:
So what goes below the screen should not be vital, 'cause people sometimes won't go "below the screen"
M-- says:
What do you mean by Below the screen?
Alice Myatt says:
yes, the page should send a clear message in about 10 seconds!
M-- says:
you mean bottom right corner?
Alice Myatt says:
yes
M-- says:
No, that's not right. If it was a little brighter or interesting to look at...like flashing etc it would catch my attention.
Eg online tutoring hours is so tiny although it is in red that it is lost.
Alice Myatt says:
k
ok
M-- says:
Now do you want to go to another page?
I can, not a problem.

Alice Myatt says:
I think that's enough for now. I need to work on this page and fix the links, also see why the chat isn't working.

M-- says:
Are you just working on this page?

Alice Myatt says:
May I have your permission to save this page for a reference as I work on the design?

M-- says:
not the inside online part?

Alice Myatt says:
No, I am going to work on about 5 pages

M-- says:
coz that has tons of problems too.

Alice Myatt says:
the main page, the online pages, about page, the virtual writing community, faq right!
I will definitely work on the inside online part...

M-- says:
Ok. But do you want to discuss it another time then?

Alice Myatt says:
if you have the time, I know you are busy

M-- says:
or I can do it now too.
on not a problem
I meant oh

Alice Myatt says:
What about in two weeks? That would give me time to work on the inside pages.

M-- says:
and give me your email address which you access daily.
great.

Alice Myatt says:
OK.

M-- says:
What are the other pages you need me to look at?

Alice Myatt says:
ajmyatt1@gmail.com

M-- says:
ok. Will send you a test mail.

Alice Myatt says:
all of my messages come there except for the student.gsu.edu, which I can’t seem to set up like I want to!
yes, please do

M-- says:
I will write from my gmail too.
is there anything else I can do?
Alice Myatt says:

Great
No you have been wonderful; this is exactly the type of information that will help me
We will stay in touch, ok?
I am going to have breakfast with my son, so you have a wonderful morning with your family, ok?
M-- says:
Great! I am so glad to be of some help to you. Thanks for thinking about me for this.
Absolutely!!!
Tell me the other pages too, that way I can look at them when I have some time during the week.
Alice Myatt says:
All right. All of the other pages are still in the old version. I will send you a message when I get a page
updated.
One quick question: did the redesign page look too crowded?
too busy?
M-- says:
Ok let me see the earlier page. Can you send me the like again?
Right now?
Alice Myatt says:
earlier page: http://www.writingstudio.gsu.edu
new page: http://www.ajmyatt.com/Prototype/
M-- says:
ak. give me a minute while I take a look at it.
hold on ok.
Alice Myatt says:
sure
M-- says:
ok now I got them both open.
Alice Myatt says:
all right
just your immediate response don't overthink it
M-- says:
It is informative and detailed just like you are.
Alice Myatt says:
first impression - too much going on or is it ok?
M-- says:
Compared to the earlier one it does look crowded but the earlier one seems like it lacked information.
Alice Myatt says:
right - trick is to find balance
M-- says:
First impression...lots of information but font too small and dull to read. Increase the fonts...that will
make a big difference.
Alice Myatt says:
all right
M-- says:
I like the information but there needs to some sparks to it....can the pictures blink or something like
that...say like the online one if you want more people to start being aware of it first so that they will
think about it and use it in future.
Fall hours, timings etc needs to be in bold and a luch bigger font...it is lost.
Alice Myatt says:

hmm, i will think about that. one thing i need to remember is that some people with have slow internet
and that might be a problem, also we have to design for sight-impaired people. Lots of things to
juggle.
I will work on making the fonts bigger and more noticeable.
M-- says:
Also do you mean byt Virtual writing community...to me it sounds like a PHD scholar and hence I wont
go into ot.
Alice Myatt says:
ok, that's important to know!
M-- says:
and keep sending me the older and the new page that way I could compare them.
Alice Myatt says:
I want to include a space for people to experiment with their writing - get feedback from other writers,
not necessarily tutors.
ok will do!
M-- says:
I feel the earlier one that Write chat a little below eye level...that's what one needed.
Alice Myatt says:
to pull you in and down?
M-- says:
Also your most important thing which you want to come across needs to be at eye level....that's what I
learnt in MBA product planning class in Marketing.
Alice Myatt says:
I agree!
M-- says:
what do you mean by" pull you in and down"
Alice Myatt says:
if something is just barely visible (like the Write/Chat), does it make you want to scroll down and look at
it a bit more?
M-- says:
Why is the word " small " so tiny.
Alice Myatt says:
to find out more about it
trying to get across that the chat window is not for the tutoring session but for short questions
the type of question the person at the front desk could answer, or a tutor in between sessions could
answer
M-- says:
Also why cant it be " Need some fast help or quick answer? Thats all. When you say small
question...there is a problem coz no student will ever have a small question....and there fore if that is
what I read then I wont approach it.
You can maybe say Quick question" We are here" Click...
Alice Myatt says:
fast help, quick answer... good suggestion!
all right, now, you are very observant and I appreciate it.
M-- says:
Instead of long sentences try to make short crisp phrases.
Alice Myatt says:
Ok, will do. I must leave now, so we will definitely pick this thread up the next time we chat.

M-- says:
  ok.

Alice Myatt says:
  I will put you down for two weeks from now but my schedule is flexible.

M-- says:
  Hope I didn't offend you in any way.

Alice Myatt says:
  In the meantime, email me if you have any questions, OK?
  no you did not!
  the reason I asked you is that I knew you would be open and direct, and that is important here

M-- says:
  I have a big political science exam not this thur but the thurs after so once that is done I can work again
  with you, if that's ok.

Alice Myatt says:
  that will be wonderful

M-- says:
  Email you for what questions?

Alice Myatt says:
  just anything, or just to say hi

M-- says:
  I will...And on your gmail right?

Alice Myatt says:
  and if I am in atlanta, I will let you know... perhaps we can get together for coffee
  yes my gmail

M-- says:
  That would be fabulous.

Alice Myatt says:
  best wishes on your exam, M--

M-- says:
  Let me know anytime you are in Atlanta, will try my best to meet you

Alice Myatt says:
  OK! will do...

M-- says:
  Thanks, Alice. Take care. I enjoyed doing this.

Alice Myatt says:
  so did I; I wish you a wonderful day.

Bye for now

M-- says:
  You too. Bye.
APPENDIX K: PERSONAS

Brian is an undergraduate senior; he is 22 years old. He is a native-English-speaking biology major who plans on applying for medical school. Brian, a Newnan, Georgia resident, qualifies for and receives funding from the Hope scholarship; he works part-time as a pizza-delivery person and is taking a full course load of academic work. He owns a Macbook pro laptop, and has a Facebook account that he checks every day. He has more than 200 friends on Facebook, and follows the latest news about his favorite TV show, Mad Men, on the @MadMen_AMC Twitter feed.

Brian has visited the Writing Studio several times during his years at Georgia State. He can remember when it changed its name in 2004 from the Center for Writing and Research to the Writing Studio. He likes the physical space, but because of his work and his academic classes, he often works on his papers late in the evening when the Writing Studio is closed. He has had two online tutoring sessions using the Live Messenger chat program in the past year, and he thinks that the help he got from the tutors contributed to the B+ he received on his last paper. He has been working on his application to graduate school, and a friend of his recommended that he get some tutoring help with his application, which he plans to do as soon as the spring semester begins. His immediate goals are to:

- Complete his undergraduate work, maintaining his 3.3 average
- Complete his grad school application, complete with an outstanding personal statement
- Get accepted into the Environmental Biology graduate program and UNC Chapel Hill

DANELLE, 34, is an African American mother of two children, twin girls. Her husband works for an Atlanta real-estate firm as an appraiser, and Danelle is enrolled in the nursing program. She hopes to obtain her R.N. certification and work at an area hospital. She also relies on Hope Scholarship funding, and her goal is to keep her GPA at 3.5 or above.

Until the housing market bottomed out, Danelle and her husband were able to make ends meet without her having to work. Now, her husband must work reduced hours, as the real-estate firm he worked for has let several of their employees to and put others on a part-time schedule. Danelle was hired by Grady Hospital as a night-duty admissions clerk, but working full-time now makes it challenging to get her course work done. Fortunately, she has completed most of her core requirements and does little writing this semester. She is concerned about next semester, though, as she must turn in a 15-20 page paper as a capstone project during her senior year. She went to the Writing Studio as a first year student, and she plans to return to the Studio for help with her project next year. Because she works at night and lives near Atlanta, she plans to go to the Writing Studio in the afternoons before she goes to work. She thinks of computers as tools, and prefers not to use one when she is off work, although she turns her work in via ULearn, the Nursing School’s official course space. Her immediate goals are to:

- Stay in her nursing course, maintaining her 3.5 GPA
- Graduate on her targeted date of May 2012 with a job offer or position already in hand
Ching-li, 28, is a female graduate student in the Andrew Young School of International Policy’s international economics program. Her first language is Korean and her second language is French (English is her third language). Ching-li is attending graduate school on an international scholarship she obtained from her home university in South Korea; she plans to return to South Korea after obtaining her doctorate in international economics.

Ching-li has an aptitude for numbers, and she enjoys finance. She wants to work with either an NGO in South Korea or perhaps find a government position; the important thing to her is that she be able to contribute to the economic growth of her country. She has a long-term but long-distance relationship with Sun-Lee, a man in his mid-30s who lives in South Korea and works in the Ministry of Education. Although she considers herself a good writer, she worries that her use of English is not as good as her professors want to see. She has never been to the Writing Studio, thinking of it as a place for undergraduate. However, one of her professors has just told her that the tutors in the Writing Studio work with graduate students, so Ching-li is thinking about taking one of her seminar papers into the Writing Studio for review – if she can just find out where it is! She also has a Facebook page, and usually keeps it open on her iPhone... just to stay connected. Her immediate goals are to:

- Work with her advisers to come up with a plan for her master’s thesis
- Find an apartment to rent so that she can move out of her aunt’s house and live on her own
- Begin working as a graduate research assistant for a professor in the Economics department

Rashid, 24, is an exchange student from India; his undergraduate major is Computer Science. He has been in the United States for two years, and he has just transferred to Georgia State from a local community college, where he graduated with Honors with an associate degree in physics. English is not his first language, although he has spoken and written British English from the time he began school as a child in India. He enjoys spending time on the computer; he loves to play World of Warcraft online with his friends from India and other places around the world. He has a Facebook page and a LinkedIn account, as he hopes to build a strong network among his friends and colleagues that will help him find a good job in program design. He volunteers as a referee with a local soccer team; many young Indians enjoy playing soccer and Rashid enjoys the game.

Rashid often visits the Writing Studio to get help on his writing projects. He writes because he must, not because he enjoys it; he has a tendency to put off doing his writing assignments until the last minute. Several times, his procrastination has made it impossible to get an appointment with a tutor in the physical tutoring location, so he was pleased to find out that he could send in his work as an email attachment. The tutor he likes to send his papers to is very clear in the information he sends back to Rashid, and this reduces the tension Rashid feels over his writing assignments.

His immediate goals are to:

- maintain his 3.5 GPA and thus
- retain his scholarship and his standing as an exchange student.
APPENDIX L: THE INTERACTIVE CHAT WINDOW, OVERVIEW AND INTERVIEW

In October, 2010, I noticed that one of the writing centers, the University Writing Center at Appalachian State University, used an interactive chat feature (a widget provided by Meebo and available free from meebo.com). I thought that interactive technology feature would support the conversational mode of the prototype, so I began researching possibilities. I noticed that a fair number of libraries also used the Meebo widget (among them were The Michael Schwartz Library at CSU Ohio and Sturgis Public Library in Sturgis, SD) to provide interactive chat with their patrons. About that time, I went to Georgia State’s Pullen Library website and discovered a very similar interactive feature, but one that did not feature the Meebo logo and was customized for that particular location. I asked (via the chat feature, no less) about the chat widget and was referred to Sarah Steiner, the Social Work Librarian and Virtual Reference Coordinator for the Georgia State University Library. I began talking with Sarah, and she offered to provide a “test widget” for me to use in the prototype design.

From email correspondence of 10-29-2010:

The chat program that we’re using is one called LibraryH3lp. Our homepage instance of the "chat widget" is heavily modified from the original by our programmers, but you can see an uncoded version on my guide, here, down to the bottom right: http://research.library.gsu.edu/content.php?pid=25721&search_terms=social+work
The color on mine is pale blue, but you can change it to any color.
When people use this widget, their questions come directly to me.

I can use the LibraryH3lp system to make an infinite number of widgets with no additional cost, so I’d be happy to make you one that you can use on your mock-up. I could link it up to a live queue from the library, or even make a special temporary one for you.

You could also use a service called Meebo to make a widget that you’d have a bit more control over (http://www.meebo.com/). It does the same thing as LibraryH3lp, but is intended more for individuals than for institutions.

When Steiner and I talked later, we discussed the Meebo utility, but I mentioned (and she agreed) that I thought the Meebo logo (which could not be removed) was distracting; she added that Meebo had plans to introduce ads that would run with the chat boxes.

I interviewed her again on December 3, 2010, and asked her about the design of the library website; I asked specifically about the chat feature. What statistics were available from the program, what did people say about the chat (did they use it?), and what drove the design of the website?

Sarah responded by saying that recent scholarship about academic library websites emphasized a strongly user-centered approach that made use of “a large amount of assessment.” One reason so much emphasis has been placed on user-centered design is that designers were getting tired of, in essence, “throwing spaghetti at the wall to see what sticks,” and that incorporating focus groups and surveys had helped immensely to develop website features that patrons found helpful. With the increasing popularity of Internet social communities and iPhone web apps, there is now so much constant traffic
on the library website that if something is not used much, that web space real estate is quickly turned over to something else. The library administrators are much quicker to abandon features that don’t work or that are not popular. The library uses an ongoing combination of questionnaires, surveys, and focus groups to keep up with current trends in Internet usage, and they also conduct regular usability studies. For example, how long does it take an undergraduate at the first-year level to find an article in an electronic database?

Steiner noted that she and the library administration have been very pleased with the interactive chat feature. For some time, the library used a Meebo chat box (begun around 2004) and it was not featured on the main library web page. Up until last year, the average annual use of the chat feature was around two or three thousand visitors. However, since the introduction of the new interactive chat window and its placement on the main web page, this year the traffic has almost doubled. Since they put the chat feature on the main home page, Steiner noted that the response has been overwhelmingly positive. A good proportion of people ask exploratory questions that actually results in them visiting the library in person. I believe that the same thing would result with the inclusion of this feature on writing center web pages, at least where there is sufficient support for them. I speak further about support in a subsequent paragraph.

Steiner also noted the reciprocity between the library and the writing center. They often will refer people who initiate chat inquiries to the Writing Studio; often the questions they ask relate to writing projects. I asked Steiner if there were many people enrolled in distance learning who made use of the interactive chat feature, knowing that this is something we in the English Department had little exposure to. She responded affirmatively, noting that the University has students from Nursing, Education, and Business majors enrolled in distance learning courses. Often, these students want to save time and travel by using the interactive chat feature.

It must be noted that integrating such a feature does require an investment of people and resources — but primarily people. (Steiner noted that the annual cost for running the program, which was designed for libraries by library software developers, is about $300.00.) Once installed, the program runs easily, falters seldom, and produces statistics like the screen shots shown below (courtesy of Steiner). However, someone must be available to monitor the activity of the interactive chat. I asked Steiner to describe their current staffing model, which she did. From among library staff, one person is assigned to an exclusive one-hour shift, during which they do nothing but monitor the chat window (I include a screen shot of the back-end of the chat feature in this appendix.) The library uses a Pidgen aggregator to manage multiple concurrent submissions, so over the past year, Steiner has worked to develop what she called a “communal approach” to staffing the chat. Anyone who is working at a desk or a static location may log in to the backend chat program; they will step in if they see that traffic is backing up. She noted that this approach has been very successful, as can be seen from the screen shot, which shows a number of people logged on at one time.

In writing centers that make use of a dedicated receptionist staff (whether one individual or a number of rotating people), such an interactive chat feature would increase the visibility, and I believe, the number of people using writing center tutoring sessions in both face-to-face and online settings. Even when a
dedicated receptionist is unavailable, if there are enough tutors working, support for the chat box could be a part of the regular work tutors do. I asked Steiner about the reaction of people who may visit the website when the chat feature is offline. Steiner noted that there is a message encouraging such visitors to send in queries by email. People do send in such messages, and there is rarely a complaint when the chat feature is offline; she noted that most people “do not expect anyone to be online supporting the chat feature at 2 a.m. at night!” In a related comment, she said one of the most often received comments is an expression of pleasure and appreciation for the “real person” on the other end of the chat box. People are most enthusiastic about finding an expert available to answer their questions, and most people do not linger in the chat session once their questions have been answered.

I present some screen shots of the statistics Steiner is able to gather from the program, and I end with a screen shot of the backend of the interactive chat widget.

Appendix Figure L1: Library H3lp Reports Options Page

Figure L1 shows the report options available for administrative use, while Figure L2 shows the number of sessions for each day, as well as indicating at a glance the days when there was activity.

Appendix Figure L2: Library H3lp Calendar Statistics Page
From this chart, it is possible to chart the activity by hour for number of chat sessions.

From Figure L3, it is possible to see which protocol has the most activity. The web interactive chat feature accounts for the highest amount of activity.

### Appendix Figure L3: Chats by Protocol Chart

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>am</td>
<td>391</td>
</tr>
<tr>
<td>galk</td>
<td>7</td>
</tr>
<tr>
<td>twilio</td>
<td>34</td>
</tr>
<tr>
<td>voice</td>
<td>2</td>
</tr>
<tr>
<td>web</td>
<td>11983</td>
</tr>
<tr>
<td>yahoo</td>
<td>137</td>
</tr>
<tr>
<td>total</td>
<td>12735</td>
</tr>
</tbody>
</table>

### Figure Appendix L4: Library H3lp Chats by Hour Chart

From this chart, it is possible to chart the activity by hour for number of chat sessions.
Screen Shot taken November 3, 2010