Socially-based essay planning in a postsecondary first year writing seminar

Debra Anne Johnson

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Socially-based essay planning in a postsecondary first year writing seminar

by

Debra Johnson

A dissertation submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Education

Program of Study Committee:
Anne Foegen, Co-major Professor
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Linda Lind

The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this dissertation. The Graduate College will ensure this dissertation is globally accessible and will not permit alterations after a degree is conferred.

Iowa State University

Ames, Iowa

2020

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# TABLE OF CONTENTS

| LIST OF FIGURES | iv |
| LIST OF TABLES | v |
| ACKNOLEDGEMENTS | vii |
| ABSTRACT | viii |

| CHAPTER 1. NATURE OF THE PROBLEM | 1 |
| Background | 1 |
| Significance of this Problem | 3 |
| Purpose of this Study | 8 |
| Significance of the Study | 9 |
| Research Questions | 10 |
| Definition of Terms | 11 |

| CHAPTER 2. REVIEW OF THE LITERATURE | 14 |
| Strategy-based Writing Instruction | 15 |
| Conceptual Framework | 20 |
| Review of Strategy-Based Writing Studies Involving Environmental Structuring and Pre-Write Planning | 34 |
| Impact on Study Design | 54 |

| CHAPTER 3. METHODS | 56 |
| Purpose of this Study | 56 |
| Research Questions | 57 |
| Design and Study Context | 57 |
| Setting and Participants | 63 |
| Data Sources | 64 |
| Procedures | 75 |
| Data Analysis | 79 |

| CHAPTER 4. RESULTS | 84 |
| Qualitative Data Results | 85 |
| Quantitative Results | 124 |
| Qualitative and Quantitative Results Compared | 138 |

<p>| CHAPTER 5. DISCUSSION | 142 |
| Theoretical Implications | 143 |
| Implications for Practice | 159 |
| Limitations | 165 |</p>
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Research</td>
<td>167</td>
</tr>
<tr>
<td>Summary</td>
<td>171</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>172</td>
</tr>
<tr>
<td>APPENDIX A: INFORMTED CONSENT/IRB APPROVAL LETTER</td>
<td>183</td>
</tr>
<tr>
<td>APPENDIX B: UNIVERSITY-ESTABLISHED ESSAY GRADING RUBRIC</td>
<td>185</td>
</tr>
<tr>
<td>APPENDIX C: SELF-EFFICACY FOR WRITING SURVEY (SEWS) QUESTIONS.</td>
<td>186</td>
</tr>
<tr>
<td>APPENDIX D: WRITING ANXIETY TEST (WAT) QUESTIONS</td>
<td>187</td>
</tr>
<tr>
<td>APPENDIX E: INDEPENDENT PLANNING ESSAY PAGE</td>
<td>188</td>
</tr>
<tr>
<td>APPENDIX F: COLLABORATIVE PLANNING ESSAY PLANNING PAGE</td>
<td>190</td>
</tr>
<tr>
<td>APPENDIX G: WWW</td>
<td>191</td>
</tr>
<tr>
<td>APPENDIX H: COPS</td>
<td>192</td>
</tr>
<tr>
<td>APPENDIX I: RESEARCH NOTE GRAPHIC ORGANIZER</td>
<td>193</td>
</tr>
<tr>
<td>APPENDIX J: SOCIAL COGNITIVE WRITING COMPONENTS PLANNED FOR GENERAL WRITING INSTRUCTION</td>
<td>195</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Reciprocal Feedback Loop of Self-Regulated Functioning</td>
<td>27</td>
</tr>
<tr>
<td>3.1</td>
<td>Two Group Formats for Each Student</td>
<td>62</td>
</tr>
<tr>
<td>4.1</td>
<td>Descriptive Categories of the Student Participants</td>
<td>87</td>
</tr>
<tr>
<td>4.2</td>
<td>Overarching Theme and Subthemes</td>
<td>95</td>
</tr>
<tr>
<td>4.3</td>
<td>Subthemes Arranged into the Social Cognitive Model for Self-Regulated Writing</td>
<td>96</td>
</tr>
<tr>
<td>4.4</td>
<td>Themed Categories Influencing Students’ Perceptions for Collaborative Small Group Planning – Research Question One</td>
<td>97</td>
</tr>
<tr>
<td>4.5</td>
<td>Themed Categories Influencing Students’ Perceptions for Collaborative Small Group Planning and Writing Ability – Research Question Two</td>
<td>110</td>
</tr>
<tr>
<td>4.6</td>
<td>Essay Scores Box Plots</td>
<td>125</td>
</tr>
<tr>
<td>4.7</td>
<td>Essay Scores Ranked Differences Histogram</td>
<td>126</td>
</tr>
<tr>
<td>4.8</td>
<td>SEWS Scores Box Plots</td>
<td>129</td>
</tr>
<tr>
<td>4.9</td>
<td>SEWS Scores Ranked Differences Histogram</td>
<td>129</td>
</tr>
<tr>
<td>4.10</td>
<td>Comparing Mean SEWS Scores by Dimension for Independent Planning and Collaborative Planning</td>
<td>132</td>
</tr>
<tr>
<td>4.11</td>
<td>SEWS Writing Dimension Survey Score Mean Differences Histogram</td>
<td>133</td>
</tr>
<tr>
<td>4.12</td>
<td>WAT Scores Box Plots</td>
<td>136</td>
</tr>
<tr>
<td>4.13</td>
<td>WAT Scores Ranked Differences Histogram</td>
<td>136</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 2.1</td>
<td>Three Processes and Ten Self-Regulatory Classes in the Social Cognitive Model for Writing</td>
<td>24</td>
</tr>
<tr>
<td>Table 3.1</td>
<td>General Student Demographics</td>
<td>64</td>
</tr>
<tr>
<td>Table 3.2</td>
<td>Instruments Used to Measure the Extent of the Experimental Variable</td>
<td>65</td>
</tr>
<tr>
<td>Table 3.3</td>
<td>Core Questions Planned for the Planning Phase of Focus Group Discussions</td>
<td>68</td>
</tr>
<tr>
<td>Table 3.4</td>
<td>Core Questions Planned for the Post-Writing Phase of Focus Group Discussions</td>
<td>69</td>
</tr>
<tr>
<td>Table 3.5</td>
<td>Reflective Post-Focus Group Email Questions</td>
<td>70</td>
</tr>
<tr>
<td>Table 3.6</td>
<td>Pre-Study and Get-to-Know Phase Procedures Timeline</td>
<td>76</td>
</tr>
<tr>
<td>Table 3.7</td>
<td>Independent Planning and Collaborative Planning Phases Procedures Timeline</td>
<td>77</td>
</tr>
<tr>
<td>Table 3.8</td>
<td>Theoretical Constructs Incorporated into the Independent and Collaborative Planning Sessions</td>
<td>78</td>
</tr>
<tr>
<td>Table 3.9</td>
<td>Data Source and Method for Data Analysis</td>
<td>79</td>
</tr>
<tr>
<td>Table 4.1</td>
<td>Focus Group Discussion Word Count</td>
<td>86</td>
</tr>
<tr>
<td>Table 4.2</td>
<td>Three Writing Processes of the Social Cognitive Model for Self-Regulated Writing</td>
<td>92</td>
</tr>
<tr>
<td>Table 4.3</td>
<td>Post-Focus Group Follow-up Email Response Rate</td>
<td>124</td>
</tr>
<tr>
<td>Table 4.4</td>
<td>Essay Score Descriptive Statistics</td>
<td>125</td>
</tr>
<tr>
<td>Table 4.5</td>
<td>Wilcoxon Signed-Rank Results for Matched Essay Scores</td>
<td>127</td>
</tr>
<tr>
<td>Table 4.6</td>
<td>Comparison of the Signed-Rank Differences</td>
<td>127</td>
</tr>
<tr>
<td>Table 4.7</td>
<td>Comparison of Mean Essay Scores by Focus Group</td>
<td>127</td>
</tr>
<tr>
<td>Table 4.8</td>
<td>SEWS Scores Descriptive Statistics</td>
<td>129</td>
</tr>
</tbody>
</table>
Table 4.9. Wilcoxon Signed-Rank Results for Matched SEWS Scores.................. 130
Table 4.10. Comparison of the SEWS Signed-Rank Differences.......................... 130
Table 4.11. Comparison of the Overall Mean SEWS Scores by Planning Format for Each Focus Group.......................................................... 131
Table 4.12. Comparison of the SEWS Social Cognitive Dimension Categories and Mean Survey Scores by Planning Format........................................... 131
Table 4.13. Comparison of the SEWS Social Cognitive Dimension Categories and Mean Survey Scores by Planning Format for Each Focus Group........... 132
Table 4.14. Wilcoxon Signed-Rank Results for Matched SEWS Writing Dimension Survey Score Mean Differences...................................................... 134
Table 4.15. Wilcoxon Signed-Rank Results for Matched SEWS Writing Dimensions Survey Score Mean Differences...................................................... 134
Table 4.16. WAT Scores Descriptive Statistics................................................... 136
Table 4.17. Wilcoxon Signed-Rank Results for Matched WAT Scores.................. 137
Table 4.18. Comparison of the Signed-Ranked WAT Scores............................... 137
Table 4.19. Comparison of the Overall Mean WAT Scores by Planning Format for Each Focus Group.......................................................... 138
Table 4.20 Compared Qualitative and Quantitative Results – Writing Ability......... 139
Table 4.21 Compared Qualitative and Quantitative Results – Writing Self-Efficacy and Writing Anxiety............................................................ 140
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Thank you to my family for their support and patience throughout my entire educational journey. In addition, I would also like to thank my friends, colleagues, the ISU department faculty, and staff for making my time at Iowa State University a challenging and transforming experience. I want to also offer my appreciation to Wendy Barlow, the students, and university instructors who were willing to participate in this research because without them, this study would not have been possible.

Finally, in the spirit of strategy-based writing research, Ben Jonson (1572-1637), a British poet and dramatist, believed he wrote best in his perfect writing environmental structure - “the pungent odor of orange peel, warmed by a lot of tea, and a purring cat” (Barzón, 1964).

Humbly, I compare my perfect writing environmental structure somewhat similar to Mr. Jonson’s as I too wrote best not with orange peel and tea, but with the pungent odor of old books, warmed by a lot of hot coffee, and the purring of two loyal cats. I dedicate the words on these pages to Grady and Callie. Thank you for your purring and constant, vigilant companionship while I wrote this dissertation.
Writing skills are important to young adult learners for their success in higher education, future employment, and to function as 21st century citizens. However, statistics suggest that a majority of first year college students in the United States do not possess the writing skills needed to meet the expectations waiting for them after high school graduation (NAEP, 2012). In addition, there is a lack of research, specifically qualitative research, focusing on best practices for postsecondary writing. This study attempted to fill this gap. The social cognitive model for self-regulated writing (Zimmerman & Risemberg, 1997) was used as the strategy-based instructional foundation and theoretical framework in this study. This study focused on two areas of this model, pre-write planning strategies and environmental structuring. The goal was to explore the impact of the collaborative pre-write planning format on overall essay writing quality, writing self-efficacy, writing anxiety, and student perceptions when taught in a socially-based writing format.

This study collected qualitative and quantitative data using the concurrent triangulated mixed methods research design. Participants were 18 postsecondary students (n=18) enrolled in an interdisciplinary first year writing seminar at a Midwestern university. Quantitative data collected consisted of student-written essays and survey responses. The Wilcoxon signed-ranks test (Wilcoxon, 1945) was used to determine statistical significance. Qualitative data included ability-grouped focus group interviews, classroom observations, and research notes.

The results of this study found a statistically significant relationship between collaborative planning and improved essay scores, increased self-efficacy, and lowered writing anxiety. In addition, participants’ perceived collaborative planning to improve not only their
writing ability but how they perceived themselves as writers. It was concluded that the use of collaborative planning can improve postsecondary writing ability.

This study provides a unique and valuable student-voiced perspective to postsecondary writing research. Professors and instructors who teach composition or use writing as a tool to communicate learning, may find the results of this study helpful in designing courses that support student writing. Though more research is needed, this study has contributed a valuable student-centered perspective to the field of strategy-based, postsecondary writing research.
CHAPTER 1

NATURE OF THE PROBLEM

Background

The ability to convey thoughts, ideas, and knowledge through writing is a multifaceted and cognitively challenging skill. The cognitive load required to compose text is demanding. The writer must simultaneously juggle and utilize a wide variety of concepts related to composition such as setting purpose, planning, text structure, language and word choice, grammar, spelling, keyboarding, metacognitive processes such as self-regulation and self-evaluation, and reading ability. Kellogg and Whiteford (2009) compared the attention demand of writing to a chess game stating that “the only task found that was comparable to the attention demands of a college student composing an essay of a few hundred words was an expert chess player evaluating a move in mid-game” (p. 255). Kellogg (2008) theorized that it takes more than two decades to reach the level at which writers are considered skilled in the composing process. Writing is a recursive, self-directed tool used to convey new learnings, thoughts, personal feelings, or opinions to a specific audience with a specific purpose. MacArthur and Graham (2016) defined the act of writing as “a complex social and cognitive process that requires shared understanding with readers about purposes and forms, knowledge of content, proficiency in language, and a range of skill and strategies, as well as motivation” (p. 1). Clearly, the ability to write a coherent message is no easy task.

Writing skills are often referred to as the “gateway” for future opportunities in education and employment (Graham & Perrin, 2007, p. 445). For young adults of the 21ST century, the ability to write is necessary to function effectively in today’s society and is a foundational skill that serves as a tool for many important purposes, with three of primary importance. First,
writing is a crucial skill for admittance and future success in higher education. Students who have their sights on obtaining a higher education degree will be required to take writing entrance exams or write essays for college applications. The expectation upon entering higher education is that students are no longer learning how to write, but able to use writing as a process to demonstrate learning or as a tool for new learning (Klein, Arcon, & Baker, 2016).

The second important purpose is that upon college graduation, most occupations will require some type of writing and judgements may be made based on the quality of that writing. According to Inc.com, 73% of employers want candidates with strong writing skills and stated that “as business continues to move into increasingly tech-based communication (like email, texting, etc.), hiring a team with strong writing skills is essential” (Moore, 2016, n.p.). Further, The National Commission of Writing for America’s Families, Schools, and Colleges reported that “80 percent or more of respondents [employers] report taking writing into account frequently, or almost always, when hiring salaried employees” (p. 11) with employment applications being doomed if poorly written or poorly spelled (2004). Lastly, writing is a fundamental skill for communicating with friends and family both near and far in the form of recreational writing (e.g. tweets, emails, texts) as well as functioning as ordinary citizens to express political views or “in the pursuit of both political and personal aims” (MacArthur & Lembo, 2009, p. 1022).

According to the National Center for Educational Statistics (2018), of the first-year college students starting their four-year program in 2010, only 60% overall graduated from college within six years. The inability to write effectively could possibly be a contributing factor to those 40% who do not graduate as the majority of high school seniors do not possess these skills based upon national statistics and case studies completed in the last ten to 15 years.
(Applebee & Langer, 2011; NAEP, 2012; Pintrich, 2002). It is important for first year students entering higher education to possess proficient writing skills to meet these high stakes demands for success at the postsecondary level as well as functioning in the complex world described above. Young adults who do not write well are at a severe disadvantage. Struggling writers lack the ability to demonstrate and extend their learning, especially in the content areas and across domains. They appear to lack cognitive and process strategies and/or do not transfer their use beyond their English or composition classrooms (Dean, 2005). Their grades suffer and their chances for college graduation diminish.

**Significance of the Problem**

Writing skills are of utmost importance to young adult learners for their success in higher education, future employment, and to function as 21st century citizens. However, statistics suggest that a majority of first year college students in the United States do not possess the writing skills needed to meet the expectations waiting for them after high school graduation. According to recent data from the National Assessment of Educational Progress (NAEP, 2012), 73% of U.S. 12th graders are not proficient in writing. A closer look at that statistic paints an even more alarming picture: 52% of those tested wrote at the basic level and 12% scored below the basic level. When participants were asked if writing was an enjoyable activity, 57% responded negatively, with 39% responding as “Disagree” and 18% responding “Strongly Disagree”. Additionally, data from this assessment showed that students who wrote less than four pages a week for homework scored significantly lower than those who wrote four or more pages per week.

Based upon these statistics, one could surmise that writing is like any other acquired skill; motivation and deliberate, repeated practice promote proficiency. Kellogg and Whiteford (2009)
argued for “additional task practice at the high school and college level in deliberate forms aimed at improving advanced writing skills” (p. 251) and Hayes (2000) stated that extensive practice could lead to improved writing abilities.

Writers need to possess the skill and knowledge to compose a text, and they also need to be fluent in the use of metacognitive strategies (Flavell, 1979; Hayes, 2000; Pintrich, 2002; Zimmerman & Risemberg, 1997). Hayes and Flower (1986) described skilled writing as a goal-directed activity in which writers incorporate metacognitive, self-regulated strategies to compose a coherent message. Zimmerman and Risemberg (1997) defined expert writers as those who can incorporate personal, behavioral, and environmental self-regulatory processes recursively into the act of composing. Yet according to Pintrich (2002) postsecondary students “come to college having very little metacognitive knowledge; [including] knowledge about different strategies, different cognitive tasks, and … accurate knowledge about themselves” (p. 223). In addition, Zimmerman and Risemberg (1997) stated that many students define proficient writing as possessing knowledge of vocabulary and grammar, “…however they are far less aware of their need for high levels of self-regulation” (p. 73). As stated above, 73% of the U.S. high school students are not proficient in writing (NAEP, 2012). This lack of self-regulatory skill could explain why first year college students struggle to write at the proficient level; high school seniors become first year college students and bring these deficits in writing with them.

If these statistics are representative of high school seniors as a whole, why is such a large percentage of students failing to demonstrate the ability to write at the proficient level? A look into the classroom could provide answers. Applebee and Langer (2011) described writing instruction at the secondary level as less than ideal. Through classroom observation and teacher and administrator interviews, their National Study of Writing Instruction researched over 260
English, math, social studies, and science classrooms in 20 middle schools and high schools in five states and found that actual classroom instruction had not changed significantly since the early 1980s. Findings that could explain the large percent of struggling writers include:

1. English teachers reported assigning only 5.5 writing assignments of one page or less, 2.6 writing assignments of one to two pages, and only 1.1 extended writing assignments of three or more pages in a nine-week grading period. Teachers from the content areas reported assigning even less.

2. Based upon observation, only 50.2% of the classrooms incorporated writing related instruction. Explicit writing strategy instruction was observed only 6.3% of the time. The use of writing models was observed 5.5% of the time and instruction on the structure and organization of writing was observed only 3.1% of the time.

3. At the time of the study, more class time was spent on direct instruction about writing with less time being spent on the actual act of writing. High school teachers reported only 12.3% of the time was spent writing a paragraph or more during class.

According to Applebee and Langer (2011), there has been a great deal of development in teachers’ conceptions of writing and its importance in learning over the past 30 years, yet using writing “as a way to study, learn, and go beyond – as a way to construct knowledge or generate new networks of understandings – is rare” (p. 26). It can be inferred, based upon the NAEP scores of 12th graders in 2012 that the effectiveness of the writing instruction observed in the classrooms of the Applebee and Langer study during that same time period (2011) was not effective in training students to become proficient writers.

If first year college students are not proficient writers, how can college instructors support or remediate postsecondary instruction to improve students’ writing ability? This is a
challenging question to answer as research on best practices in teaching writing and writing intervention frameworks at the postsecondary level is limited. MacArthur, Philippakos, and Graham (2016) found that little research has “focused on instructional methods or investigated effects on (postsecondary) writing achievement” (p. 856) and Wischgoll (2016) concurred stating that at the time of her study, writing research at the postsecondary level was scarce. In a meta-analysis of research on self-regulated writing, Santangelo, Harris, and Graham (2016) found that “some” writing research is available, but more is needed; especially in the areas of environmental structuring and the social nature of writing, self-monitoring and the effects of writing anxiety on writing self-efficacy, self-regulated processes across genres, time planning and management, and the developmental nature of writing (p. 191).

Researchers have stated that cognitive, writing process, metacognitive, and self-regulation writing strategies are important components to the act of skilled writing (Flavell, 1979; Hayes, 2000; Hayes & Flower, 1986; Graham, Bruch, Fitzgerald, Friedrich, Furgeson, Greene, … Smither, 2016; Harris & Graham, 1985; Kellogg & Whiteford, 2009; Zimmerman & Kitsantas, 2002; 2007; Zimmerman & Risemberg, 1997). These researchers have shown that the use of these four categories of strategies can have a substantial effect on writing ability and writing self-efficacy, or perceived ability to complete the writing task. However, most of this research has focused upon elementary, middle school, and to a lesser degree, high school classrooms. Of the few studies focusing on postsecondary students, most incorporated quantitative measures such as analyzing pre- and post-tests for writing quality improvement with a few adding a brief, post-study student interview asking students about their opinions on the effectiveness of the self-regulated strategy development intervention (Berry & Mason, 2012; Graham & Harris, 1993, 2016; MacArthur & Lembo, 2009; MacArthur & Philippakos, 2013).
Graham and Perin (2007) determined that more research is needed in the area of combining cognitive and metacognitive strategies with a focus on which combinations are most effective to improve writing quality within writing instruction. Santangelo and colleagues (2016), Torrance (2016) and Zimmerman and Risemberg (1997) called for more research in pre-write planning strategies using socially-based learning contexts. Though most of this research was focused on kindergarten through twelfth grade classrooms, it could also be an effective focus for postsecondary writing instruction research as well; specifically, first year college students who have just graduated from high school.

As stated above, most research reviewed for this study incorporated quantitative methodologies. Fewer studies, such as Beck, Llosa, Black, and Trzeszkowski-Giese (2015) and Reed, Schallert, and Deithloff (2002) have incorporated in-depth qualitative case study methodology in the form of structured student interviews and think aloud protocols scheduled several times throughout writing instruction as the actual writing event unfolds. In addition to quantitative data collection, qualitative research studies focusing on postsecondary writers and their perceptions of the effectiveness of strategy-based writing and self-regulated writing strategies are needed to understand the effectiveness of such strategy instruction for writing skill improvement and their effects on perceived writing self-efficacy and writing anxiety. Research using these methods could fill this gap in the field of writing research.

An additional area in need of research within this body of knowledge is the transfer or generalizing of strategy use, specifically in planning across writing genres, across other disciplines, into other classes, and over time (Dean, 2005). Thomas, Englert, and Gregg (1987) found that without teacher prompting, students often use the “Think and tell strategy” (Bereiter & Scardamalia, 1987) when writing independently. This strategy skips any type of
metacognitive, self-regulatory pre-write planning or goal setting, which has shown to be an important component to an effective writing model (Hayes & Flower, 1986). Additional studies that investigate how to promote transfer and generalizing of writing strategies are needed.

**Purpose of This Study**

This study aimed to explore the impact of two pre-write planning formats on overall essay writing quality as well as their effects on self-efficacy, writing anxiety, and student perceptions regarding the effectiveness of the writing strategy. The participants were students enrolled in a postsecondary interdisciplinary first year seminar. A combination of qualitative and quantitative methodologies was used to investigate the effectiveness of collaborative planning, with the primary outcome variables of 1) ability-grouped focus group interviews, 2) overall essay writing quality explored via comparison of writing samples collected before collaborative small group planning and after 3) perceived levels of self-efficacy for the writing task, and 4) perceived levels of writing anxiety. Qualitative data from ability-based focus group discussions was used to explore perceived self-efficacy, writing anxiety, and perceptions of the effectiveness of the intervention and quantitative data was collected to explore overall essay writing quality, self-efficacy, and writing anxiety. Observations from individual student writing conferences and whole class discussions were recorded into a research journal as well.

This research took place within a required first year liberal arts Core One seminar course in a Midwest private university. The theme-based course is designed to introduce first year students to postsecondary education and academic culture to provide them with knowledge to make informed decisions supporting their intellectual and personal development. The writing goal for this course was to produce 10 to 12 pages of polished writing throughout the semester building up to a three to six page sustained academic argument essay which incorporates four to six credible sources.
Students were challenged to develop their communication skills and learn about the scholarly writing expectations of higher education by researching relevant topics within a course theme. The themes for these introductory courses were self-selected by the instructors and students were allowed to pick their top five courses. They were then assigned one of those courses. The theme-based course for this research setting was true crime and cold case investigation, incorporating true crime case research and persuasive essay writing. Students wrote four essays of various lengths over the course of the semester formatted in a variety of text structures; however, the essay structure for this study followed the persuasive text structure format, a structure that requires students to incorporate three or more arguments supported with evidence in addition to an introduction and concluding paragraph.

**Significance of This Study**

This research contributed to the field of writing research in three major areas. First, it addressed the need to determine methods of effective writing instruction for postsecondary students (Graham & Perin, 2007; MacArthur et al., 2016; Santangelo et al., 2016; Wischgoll, 2016) Second, this study addressed a gap in the body of research exploring pre-write planning strategies and environmental structuring for the writing process (Bruning & Kauffman, 2016; Pajares & Viliante, 1997; Santangelo et al, 2016; Torrance, 2016). Environmental structuring refers to the physical and social setting in which writing takes place. Lastly, this study addressed the lack of qualitative research on writing by including qualitative as well as quantitative data collection and analysis in a mixed method design. This methodology addressed the need for writing research that explores college students’ affective responses to writing instruction including their perceived self-efficacy, level of anxiety, and perceptions of the writing strategy (Beck et al., 2015; Reed et al., 2002). The intervention included two planning phases. It began with a traditional, independent planning format, known as the independent planning phase, and
then a collaborative small group planning phase. These two planning phases contributed to the knowledge base on effective environmental social structuring strategies, specifically collaborative small group planning, for postsecondary writing instruction.

**Research Questions**

This study explored student perceptions of their experiences while participating in two planning formats as well as whether students perceived the two planning formats as supportive of their writing ability. It also examined potential relationships between the two planning formats and students’ quality of writing, perceived efficacy for writing, and perceived anxiety about writing. The research questions that guided this study are:

1) How did students perceive their experiences while participating in collaborative small group planning?

2) How effective did students perceive collaborative small group planning to be in supporting their ability to write?

3) How did collaborative small group planning affect the quality of students’ writing?

4) How did collaborative small group planning affect students’ overall perceived self-efficacy for writing?

5) How did collaborative small group planning affect students’ level of writing anxiety for writing?

Based upon the conceptual framework and literature review from this study, it was hypothesized that by incorporating collaborative small group planning groups into the writing process, student self-efficacy would increase, student writing anxiety would decrease, and overall essay writing quality would increase.
Definition of Terms

Collaborative small group planning: an activity completed by a group of students who have researched a similar topic and are planning to write individual persuasive written response essays. Collaborative small group planning includes sharing research resources, ideas for content, structure and feature ideas, and establishing a time frame for each stage in the writing process. Students’ essays were written independently. For instructional purposes, these collaborative planning groups were identified as Research Teams within the classroom.

Metacognition: knowledge about cognition in general as well as awareness and knowledge about one’s own cognition (Pintrich, 2002). The ability to monitor, regulate, and direct one’s own mental processes toward a desired end (Harris & Hodges, 1995) using cognitive monitoring (Flavell, 1979).

Recursive: using a rule or procedure that can be applied repeatedly (Dictionary.com). In this study, recursive applies to the writing process and self-regulated behaviors used during the act of composing (Zimmerman & Risemberg, 1997).

Self-efficacy: beliefs about one’s capabilities to learn or perform certain behaviors (Bandura, 1986).

Self-regulation: the ability to use a self-selected set of strategies to achieve academic goals on the basis of self-efficacy perceptions (Zimmerman, 1989, 2001). These strategies are content-specific, personal, and goal directed but are not generalizable across domains (Schunk, 2001, 2008). Self-regulated strategies that support writing in one domain may not be effective in another. Self-regulation is not an innate skill and must be explicitly taught in a supported environment. In addition, to be a self-regulated writer, one must possess the ability to be metacognitive about the content, process, and progress of one’s own writing.
Self-regulated learning strategies: the strategies explicitly taught within a strategy-based writing model. They are actions and processes used for acquiring information or skill that involve agency, purpose, and a sense that the strategy will result in positive outcomes (Zimmerman, 1989).

Strategy-based writing instruction: a general instructional framework that explicitly teaches students the declarative, procedural, and conditional knowledge of a wide variety of writing strategies. This framework of writing instruction promotes students’ independent use of strategies while writing.

Strategic writing: a method of composing text in which a skilled writer self-selects and employs a variety of strategies while composing a text. These strategies can be a combination of cognitive strategies, writing process strategies, and/or self-regulatory strategies used to support the writer in completing the final writing product or piece.

Strategic writing instruction model: a specific strategy-based writing approach developed by Collins and Collins (1996) that supplies students with strategies that help them develop ability to write effectively throughout their lives. The writing strategies are tools adaptable to a variety of situations along with the ability to understand the context well enough to know which tools to employ in a given situation (Dean, 2005). The overall goal of strategic writing is to teach students how to independently apply and adapt to a variety of writing contexts;

Writing process: In this study, the writing process consisted of a writer’s workshop format, including minilessons, activities to apply the content of the minilessons in a supportive environment, and time to write independently. During independent writing time, one-on-one conferences and small group instruction were completed. Students cycled through the five stages of the writing process for the independent planning essay and the collaborative planning essays.
These five stages are pre-write planning, drafting, revising, editing, and publishing (K-8 Writing, 2014).

The following chapters summarize the specific details of this study. Chapter Two summarizes strategy-based writing instruction models and the theoretical perspective of Zimmerman and Risemberg’s (1997) social cognitive theory for self-regulated writing and review of the relevant literature which informed this study. Chapter Three addresses the research questions and the design of the study, including participants, setting, data sources and collection, and data analysis. Chapter Four summarizes the results of the study and Chapter Five reports conclusions drawn from this study and analyzes implications for postsecondary writing instruction.
CHAPTER 2

REVIEW OF THE LITERATURE

The ability to write a coherent message for a variety of purposes and audiences is a critical skill for young adults of the 21st century. Becoming a strategic, skilled writer could open the door to a college education, a future career, and personal satisfaction. The Educational Policy Improvement Center (Conley, 2007) identified skills in writing within the content areas as one of the four key components for college success and Atkinson and Geiser may (2015) reported that “writing is the single most important skill for success in college” (n.p.). However, as stated in Chapter One, a majority of students fall short in demonstrating an ability to perform this skill. Multiple empirical studies have demonstrated that writing instruction incorporating cognitive, writing process, and self-regulatory writing strategies is an effective tool for teaching students to write and improve composing capabilities. A sampling of scholars who have contributed to this field of research are: Collins and Collins (1996), Dean (2005), Gallagher (2006), Graham, Harris, and Mason (2005), Graham and colleagues (2016), Graves (2004), Kellogg (2008), MacArthur and colleagues (2009, 2013),), MacArthur, Philippakos, and Ianetta (2015), Schunk and Swartz (1993), Zimmerman and Kitsantas (1999, 2002), and Zimmerman and Risemberg (1997). These researchers have focused on a general writing framework identified as strategy-based writing instruction.

There is a wide variety of research goals, methodologies, and findings in the literature on strategy-based writing instruction; however, there are many common threads as well. The goal of this literature review was to seek out these common threads. In the following sections, I first provide a definition and a broad overview of the benefits of strategy-based writing instruction. Next, I summarize three meta-analyses focused on evidence-based strategies and practices found
in strategy-based instruction. The conceptual framework for this study, focusing on a specific strategy-based writing model, comes next followed by a review of strategy-based writing studies. This chapter concludes with a summary of the impact this literature review had on this study’s design.

**Strategy-Based Writing Instruction**

Strategy-based writing instruction is an instructional framework that explicitly teaches a wide variety of writing strategies with the goal of developing independent, skilled writers who are able to use writing as a tool to communicate. Further, it empowers writers to employ combinations of strategies to support independent, self-regulatory writing across domains for a variety of purposes. It explicitly teaches students declarative knowledge (what is the writing strategy), procedural knowledge (how to use the writing strategy), and conditional knowledge (why is it important and when the strategy should be used; Paris, Lipson, & Wixson, 1983) for cognitive, writing process, and self-regulatory strategies within a writing workshop format using the gradual release of responsibility framework (Pearson & Gallagher, 1983). Some of these strategies are self-monitoring, self-reflection, the use of graphic organizers, peer review, goal setting, and focused deliberate practice (Harris & Graham, 2009; Kellogg & Whiteford, 2009; MacArthur & Lembo, 2009; Schunk & Zimmerman, 2007; Wischgoll, 2016; Zimmerman & Kitsantas, 2002, 2007). Writers who are strategic self-select and employ a variety of strategies while independently composing a text.

**Benefits of Strategy-Based Writing Instruction**

Dean (2010) asserted that strategy-based writing helps students identify, set, and accomplish goals. The use of effective strategies can set novice writers apart from skilled writers
because, “… strategies provide the essential extra element for developing writers by moving them beyond putting words on paper to considering the cognitive processes involved – and the tools that will help them address those processes” (Dean, 2010, p. 5).

Strategies, specifically using models and providing exemplar writing to establish proficient norms, can support students to identify characteristics of good writing: what it looks like and sounds like. The supportive nature of writing strategy use promotes positive attitudes and self-efficacy for writing (Harris, Graham, Friedlander, & Laud, 2013; Schunk & Swartz, 1993; Zimmerman & Risemberg, 1997). Finally, the use of writing strategies promotes development of resiliency and perseverance; important traits for students who will be expected to use writing as a tool to demonstrate their learning or communicate their thinking in higher education or in their careers.

**Strategy-Based Writing Meta-Analyses**

The research in the field of strategy-based writing instruction has contributed an immense amount of knowledge on best practices and evidence-based strategies. Findings have led to a clearer picture of the most effective practices, focused on strategy instruction. Three meta-analyses (Graham, Harris, & Chambers, 2016; Graham & Perin, 2007; Santangelo et al., 2016) have attempted to summarize this research into a list of most effective writing strategies and evidence-based best teaching practices for strategy-based writing instruction.

**Most Effective Writing Strategies**

Graham and Perin (2007) attempted to identify the most effective strategies for writing instruction, narrowing the list to ten instructional practices that demonstrated positive effect sizes for writing quality. Their findings confirmed the value of teaching cognitive, writing process, and self-regulatory strategies to students. Strategies with the highest effect sizes included writing
process strategies such as planning, revising, and editing; and cognitive strategies such as teaching students procedures for summarizing reading material and how to write more complex sentences. Self-regulatory strategies with the highest effect sizes included goal setting, planning, and teacher modeling. In addition to strategy instruction, Graham and Perin also found large effect sizes for socially-based collaborative learning and for writing activities designed to sharpen inquiry skills.

**Self-regulating Processes**

Santangelo and colleagues (2016) focused on a specific writing model known as the social cognitive model for self-regulated writing developed by Zimmerman and Risemberg (1997). Like the Graham and Perin meta-analysis, Santangelo and colleagues (2016) focused on writing process studies that demonstrated positive effect sizes on writing quality, finding similar results. The highest effect sizes were found for instruction that included cognitive strategies, identified as “general or genre-specific cognitive strategy instruction” (p. 188) and self-regulatory strategies. Several self-regulatory strategies demonstrated high effect sizes such as self-selected models, self-evaluation based upon standards, and self-monitoring. Mental imagery showed high effect sizes in grades three through six only.

**Evidence-based Best Teaching Practices**

Graham and colleagues (2016) set out to determine evidence-based best teaching practices in writing instruction. Unique to this meta-analysis was their focus on teacher instructional practices and the inclusion of a broader range of methodologies. These researchers identified six recommendations for best practices in writing instruction with many of their recommendations similar to the findings of the first two meta-analyses. Examples include explicitly teaching writing skills, content knowledge, and self-regulated strategies, using models,
and prompting students to use imagery as they compose all had positive effects on writing quality. In addition, positive effects were also found for creating a supportive writing environment. This includes teachers setting goals, students collaborating as they compose, and individualizing writing instruction in a variety of settings. Finally, increasing the amount of time students are allowed to write, providing space for teacher and peer feedback, and the use of writing as a tool to support student learning across disciplines and content areas and for a variety of purposes were all identified as evidence-based best teaching practices for improving the quality of students’ writing.

There are several common threads in the results of these three studies. First, the explicit instruction of cognitive, writing process, and self-regulatory strategies is an effective and evidence-based practice. Specific strategies with high effect sizes included in all three studies were goal setting, pre-write planning, and modeled instruction. Providing a supportive, socially-based, collaborative learning environment with time to interact with peers was found to be an effective practice in all three. Finally, time to write for authentic purposes and across disciplines can improve writing quality. The findings of these three meta-analyses support the use of strategy-based writing instruction to improve writing skill and to develop students’ abilities to identify, adapt, and utilize writing strategies for personal and academic needs and purposes.

**Strategy-Based Writing Instructional Model**

Strategy-based writing instruction encompasses specific writing models teachers can incorporate into lesson planning. In this review of the literature, four models, each with a large and robust body of supporting research, were identified: cognitive strategy instruction in writing (Englert, Raphael, & Anderson, 1992; Raphael & Englert, 1990), strategic writing instruction (Collins & Collins, 1996; Dean, 2005; Helsel & Greenberg, 2007), self-regulated strategy
development (Graham, 2009; Graham & Harris, 1993; Harris & Graham, 2009; Graham et al., 2005), and the social cognitive model for self-regulated writing instruction (Schunk & Swartz, 1993; Zimmerman and Kitsantas, 2002; Zimmerman & Risemberg, 1997).

These four writing models possess many similar elements. Each of the models are influenced by multiple perspectives when developing their writing models. All four models incorporate instructional practices, strategies, and evidence-based best teaching practices identified as most effective in the meta-analyses discussed previously (Graham et al., 2016; Graham & Perin, 2007; Santangelo et al., 2016). All provide large amounts of time to write in a variety of domains and for authentic purposes and provide a supportive writing environment where teachers or students set goals, explicitly model skills using think alouds, provide collaborative learning experiences, plan using graphic organizers, and provide teacher and peer feedback.

There is one model, however, that stands apart from the others based on the theoretical depth it provides for defining the processes involved in strategy-based writing, specifically within the environmental structuring and pre-write planning domains: the social cognitive model for self-regulated writing instruction (Zimmerman & Risemberg, 1997). This model places equal status on the “skill, will and self-regulation” (Zimmerman & Risemberg, 1997, p. 118) of writing, defined as the cognitive, motivational, and self-regulating processes involved in strategy-based writing. It emphasizes the importance of socially-based learning experiences and the impact the writing environment has on the act of composing. It explains the impact perceived self-efficacy has on writing identity, motivation, anxiety, and the writing process; and provides an additional layer of knowledge regarding self-regulatory strategy use and acquisition. Finally, it includes detailed explanations and knowledge about writing strategies involved in the act of
composing and the recursive nature of their interaction. These components make the social
cognitive model for self-regulatory writing unique and why it was chosen for the theoretical
foundation for this study. It provides the empirical clarity needed to truly understand the act of
strategic writing and best practices for instruction.

**Conceptual Framework**

The Zimmerman and Risemberg (1997) social cognitive model for self-regulated writing
is based on the belief that writing is more than a “literary expression of cognitive skill” (p. 76)
and on the idea that social, motivational, behavioral, and cognitive processes all contribute
equally to the act of composing, in a dynamic and interactive loop. The model seeks to describe
how learning and self-regulatory development are mutually beneficial. It applies the social
cognitive theory of self-regulation (Bandura, 1986, 1988, 2001) to the writing process and is
based upon the idea that “students can be taught to become more self-regulated learners by
acquiring effective strategies and by enhancing perceptions of self-efficacy” (Zimmerman, 1989,
p. 336). Students’ use of self-regulated learning strategies enables them to develop their own
sense of control over their writing behavior.

There are five important components of this model that contribute to the theoretical
foundation of this study. First, it incorporates multiple theoretical perspectives important to
learning and writing instruction. Second, it incorporates the social nature of learning and the
importance of social interaction. Third, it incorporates explicit strategy instruction and a triadic
model of interdependent processes and behaviors, identified as classes, important to the act of
writing. Fourth, it places importance on perceived self-efficacy and writing anxiety to writing
skill and will. Finally, it incorporates a multileveled framework for the developmental nature of
writing skill acquisition. These five components provide the theoretical foundation and
conceptual framework of this study.
Multiple Perspectives

The first component important to this study is the eclectic nature of the writing model. Harris and Graham (2009) stated that effective writing models must be grounded in an integration of “multiple lines of research from multiple perspectives in order to develop powerful interventions for students who face significant academic challenges” (p. 119). The Zimmerman and Risemberg social cognitive model for self-regulated writing (1997) integrates multiple lines of research and perspectives to explain processes involved in strategic writing (Harris & Graham, 2009; MacArthur & Lembo, 2002; Zimmerman & Risemberg, 1997). Many perspectives have contributed to the understanding of how strategic writing ability develops and is taught as well as to the development of the Zimmerman and Risemberg model. They are Hayes and Flower (1986) and Hayes’ cognitive writing models (1996; 2000), Flavell’s model of cognitive monitoring (1979), Vygotsky’s social cultural theory (1978), and Bandura’s social cognitive theory (Bandura, 1986, 1988, 2001).

Hayes and Flower (1986) and Hayes (1996; 2000) are considered foundational models within the field of writing research (MacArthur & Graham, 2016) laying the foundation for vocabulary used and the cognitive strategies taught when composing text. Flavell’s model of cognitive monitoring (1979) provides the foundation for the idea of applying cognitive processes (skill), metacognition (will), and self-regulatory strategies to writing instruction. Vygotsky (1978) provided the concept of scaffolding and the idea that cognitive development occurs best in social interactions within the physical world where the learner is challenged beyond their current level of development to their zone of proximal development, where learning takes place. This learning is enhanced through supported collaborative activities with capable individuals such as teachers and/or peers.
Finally, Bandura’s Social Cognitive Theory (1986, 1988, 2001) provides a social perspective to learning and the idea that students can regulate the motivational, affective, and social determinants of their cognitive functioning. Bandura theorized that good self-regulators do better academically, including their ability to write a coherent message. The incorporation of these theoretical perspectives provides a solid foundation for understanding the myriad components contributing to effective writing instruction and specifically to the environmental structuring and pre-write planning domains. It also rationalizes the incorporation of broad categories of strategies into writing instruction.

**Social Learning Experiences**

Three broad social learning experiences are the foundation of the social cognitive model of self-regulated writing (Zimmerman & Risemberg, 1997) and have a significant impact on the acquisition of self-regulatory strategies. The first, and probably most important, is the idea that strategies and processes of the model are acquired through social learning experiences such as modeling, incorporating writing exemplars into instruction, and teacher and peer collaboration. Second, strategy instruction from this theoretical perspective is based upon social interactions. Zimmerman and Risemberg acknowledge cognitive models as important to learning, but extend that thinking to the idea that students construct their own understanding for when and where to use cognitive, metacognitive, and self-regulated strategies through interacting with peers and teachers (MacArthur & Lembo, 2009, Zimmerman, 2000, 2001).

Finally, self-regulation is viewed as a domain-specific, acquired skill dependent on several processes such as planning, strategizing, and self-monitoring with an emphasis on the social, environmental influence (Schunk & Zimmerman, 2007). The self-regulatory strategies used while writing will vary between different domains and it is within the social learning
environment that students are able to understand which self-regulatory strategies to use and in what situations. Social learning experiences are fundamental to skill acquisition and the act of composing a text within the social cognitive theory of self-regulation. Because this study seeks to extend what we know about effective writing instruction as well as the most effective environmental structure for writing, social learning theory is a foundational construct for this research.

**Strategy Instruction and the Triadic Nature of Writing**

The Zimmerman and Risemberg model places equal importance on cognitive, motivational, writing process, and self-regulating strategies and their interactive nature while composing. In addition to explicit instruction of these broad categories of strategies, this model provides a detailed conceptualization of self-regulatory behaviors and the nature of their interaction. Self-regulatory behaviors are those a writer consciously implements while working and monitoring progress toward a learning goal (Pajares & Valiante, 1997; Zimmerman, 2000, 2001). The use of metacognitive strategies contributes to a writer’s ability to be self-regulating. Zimmerman and Risemberg (1997) incorporate a triadic recursive model similar to Bandura’s social cognitive theory (1986, 1988, 2001) and apply it to the writing domain. This triadic model includes three broad influences, or processes, that contribute to the act of writing: the environmental process, the behavioral process, and the writer’s own personal process. Within each process there are self-regulatory behaviors, identified as classes in this model, that writers use while composing. For example, within the environmental process, there are specific self-regulatory behavior classes that relate to the writing environment. Likewise, the behavioral process contains specific self-regulatory behavior classes that relate to writing behaviors. Finally, the writer’s personal process contains specific self-regulatory behavior classes related to the
personal processes the writer possesses. See Table 2.1 for a description of each of these three processes and ten classes. A brief summary with specific examples of each process and class as well as connections to the goals of this study follows.

Table 2.1

| Three Processes and Ten Self-Regulatory Classes in The Social Cognitive Model for Writing |
|-----------------------------------------------|---------------------------------------------------------------|-------------------|
| **Environmental process**                    | **Behavioral process**                                        | **Personal process** |
| The physical and social setting in which writing takes place | Self-observation, self-judgement, and self-regulation of writing | Cognitive beliefs and knowledge, metacognitive processes, and the affective states of writing |
| → Environmental self-regulatory classes include: | → Behavioral self-regulatory classes include: | → Personal covert self-regulatory classes include: |
| 2. Self-selected models, tutors, or books      | 4. Self-consequenting                                         | 7. Goal setting |
|                                               | 5. Self-verbalizations                                       | 8. Self-evaluation |
|                                               |                                                               | 9. Cognitive strategy use |
|                                               |                                                               | 10. Mental imagery |

*Note.* This table adapted from Zimmerman & Risemberg, 1997

**Environmental Process and Self-regulatory Classes**

Environmental processes refer to the physical context and social experience in which writing takes place. While there are six types of environmental processes: enactive outcomes, modeling, verbal persuasion, direct assistance, literary and other symbolic forms of information, and structure of the learning context, theorists have paid particular attention to “the impact of social and enactive experiences on human functioning determining that enactive outcomes are the most influential method to changing a learner’s perception of efficacy and improving the retention of knowledge” (Risemberg, 1986, p. 335). According to Risemberg, a student’s decision to enact or use a strategy to support their learning ultimately rests on the question, “Does this strategy work for me on this topic” (p. 335) and in this writing context? This type of
enactive, metacognitive thinking and interaction between the environmental, behavioral, and personal processes of writing will determine if the strategy will continue to be used or be replaced with another, more effective one. This is the essence of self-regulated learning.

Within this environmental process, self-regulatory behavior classes include environmental structuring and self-selected models, tutors, and books. According to Zimmerman and colleagues (1997, 2002) and Graham and Perin (2007), this class has received the least amount of research, yet it is cited most often as important to their writing craft. Environmental structuring includes such activities as selecting, organizing, and creating effective writing settings and conditions, and self-regulated strategies such as writing in a quiet room, avoiding distractions, or planning alone or with peers. Self-selected models, tutors, or books that serve as sources for writing knowledge and skill are also within the environmental process. This study’s primary focus was to explore the extent to which environmental structuring affects writing ability, self-efficacy, writing anxiety, and student perception of composing.

**Behavioral Process and Self-regulatory Classes**


The self-regulatory classes found within the behavioral processes are the overt responses to self-observations and self-j judgements made while writing. They are strategies the writer possesses for controlling their actions such as self-monitoring, self-consequences, and self-
verbalizations. Examples include pre-planning activities, keeping track of the number of pages written, or rewarding oneself for meeting a writing goal.

**Personal Processes and Self-regulatory Classes**

Personal processes relate to the cognitive knowledge and beliefs, metacognitive processes, and affective states associated with writing. These include the writer’s process and product writing goals; declarative, procedural, and conditional knowledge the writer possesses; and the interaction of that knowledge while composing. The personal covert classes of self-regulatory behaviors include time planning and management, goal setting, self-evaluation, cognitive strategy use, and mental imagery. Specific examples of personal covert self-regulated behaviors include the use of cognitive or affective strategies while writing, problem solving strategies, or lowering self-evaluative standards to reduce writing anxiety. This study’s focus is on the cognitive strategy of pre-write planning and the setting in which it takes place. Other personal processes related to this study are time planning and management and goal setting.

**Covert Self-regulation Feedback Loop**

Zimmerman and Risemberg (1997) posited that the three processes and ten classes of writing interact via a “cyclic reciprocal feedback loop” (p. 73). This covert self-regulated feedback loop allows writers to self-monitor and respond to feedback regarding the effectiveness of self-regulatory processes (Santangelo et al., 2016; Figure 2.1).
Figure 2.1

*Reciprocal Feedback Loop of Self-Regulated Functioning*

*Note.* This figure is adapted from Zimmerman & Risemberg, 1997, p. 78

The writing processes appear in each circle of the figure and the self-regulatory classes are filled in between each process. The dotted lines running between each process indicate the flow of feedback, the solid lines indicate the process output for the writing task, and the self-regulation feedback loop incorporates all of these activities. For example, the belief a writer has in their ability to write (personal process) can be influenced by comparing their writing to their peers and through teacher feedback (environmental process). Based upon that self-evaluation, a writer will either persevere if the feedback or comparison is positive or abandon the writing task if negative (behavioral process).

It is important to note the one-way flow of the environmental process. It sends input to the personal process which then sends output to the behavioral process. It is from the behavioral process that environmental factors can be adjusted. For example, a student is working in a quiet
spot in the library when a group of students sit down at an adjacent table and begin talking. The message sent to the self is that this setting is no longer conducive to writing. The self sends a message to the behavioral process to find another place to work and the student gets up and leaves.

Ideally, self-regulated writers would attempt to use all three processes and ten self-regulated classes in synchrony when composing. The feedback loop is dependent on self-monitoring of the outcome goals set for the writing task and allows writers to be metacognitive about the input and output of the three writing processes based on the strategies being used and the perceived quality of the writing product. Ultimately, the writer’s perception of this reciprocal process will affect their self-efficacy for the writing task and their writing ability in general. The writers’ sense of self-efficacy is “predictive of not only their self-regulatory processes but also their intrinsic motivation to write and their eventual literary outcomes” (Schunk & Zimmerman, 1997, p. 198). This feedback loop is the essence of the Zimmerman and Risemberg model because it provides a clear picture of the internal narrative necessary to become an independent, self-regulated writer. This feedback loop is not found in other strategy-based writing models reviewed for this study.

**Perceived Self-efficacy**

Perceived self-efficacy is the fourth component important to the theoretical perspective of this study and is unique to this strategy-based writing model. Self-efficacy is defined as one’s perceived ability to plan and implement actions necessary to attain designated levels of writing on specific tasks (Zimmerman, 1989, 1998; Zimmerman, Bonner, & Kovach, 1996). It is a key variable in self-regulated learning (Bandura, 1986, 1988, 2001). Self-efficacy can be compared to a writing thermostat “that regulates strategic efforts to acquire knowledge and skill through a
… feedback loop” (Zimmerman, 1989, p. 330). The reciprocal nature of the three writing processes and ten self-regulatory behavior classes explains how writers self-monitor the effectiveness of their self-regulatory behaviors which in turn is closely linked to the writer’s perceived self-efficacy (Zimmerman & Risemberg, 1997).

Learners obtain information from their actual writing performance, writing models, feedback from peers or teachers, and physiological and emotional reactions, such as writing anxiety, to determine their level of self-efficacy (Bruning & Kauffman, 2016; Pajares, 2008). Writing anxiety is defined as the anxiety an individual feels when faced with a task that requires them to share their thoughts, feelings, or knowledge in writing (Güler, Ilhan, Guneyli, & Demir, 2015). Bruning and Kauffman (2016) stated that writing anxiety can have significant effects on writing development and self-efficacy. It is important to identify students who experience writing anxiety early to provide the support needed to alleviate these feelings and limit the effect writing anxiety has on writing ability and self-efficacy.

Students’ levels of perceived self-efficacy are related to two important aspects of the reciprocal feedback loop: students’ use of learning strategies and their self-monitoring (Zimmerman, 1989). Students with higher perceived self-efficacy appear to use higher quality learning strategies, work harder, persist longer when they encounter difficulties, and achieve at higher levels (Kurtz & Borkowski, 1984; Pajares, 2008; Zimmerman, 1989). Schunk (2001, 2008) reported that modeling enhanced self-efficacy, specifically when models are perceived to be similar in age, ability, or achievement level to the writer.

Applying these findings to writing, Zimmerman and Risemberg (1997) stated that self-efficacy for writing was significantly associated with writing achievement. It appears that self-appraised successes in writing raise self-efficacy for writing, and failures lower it. Either way,
the level of perceived self-efficacy and anxiety have an effect on the environmental, behavioral, and personal writing processes and use of self-regulating classes for future writing tasks.

**Social Cognitive Model of Sequential Skill Acquisition**

The fifth and final component important to this study is the social cognitive model of sequential skill acquisition. Novice learners acquire cognitive, writing process, and self-regulatory skills and strategies most rapidly from social learning experiences such as models and interactions with peers and teachers (Zimmerman & Rosenthal, 1974). Taking this into account, Zimmerman and Risemberg (1997) explained how learners develop competence in self-regulatory strategies by describing a social cognitive model of sequential skill acquisition (Zimmerman & Kitsantas, 1997, 2002, 2007; Zimmerman & Risemberg, 1997). This multilevel model “predicts that academic competence develops initially from social sources and subsequently shifts to self-sources in a series of levels” (Schunk & Zimmerman, 2007, p.198). However, these theorists stress that development is a dynamic sequence from social-support to self-support rather than a one-direction, age-related progression of specific stages. A brief summary of the developmental processes involved as writers progress from a novice to a skilled writer follows.

**Developmental Processes of Self-regulatory Behaviors and Metacognition**

A notable amount of research has shown that older and higher achieving students have better self-regulating and metacognitive knowledge and control compared to younger more novice learners (Baker & Brown, 1984; Hacker, Dunlosky, & Graesser, 1998; McCormick, 2003). However, Flavell (1979) cautioned that claims cannot be made that a learner either has or does not have metacognitive knowledge or self-regulatory control and urged educators to consider the ability to think metacognitively as developing over time with “early competencies
serving as building blocks for subsequent acquisitions” (p. 909). In addition, research suggests that the use of metacognition is dependent upon a combination of the task, the writing setting, the learner’s background knowledge, and the learner’s perception of difficulty of completing the task (Baker, 2005; Baker & Brown, 1984; Flavell, 1979). The challenge for novice learners is that cognitive resources available for learning a difficult task are limited. Any one challenging task can consume so much of the available cognitive resources that other tasks cannot be completed or attended to at the same time. For a novice, the process of a difficult task such as composing a text involves working one step at a time. The cognitive load is simply too great to do two tasks at once (Samuels, Ediger, Willcutt, & Palumbo, 2005).

Pintrich and Zusho (2002) asserted that development of working memory processes and a learner’s background knowledge contribute to the independent use of metacognitive and self-regulatory processes. They stated, “Older students can think about their own thinking and regulate it, not because they are more mature or in a higher developmental stage, but because their cognitive resources are freed up for regulatory tasks in comparison to knowledge search and retrieval processes” (p. 258). However, the differences in metacognitive and self-regulatory strategy use between students has more to do with skill expertise and less to do with age. Pintrich and Zusho (2002) contended that when a student is learning a difficult task, they tend to be “other-regulated” (p. 258), initially through instructional support and teacher scaffolding, before they can self-regulate. These theorists asserted that a greater degree of background knowledge increases the ability to incorporate metacognitive and self-regulatory strategies. No matter the age of the student, if the task is manageable, the student is more likely to use self-regulatory strategies. If the task is difficult, the student is less likely to use their self-regulatory strategies and more likely to depend on others to regulate their learning, (e.g., teachers or models).
Because of this, theorists recommend teaching cognitive, metacognitive, writing process, and self-regulatory strategies in tandem so once learners have available cognitive resources to incorporate metacognitive and self-regulated strategies, they have them in their repertoire ready to use. Afflerbach, Cho, Kim, Elliker-Crassas, and Doyle (2013) stated that by incorporating both cognitive and affective factors into classroom instruction, teachers promote students’ literacy development, helping them to become skilled, strategic learners. However, research has shown that even though a learner has metacognitive and self-regulatory strategies available to support their learning, they are not always used. In fact, according to Baker (2005), middle school seems to be the time when students are cognitively more prepared to benefit from metacognitive and self-regulatory strategy instruction; however, because their intrinsic motivation for learning begins to decrease, they tend to use them less compared to other groups of students. Because of this, motivation and affect play a major role in the activation or automaticity of strategy use.

**Writing and the Social Cognitive Model of Sequential Skill Acquisition**

When applying these theoretical concepts to the social cognitive model of skill acquisition and writing as well as Vygotsky’s sociocultural theory (1978), Schunk and Zimmerman (1997) identified four developmental phases or stages progressing from social sources of influence as the student is learning the skill to self-sources as the student becomes independent. A description of each of these phases is below.

1) The observational stage focuses on novices observing writing models demonstrating how the skill is to be performed, receiving guidance, feedback, and reinforcement from the writing model

2) The emulation stage occurs when the novice writer imitates the model’s general
pattern or style of writing

3) The self-controlled stage occurs when the learner has internalized the use of the writing strategy, independently performing a transfer task, yet is still dependent on a model’s performance and self-evaluates based upon those parameters.

4) The self-regulated stage is the level at which the learner has complete control of the writing skill and is able to initiate self-regulatory strategies and adapt the writing skill to changing personal and contextual tasks (Schunk & Zimmerman, 1997, p. 199).

These stages are similar to the ways Pintrich and Zusho (2002) and Flavell (1979) described the development of metacognitive and self-regulation abilities. The learner has shifted from dependence on modeled writing processes to performance writing outcomes (Schunk & Zimmerman, 1997). These four developmental stages are important considerations when planning instruction to ensure students are given the support they need to develop into skilled, self-controlled, self-regulated writers. The incorporation of the two planning formats this study is examining will be taught during the observational and emulation stages and implemented during the self-controlled phase.

**Concluding Comments on the Social Cognitive Model for Self-Regulated Writing**

The social cognitive model of self-regulated writing (Zimmerman & Risemberg, 1997) contributes a theoretical and comprehensive focus to this study. First, the model integrates multiple perspectives, including those of informational theorists, behavior performance considerations, and the central role of social and self-regulated motivation and action. Second, it is a strategy-based writing framework that incorporates a triadic, recursive model depicting how the environmental, behavioral, and personal processes and self-regulatory classes interact during composing. It is a model that is based upon the effects of perceived self-efficacy and its
importance to writing skill, will, and independent writing performance. Finally, it provides a four-stage model for the teaching and acquisition of writing skills.

Using this model as a foundation, this study focused on two specific strategy domains, environmental structuring and pre-write planning process, to determine if they affected students’ writing ability, writing self-efficacy and reduce writing anxiety. The four developmental stages of skill acquisition posited by Schunk and Zimmerman (1997) described above provide the socially-based, supportive instructional framework needed to implement these writing strategies in two planning formats.

**Review of Strategy-Based Writing Studies Involving Environmental Structuring and Pre-Write Planning**

This review of strategy-based writing studies that incorporated environmental structuring and the pre-write planning process is organized around clusters of the five components of the social cognitive model for self-regulatory writing. Studies specific to the research base on that model (Pajares & Valiante, 1997; Schunk & Swartz, 1993; Schunk & Zimmerman, 1997; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 1999, 2002, 2007; Zimmerman & Risemberg, 1997) as well as empirical research from other models and perspectives are included. Including evidence from multiple perspectives is theoretically and contextually acceptable because the foundations for all strategy-based writing models reviewed are based upon an eclectic approach and share many evidence-based best practices for writing instruction.

The five foundational components of the social cognitive model for self-regulatory writing for this study are: incorporation of multiple theoretical perspectives, the social nature of learning, explicit strategy instruction, an emphasis of perceived self-efficacy on writing skill, and a multileveled model for sequential skill acquisition. This review is organized into three clusters.
Because self-efficacy levels are directly affected by strategy and instructional practices used during instruction (Schunk & Swartz, 1993; Schunk & Zimmerman, 2007; Shell, Colvin, & Bruning, 1995; Shell, Murphy, & Bruning, 1989; Zimmerman & Risemberg, 1997), self-efficacy is clustered with each of the broad components from the social cognitive model. The clusters and their corresponding research are: 1) social learning experiences, collaboration, and its effects on self-efficacy, 2) strategy instruction and its effects on self-efficacy, and 3) the developmental and multileveled approach to writing skill acquisition. A brief overview of the research methods used in these studies will be summarized first.

**Overview of Identified Studies**

The studies identified in this literature review contained many common methodologies. All participants in the studies ranged from third grade to college-level as well as adult learners working toward GED certificates; however, the majority of the participants were in elementary or secondary grades. Most included quantitative research methods with a smaller number incorporating qualitative methodologies in a mix-method design. Very few investigated student perceptions to strategy-based writing instruction. All studies incorporated explicit strategy instruction using the gradual release framework (Pearson & Gallagher, 1983) for learning support. Because this study is grounded on a writing model that is strategy-based and focuses on postsecondary first year students, research at the college-level is of particular interest. Of all the strategy-based research reviewed for this study, the college-level studies resulted in findings similar to research at the elementary and secondary grade levels. These studies, though few in number, found that writing ability did improve when strategies were included in postsecondary instruction. As a result, it was concluded that all students, including those at the postsecondary
level, can benefit from writing strategy instruction (Berry & Mason, 2012; MacArthur & Lembo, 2009; Wischgoll, 2016; Zimmerman & Kitsantas, 1999, 2002).

**Literature on Social Learning Experiences and Collaboration**

In the three meta-analyses summarized previously, social learning experiences and peer collaboration were identified as instructional practices that resulted in improved writing ability and self-efficacy (Graham & Perrin, 2007; Santangelo, et al., 2003; Graham et al., 2016). Social interactions have been incorporated into many of the studies reviewed for this literature review and include writing models with think alouds, collaborative writing, social feedback, and learning by reviewing.

**Writing Models with Think Alouds**

The gradual release of responsibility framework developed by Pearson and Gallagher (1983) incorporates the strategy of modeling skills in the “I Do” and “We Do” phases of instruction for novice learners (other-regulated). After these phases, support is gradually reduced until the learner can independently perform the skill on their own (self-regulated phase). Modeling is a key component to socially-based writing instruction. It is a precursor to self-regulation and serves to transmit new skills to novice learners; skills which they did not possess prior to the lesson (Zimmerman & Risemberg, 1997).

To learn from modeling, some form of think aloud by the teacher or skilled adult must be included. In addition, students must be engaged, must understand and remember the information, and must be able to produce a response to the modeling in a supportive environment (Zimmerman & Rosenthal, 1974). In all three meta-analyses summarized previously (Graham et al., 2016; Graham & Perin, 2007; Santangelo et al., 2016) writing models and think alouds were identified specifically as highly effective in writing skill acquisition.
Within the first and second stage of the social cognitive model of sequential skill acquisition (Schunk & Zimmerman, 1997), modeling with think alouds is used to transmit new learning. During the first stage, the observational stage, a model adopts a teaching role and demonstrates for the learners the steps required to learn the skill as well as verbalizes the thought processes that accompany the skill. These verbalizations, or think alouds, are important to the modeling phase of instruction (Graham et al., 2016; MacArthur et al., 2015). During the second stage, the emulation stage, the learner repeats the process the model demonstrated and the model guides the learners through that process. In this study, both pre-write planning formats were introduced to students using modeling with think alouds during these two beginning stages. Research has focused on two types of modeling; the mastery model and the coping model.

**Mastery Models Versus Coping Models.** Mastery models perform a task perfectly and seamlessly without demonstrating struggle or error; whereas coping models appear less competent and share their struggles and errors as they demonstrate a skill to novice learners. Research has shown that coping models are more effective at teaching learners a new skill (MacArthur et al., 2014; Wischgoll, 2016; Zimmerman & Kitsantas, 2002).

MacArthur and colleagues (2015), Wischgoll (2016), and Zimmerman and Kitsantas (2002) examined the effectiveness of coping models over mastery models at the undergraduate level within the observational and emulative stages of the social cognitive model of sequential skill acquisition (Schunk & Zimmerman, 1997). All studies incorporated coping models with think alouds while writing. Results revealed that students who received observational instruction with a coping model demonstrated higher effects on learning, were sustained through to the emulation stage, and acquired more writing skill, greater self-satisfaction, and higher interest than those viewing a mastery model. Overall effects on self-efficacy were positive.
Based upon the results of these studies, the use of coping models with think alouds is an effective component for skill acquisition within a socially-based learning environment. This could be due to the demonstration and think aloud process of applying problem solving strategies as the coping model taught and struggled with implementing the writing skill. The skills and problem-solving strategies were transferred to the students’ independent writing through observation; the coping model made the implicit use of strategies explicit for the students allowing learning to occur.

**Collaborative Writing**

The second social interaction instructional practice found to result in improved writing ability is collaborative writing. An important stage within the gradual release of responsibility framework (Pearson & Gallagher, 1983) is the use of peer collaboration. It is known as the “You Do Together” stage and allows students to work together as teacher support is gradually withdrawn and students progress toward independent use of a skill. The self-controlled stage of the Schunk and Zimmerman (1997) social cognitive skill acquisition model corresponds to this stage. Collaborative writing is defined as any activity where “students help each other with one or more aspects of their writing” (Graham & Perin, 2007, p. 16) and can be included during goal setting, implementation of a strategy, or during self-regulation strategies such as planning, revising, and/or editing. It is a foundational component of the social cognitive model of self-regulatory writing (Zimmerman & Risemberg, 1997).

Research incorporating peer collaboration as the experimental variable in the writing domain is a relatively new field that is limited in nature (Storch, 2005). In the research reviewed (Bhowmik, Hilman, & Roy, 2019; Dean, 2010; Fernández Dobao, 2012; Hillebrand, 1994; Neumann & McDonough; 2015; Storch, 2005; Wilhelm, 1999), four broad categories of results
emerged: 1) the effects of collaborative writing on planning, 2) the effects on students’ writing performance, 3) the effects on the learning environment and behaviors, and 4) important implications to consider if incorporating this format into instruction.

**Effects of Collaborative Writing on Planning.** First, collaborative writing had positive effects on the pre-write planning process. Bhowmik and colleagues (2019), Neumann and McDonough (2015), and Storch (2005) found collaborative writing to result in better planning defined as more time spent planning and generating more ideas. According to Storch (2005), this was due to the idea that “collaboration afforded the students the opportunity to interact … [and] encouraged students to collaborate when generating ideas” (p. 168). Based on student interviews, this aspect of collaborative writing was deemed most valuable to the participants’ self-perceived writing ability (Storch, 2005).

**Effects of Collaborative Writing on Writing Performance.** The second category of collaborative writing research results was the effects on students’ writing performance. Similar to its effects on planning, writing performance was also enhanced overall when collaborative writing was included in the instructional design defined by more appropriate thesis statements, fewer unnecessary details, and more accurate evidence (Bhowmik et al., 2019; Dean, 2010; Fernández Dobao, 2012; Neumann & McDonough, 2015; Storch, 2005). Though essays were shorter in length, they were more succinct and focused on the purpose for the writing assignment (Fernández Dobao, 2012; Storch, 2005). Essays also showed evidence of better audience awareness (Bhowmik et al., 2019; Dean, 2010) and better grammatical accuracy (Fernández Dobao, 2012). Graham and colleagues (2005) found that when peers collaborated together during writing, they included more story elements in their narratives and spent more time composing their informative papers than the control group.
Effects of Collaborative Writing on the Learning Environment and Behaviors.

Enhanced learning environments and learning behaviors was the third theme found in the studies reviewed. Regarding learning behaviors, Fernández Dobao (2012) found that participants challenged one another beyond their individual performance levels. Storch (2015) found that students were more willing to take risks in their writing behaviors and higher levels of critical thinking and problem-solving behaviors were demonstrated when writing collaboratively (Bhowmik et al., 2019; Fernández Dobao, 2012; Wilhelm, 1999). Hillebrand (1994) found students to be more agentive, self-aware of writing strengths and struggles, and “by working together toward a common goal, … students achieved synergy – an outcome that is superior to any one’s individual effort” (p. 74).

When students write collaboratively, the writing environment is perceived as more supportive and positive as multiple perspectives are pooled together, the writing project is co-owned, and writing anxiety is relieved, thus increasing self-efficacy levels (Bhowmik et al., 2019; Dean, 2010; Laal & Ghodsi, 2012; Wilhelm, 1999). Finally, Graham and colleagues (2005) found that peer collaboration enhanced transfer to other writing tasks over control groups. Harris and Graham (2009) found similar results but called for more research into the best methods for incorporating peer collaboration and support into classroom instruction.

Implications for Use of Collaborative Writing in the Classroom. Finally, of the studies reviewed, several implications were suggested to consider when incorporating collaborative writing into the instructional design of classroom writing. First, the process must be taught and should not be considered the best format universally (Bhowmik et al., 2019; Dean, 2010). Bhowmik and colleagues (2019) stated that instructors must “provide sufficient details and time to train students about how to accomplish collaborative writing (pp. 12-13). Careful
consideration must be made when grouping students and teachers should be proactive in resolving any conflicts that arise during the collaborative process (Bhowmik et al., 2019). Hillebrand (1994) found choice was preferable over assigning groups and all studies found that writing in groups was not preferable for all students; in every study reviewed, there were students who chose to write independently. Finally, teachers need to incorporate student accountability strategies, as Fernández Dobao (2012) found evidence of passive learners within the collaborative groups, and to allow for more time to complete writing that is collaboratively based (Bhowmik et al., 2019; Fernández Dobao, 2012).

Overall, based upon the studies reviewed, collaborative writing has shown positive results. However, more research is needed. Bruning and Kauffman (2016) stated that little is known in the area of social contexts in writing and research in the area of “collaborative writing, including participating in group-based prewriting activities” (p. 167) is needed. Both Bruning and Kauffman (2016) and Zimmerman and Risemberg (1997) pointed out that writing is an isolated, individualized activity and for writers who struggle, who possess low writing self-efficacy, and/or experience writing anxiety, challenging writing tasks could seem daunting to complete independently. Further, Bruning and Kauffman stated that writing anxiety, specifically college writing that requires students to understand and integrate unfamiliar content into a coherent text, can cause negative physiological and emotional reactions with significant effects on writing development and self-efficacy. To alleviate these negative reactions, they posited that “well-managed collaborative approaches to writing would seem to have considerable potential for strengthening writing self-efficacy by offering models for decision making, exposure to new perspectives on writing, and a greater chance for successful performance” (p. 167). These authors posited that social collaboration and collaborative writing could provide the support
needed to alleviate these negative associations with writing and increase time on-task, motivation, and writing skill.

**Social Feedback**

The third social interaction instructional practice found to improve writing ability is social feedback. Social feedback is “information given to a learner by others about the accuracy of their response and has been consistently linked with higher achievement and greater motivation to learn” (Zimmerman & Kitsantas, 2002, p. 661). Social feedback can be given by teachers or peers and is an integral part of collaboration in Zimmerman and Risemberg’s social cognitive model of writing (1997). Zimmerman and Kitsantas (2002) incorporated peer feedback in their study focused on coping and mastery models with postsecondary students. Results showed that social feedback is “effective at all levels of observational learning” (p. 666) with treatment groups demonstrating higher writing skill and higher self-efficacy. Graham and colleagues (2016) reported student writing improved when teachers gave feedback, when students were taught to evaluate their own writing, and through peer review. Kellogg and Whiteford (2011) claimed intermittent rather than continuous teacher feedback was preferable and “can enhance long-term retention of a skill” (p. 261).

A study by MacArthur and colleagues (2015) used an interesting experimental design to incorporate peer review as part of the instructional sequence at the postsecondary level. After students had completed the modeling, collaborative practice, and guided practice phases, they peer reviewed and edited papers by unknown authors using an established criterion. Then they edited their own paper and met in pairs to peer review and edit one another’s paper. The instructors who participated in this study reported that, although the process was difficult at first for their students, it was effective. Writing quality increased as well as student self-efficacy.
Learning by Reviewing

The fourth social interaction instructional practice found to result in improved writing ability is learning by reviewing. Cho, MacArthur, and Graesser (2011) studied the effects of peer review from an interesting perspective as well. The focus of their study was to ascertain if writers could enhance their own writing skills by reviewing a similar text written by a peer; known as learning by reviewing (Cho et al., 2011). According to these researchers as well as Hayes (2000), when a writer takes on the reader’s perspective while reviewing a peer’s writing, they evaluate the text, apply problem-solving processes to identify and diagnose problems, and then provide a solution. This requires metacognitive thinking and has been shown to improve the reviewer’s own writing, due to the extra practice in problem detection that promotes reflection on their own writing. Reviewing a peer’s writing is more engaging and helpful than reviewing the writer’s own text. In addition, research showed that students had a harder time finding errors in their own writing compared to their peers (Cho et al., 2011). Nicol and MacFarlane-Dick (2006) stated that when reviewing the work of peers and providing feedback, students were able to develop an understanding of the standards and quality of the writing task, which they potentially transfer to their own work. Englert and colleagues (1992) stated collaborating with peer writers and reading their text can also provide a clearer sense of audience and purposeful writing.

In a computer-based study, Cho and Schunn (2007) incorporated peer feedback with postsecondary students in an introductory physics class where peers reviewed written lab reports. In follow-up interviews, students reported that the experience taught them what not to do in their own writing and they learned about audience perspective, similar to the reader’s perspective of
revision posited by Hayes (2000). Cho and Schunn (2007) found that students who received feedback from multiple peers improved their writing skill more than those who received feedback from a few.

Moore and Teather (2013) investigated the learning by reviewing construct in a survey study at the postsecondary level. They found that certain instructional parameters must be incorporated to ensure effectiveness for learning and student buy-in. Students completed pre-study surveys asking their opinions regarding peer review. On these pre-surveys, students responded negatively toward the practice of peer review, reporting feelings of anxiety, hesitation, concerns that their work would not be good enough, and that they would be criticized. After actively incorporating students in the course’s evaluation process by collaboratively creating rubrics and incorporating peer feedback and group collaboration, students responded on the post-survey more positively, stating the experience was useful and challenged them to think more deeply about the assignment. These researchers identified two benefits students gained from peer review. First, the process of peer review allowed for greater diversity of perspectives, especially if multiple peers are reviewing. Second, like Cho and colleagues (2007, 2011), the process of providing peer feedback prompted students to think more deeply about their own writing and the assignment in general.

The literature reviewed focusing on social interactions, specifically modeling, collaborative writing, social feedback, especially peer review and peer feedback, and learning by reviewing, indicates positive effects on writing skill, process, and self-efficacy. Important caveats are that collaborative writing and social feedback are learned skills that must be explicitly taught to ensure effective use. In addition, active participation of students in the evaluation process (collaboratively generated rubrics) appears to be crucial to student success in
the writing classroom. However, scholars have called for more research in this area; specifically, how social learning experiences interact with the environmental process of self-regulating instruction. Areas of need focus on the physical context, writing task design, and social experiences such as peer collaboration and their effects on writing ability, writing self-efficacy, and writing anxiety (Bruning & Kauffman, 2016; Santangelo et al., 2016; Zimmerman & Risemberg, 1997).

Literature on Strategy Instruction

Strategy instruction, the triadic model of interdependent processes and self-regulatory classes (Table 2.1), and their effects on writing self-efficacy and writing anxiety form the second foundational component cluster reviewed. Research demonstrated that strategy use overall was effective in improving writing ability and self-efficacy while reducing writing anxiety. Studies reviewed for this research focused mainly on individual strategies and their effects on writing ability, self-efficacy, and in some cases, writing anxiety. The primary strategy related to this study was pre-write planning.

Prewrite Planning

Hayes and Flower (1986) and Hayes (2000) determined planning to be vital to effective writing and stated that the difference between novice and experienced writers was the degree of planning completed prior to writing. Prewrite planning tools include notes to organize thoughts, drawing, graphic organizers in the form of blackline masters or paper folding, watching videos, mnemonics, or researching materials. Santangelo and colleagues (2016) and Graham and Perrin (2007) found high effect sizes for prewrite planning and Graham and colleagues (2016) identified prewrite planning as an effective evidence-based best practice in writing instruction.
However, Torrance (2016), in his review of the literature, found few studies that directly researched the benefits of planning to writing quality. Of the studies found, results were mixed.

Within the self-regulated body of research, Torrance found that teachers structured planning in two general ways. In one structure, the teacher set process goals for the students and devoted specific periods of time to plan. Another structure established product goals. In this second structure, the teacher stated that to write effectively, one must plan, but did not devote any specific time for explicit instruction. Torrance (2016) stated that without direct instruction and guided practice, it is unlikely students will incorporate this step into their writing process.

Pre-write planning where time was set aside to plan was used in the majority of the studies reviewed. Graphic organizers, mnemonics, and planning checklists were incorporated into these experimental designs.

**Graphic Organizers and Mnemonics.** Graphic organizers and mnemonics for specific steps in the writing process were used as a planning tool in the majority of strategy-based writing studies. Risemberg (1993) found that “the degree of organization in pre-writing notes, … via the content strategy of graphic organizers, led to the best writing product” (p. 84).

At the postsecondary level and for adult learners, MacArthur and Lembo (2009) used the mnemonic IRRC (Introduction, Reasons, Rebuttal, Conclusions) and Berry and Mason (2012) incorporated the mnemonic planning strategies of POW (Pick my idea, Organize my thoughts, Write and say more), TREE (Topic sentence, Reasons, Explanations, Ending), and COPS (Capitalization, Organization, Punctuation, and Sense) with adult learners preparing to take the GED exam. Both groups of researchers found these mnemonics to be effective to improve essay quality. Berry and Mason (2012) stated on pre-study essays, postsecondary students employed the “Think and Tell” strategy (Bereiter & Scardamalia, 1987) which does not employ planning
strategies, but on post-study essays when mnemonics were used, students wrote longer, more complete, and more organized essays. When interviewed, the student participants of this study stated that the planning strategies helped them write stronger essays and feel more confident in their writing ability, indicating higher self-efficacy.

Graphic organizers and mnemonics have been used at the elementary and secondary level as well. Graham and colleagues (2005) incorporated the POW, TREE, and WWW (Who, When, Where, What, and how) mnemonics in their study with fifth graders and found students who used the mnemonics produced writing that was longer, more complete, and rated higher based upon qualitative checklists. Welch (1992) incorporated the mnemonic planning strategy PLEASE (Pick, List, Evaluate, Activate, Supply supporting sentences, End) with sixth grade special education students and found it effective in developing students’ metacognitive knowledge and skill for effectively composing a paragraph. Englert and colleagues (1990, 1992) used think sheets and the POWER (Plan, Organize, Write, Edit/Editor, and Revise) mnemonic and found students could verbalize more knowledge about the structure of their writing and produced higher quality writing. Finally, Helsel and Greenberg (2007) found that not only did the use of mnemonics improve writing quality but also alleviated writing anxiety for sixth-grade students when faced with a difficult writing task.

**Planning Lists and Checklists.** Zimmerman and Risemberg (1997) found positive effects on essay quality when list-making and outlines were incorporated as planning tools in the experimental design of studies using the social cognitive model for writing. Kellogg (1988) incorporated outlines to support undergraduates in writing business letters. Results showed better writing quality overall as well as in three specific areas: idea development, effectiveness, and language usage.
In addition to mnemonics, Helsel and Greenberg (2007) also used a five-step checklist to write summaries in their case study. These researchers found, based upon observation and writing samples, that the summary writing checklist provided strategic knowledge the student needed to write an effective summary. The students identified the checklist as an additional support that reduced anxiety during independent writing.

**Collaborative Pre-write Planning**

Collaborative pre-write planning, a component of collaborative writing, is an alternate socially-based pre-write planning format defined as a self-directed group of students working and learning together as they plan the content and time management of writing projects. These projects can be based upon a topic of mutual interest or different topics and group size can vary from dyads to small groups of three to six members. Of the studies reviewed that incorporated collaborative pre-write planning in their research design, a wide range of settings were found (Amiryousefi, 2017; Clayson, 2018; Higgins, Flower, & Petraglia, 1991; Mirazi and Mahmoudi, 2016; Neumann & McDonough, 2015; Patterson, Weaver, Fletcher, Connor, Thomas & Ross, 2017; Shi, 1998; Windischer, Grote, Mathier, Meunier Martins, & Glardon, 2009). For example, studies were found in the professional business domain, teacher PLCs, the English language learning classroom, and to a lesser degree, the general education classroom. Ages ranged from postsecondary students to adults. Most studies found for this literature review were set in the English learning classroom with very few studies found focusing on the general education classroom. Of the eight studies reviewed, there were mixed and varied findings. A discussion of the specific findings of these studies follows.
Four broad categories of results emerged from the studies reviewed. They were: 1) the effects of collaborative pre-write planning on the planning process itself, 2) the effects on students’ writing performance, 3) student perception of collaborative pre-write planning, and 4) important implications to incorporate into instruction if this planning format is used.

**Collaborative Pre-write Planning and the Planning Process.** The effects of collaborative pre-write planning on the planning process were positive. Three studies found positive effects on idea generation and organization. These studies compared collaborative pre-write planning groups to individual planning or planning with the teacher and found that collaborative pre-write planning generated more ideas, the ideas were found to be at a higher quality, and were organized more logically (Amiryousefi, 2017; Clayson, 2018; Higgins et al., 1991; Neumann & McDonough, 2015, Windischer et al., 2009). In addition, these studies found that students reflected more critically on the ideas planned for the writing project when working in dyads or small groups.

**Collaborative Pre-write Planning and Students’ Writing Performance.** The second category, the effects collaborative planning has on students’ writing performance, resulted in overall positive effects on student writing performance as well. Mirazi and Mahmoudi (2016) reported improved writing performance when comparing pretest and posttest student writing samples. The quality of student essays improved based upon content, organization, fluency, complexity, and accuracy (Amiryousefi, 2017; Higgins et al, 1991; Mirazi & Mahmoudi, 2016; Neumann & McDonough, 2015). One explanation reported for these positive effects on writing performance was the reduction of the cognitive load. Higgins and colleagues (1991) stated that much of the writing students face in college is complex as they are asked to interpret, evaluate, and apply new learning to complex writing tasks that involve multiple goals and strategies. By
incorporating collaborative pre-write planning, the supportive nature of the planning groups lessened the cognitive load and allowed students to focus on selecting and adapting ideas for the writing task.

**Collaborative Pre-write Planning and Student Perception.** The third category of research findings focused on student perception of collaborative pre-write planning. These research findings were overall favorable, including an increase in performance self-efficacy (Patterson et al., 2017). However, many studies reported that not all students preferred to work in groups (Amiryousefi, 2017; Mirazi & Mahmoudi, 2016; Neumann & McDonough, 2015). According to Neumann and McDonough (2015), “Students’ perceptions about the usefulness of collaborative writing activities are generally positive, especially in terms of generating and evaluating ideas. Researchers have also emphasized that not all learners can be expected to or forced to collaborate” (p. 99). Because of this, the choice of planning in groups or independently should be provided.

**Implementation Considerations of Collaborative Pre-write Planning.** Finally, important implications for implementing collaborative pre-write planning were provided in the studies reviewed. Shi (1998) found that without structure, collaborative planning can be disorganized and unproductive. Neumann and McDonough (2015) concurred and called for teachers to incorporate specific instruction in how to plan collaboratively with the use of checklists and provisions of the assignment purpose and goals to make the group planning productive and effective. Higgins and colleagues (1991) found that students collaboratively planned in three ways – problem identification, offering alternate plans or ideas, or justifying choices - and all three ways should be taught to students (p. 20). Other recommendations to improve the effectiveness of group planning were: 1) including explicit instruction with the use
of models in the task expectations, 2) defining for students what collaborative planning is and what it entails, 3) setting goals, roles, and grading criteria, and 4) teaching the importance of individual and group reflection (Flower et al., 1991).

In conclusion, though research on the effectiveness of pre-write planning is mixed, it appears that planning strategies completed independently and collaboratively using graphic organizers, mnemonics, and checklists can improve writing length, quality, and organization overall, can improve writing self-efficacy and reduce the anxiety some writers experience when faced with a challenging writing assignment. They serve as a support in the process of composing. However, results summarized by Torrance (2016) and Graham and Perin (2007), indicate more research focused on this strategy and how to implement it within writing instruction is needed.

**Literature on a Developmental and Multileveled Approach to Writing Skill Acquisition**

The multileveled approach to writing skill acquisition “emphasizes the role of social support, self-motivation, and goal-directed practice” (Zimmerman & Kitsantas, 1999, p. 242) and was the instructional foundation of this study. In a majority of studies reviewed within the social cognitive writing model, this multilevel approach was incorporated as part of the experimental design. However, research is limited as it was rarely an isolated experimental variable and was most often incorporated as the instructional framework to study other variables such as learning models, goal setting, or peer review (Schunk & Zimmerman, 2007; Wischgoll, 2016; Zimmerman & Bandura, 1994; Zimmerman and Kitsantas, 1999; 2002). However, this instructional format is crucial for the implementation of a socially-based writing environment.
Deliberate Practice

Deliberate practice is an instructional routine that is “undertaken for a specific goal to improve” (Kellogg & Whiteford, 2009, p. 250) and is often associated with skill acquisition. Research suggests that student writing can be improved by increasing the amount of time students spend writing as well as writing for a variety of purposes and this was referred to often as a best practices in the field of writing research (Applebee & Langer, 2011; Graham et al., 2016; Hayes, 2000; Kellogg & Whiteford, 2009; Zimmerman, 1989; Zimmerman & Risemberg, 1997).

Applebee and Langer (2011) called for more time spent writing in the classroom to improve ability. Hayes (2000) stated that extensive practice can promote acquisition of “more effective writing strategies, more refined standards for evaluating text, and more facility with specific genre” (pp. 25-26). He argued this point by looking to the literature of expert writers, finding that none of their most famous and highly acclaimed works were written before ten years of practice. Kellogg and Whiteford (2009), Zimmerman and Kitsantas (2007), and Zimmerman and Risemberg (1997) all discussed the works of great poets and authors and the length of time and amount of practice it took them to reach the pinnacle of their writing careers.

Kellogg and Whiteford (2009) used the power law of skill acquisition to explain how deliberate practice can improve writing skill stating that human performance goes through three stages. In the early cognitive stage, the learner attempts to understand the domain (declarative knowledge) then progresses to the final autonomous stage where the learner is automatic in the processes of the skill, demonstrating fluid execution of procedural knowledge and the use of metacognitive and self-regulatory strategies (conditional knowledge). High degrees of practice are required for a skill to become automatic and effortless. The goal of repeated, deliberate
practice is to reduce the demands for attention to individual components in order to become automatic and attend to the task as a whole. In postsecondary years, writing is used to transform knowledge, not just tell about it (Bereiter & Scardamalia, 1987). Through deliberate practice, students could develop into automatic process writers, able to use writing as a means of thinking and for learning (Kellogg & Whiteford, 2009). In this study, multiple opportunities to write about a variety of true crime topics could enhance the likelihood the pre-write planning formats could transfer to other learning domains; however, more research is needed on how to incorporate authentic, cross-curricular deliberate practice into writing instructional frameworks (Santangelo et al., 2016).

**Literature Review Concluding Comments**

Based on this literature review, six specific areas are universally most effective for writing instruction within the social cognitive model for self-regulated writing and in strategy-based writing in general. First, incorporation of coping models with think alouds, making the implicit thought processes of skill use explicit for novice writers, is an important way to teach new writing skills and strategies. Second, peer collaboration and social feedback are important to provide multiple perspectives, deepen students’ thinking about their own writing, and understand the concept of audience and purpose in writing. Third, explicitly teaching students cognitive skills, writing process, and the environmental, behavioral, and personal processes of self-regulating strategies supports students in improving their writing ability and results in higher self-efficacy and reduced writing anxiety. Fourth, individual and collaborate prewrite planning strategies and the use of graphic organizers, mnemonics, and checklists have shown positive effects on writing quality and can be used to improve students’ organizational writing skills and self-efficacy as well as alleviate writing anxiety. A socially-based format could enhance these
effects. Finally, sequential skill acquisition, more writing time, and deliberate practice is important to automate writing skills, promote transformative writing and writing-to-learn practices, and transfer writing strategy use to other learning domains (Bereiter & Scardamalia, 1987).

This literature review also revealed gaps in the field of writing research. It demonstrated a lack of research on the pre-write planning process, the environmental self-regulatory strategies of environmental structuring, specifically in the effects of the physical context and social experiences on writing ability, writing self-efficacy, and writing anxiety (Graham & Harris, 2009; Santangelo et al., 2016; Torrance, 2016; Zimmerman & Risemberg, 1997), and qualitative measures investigating student perceptions of strategy-based writing instruction (Bruning & Kauffman, 2016; Harris & Graham, 2009; Santangelo and colleagues, 2016; Torrance, 2016; Zimmerman & Risemberg, 1997).

**Impact on Study Design**

**Instructional Practices**

This literature review informed the instructional design of this study in several ways. First, the Zimmerman and Risemberg social cognitive model for self-regulated writing (1997) was the strategy-based writing model used in this study. The instructional design incorporated three categories of strategies including the triadic processes and ten classes of self-regulatory writing (Table 2.1). In addition, the four stages of social cognitive sequential skill acquisition were used for all classroom writing instruction. Third, cognitive, writing process, and self-regulatory strategies were explicitly taught using the gradual release of responsibility framework within a writers’ workshop model. Specifically, this study focused on the writing process strategy of collaborative planning, including pre-write planning before composing and peer review, and its relationship on writing ability. Finally, perceived self-efficacy, writing anxiety,
and their effects on writing skill and motivation were examined. In this area of the research design, a focus on the collaborative planning strategy and its relationship on self-efficacy and writing anxiety were measured using research-based scales to determine if any differences in levels before and after the strategy was implemented into instruction were found.
CHAPTER 3

RESEARCH DESIGN AND METHODS

Writing is a recursive and cognitively-demanding task that takes many years to master (Kellogg & Whiteford, 2009; Zimmerman & Risemberg 1997). It is a complex process incorporating a wide range of components from the literacy domain and takes an eclectic perspective to understand. In particular, college writing requires students to comprehend and integrate new, unfamiliar content into a coherent text that clearly demonstrates their learning (Bruning & Kauffman, 2016). However, data from the National Assessment of Educational Achievement (National Center for Education Statistics, 2012) states that 73% of U.S. 12th graders are not proficient in writing. These statistics are the catalyst for this study. In this chapter, I first describe the purpose of the study, along with the research questions, and design. I next outline the student participants, data sources, procedures, and data analyses.

Purpose of this Study

The purpose of this study was to determine if a relationship exists between two different pre-write planning formats and writing ability, writing self-efficacy, and writing anxiety. This research was designed to contribute to the field of postsecondary strategy-based writing research by addressing specific gaps in the pre-write planning phase and socially-based environmental structuring components of the writing process (Santangelo et al., 2016; Torrance, 2016; Zimmerman & Risemberg, 1997). By incorporating multiple modes of data collection, this study addressed the need for writing research that explores not only quantitative effects of socially-based pre-write planning and environmental structuring on writing skill, but also students’ perceptions of the planning formats including their perceived self-efficacy, level of anxiety, and general opinions of the writing strategies (Beck et al., 2015; Reed et al., 2002).
Research Questions

This study examined the effects of incorporating two planning formats into the pre-write planning process of writing at the postsecondary level. The research questions that guided this study were:

1) How did students perceive their experiences while participating in collaborative small group planning?

2) How effective did students perceive collaborative small group planning to be in supporting their ability to write?

3) How did collaborative small group planning affect the quality of students’ writing?

4) How did collaborative small group planning affect students’ overall perceived self-efficacy for writing?

5) How did collaborative small group planning affect students’ level of writing anxiety for writing?

Design and Study Context

Concurrent triangulation mixed methods was the research design for this study (Guetterman & Fetters, 2018; Creswell, Plano Clark, Gutmann, & Hanson, 2002). In this design, qualitative and quantitative data are collected concurrently during the research process and analyzed separately. Then the two sets of data are merged to triangulate the results and form an overall corroborated interpretation (Creswell, 2011). The rationale for using concurrent triangulation mixed methods was to obtain different but complementary data on the same topic to best understand the nature of the research problem. Because this study’s overall goal was to form a clear and detailed understanding of the effects two planning formats (independent and collaborative) had on writing skill, self-efficacy, writing anxiety, and student perceptions within a writing classroom, quantitative and qualitative data collection provided the method to meet that
goal. Both types of data were collected concurrently throughout each planning phase because, as Brewer and Hunter (1989) state, “the employment of multiple research methods adds to the strength of evidence” (p. 89), and when multiple measures result in similar conclusions, there is greater certainty in the accuracy of those results (Jick, 1979). At the conclusion of the collection phase, data was analyzed separately but merged into one overall interpretation.

In this study, independent planning was defined as the process of writers independently setting the purpose, exploring a topic, planning the time management, structure, content, audience, and publication mode of the given writing piece. Collaborative planning was defined as incorporating all steps described for independent planning within groups made up of four to six mixed writing-ability students who all shared a common research topic. For instructional purposes, these collaborative planning groups were identified as Research Teams within the classroom.

Qualitative and quantitative data collection plans are described next. These data collection plans occurred during both planning formats. Analysis plans for the qualitative and quantitative phases of this study are described in detail in a later section of this chapter.

**Qualitative Data Collection**

This mixed methods study was qualitative-dominant (Guetterman & Fetters, 2018). Qualitative data was collected to determine the effects of these two planning formats on writing ability, perceptions, and physiological response. Three forms of qualitative data were collected in two rounds.

The first form of qualitative data collection was the focus group interviews, identified as discussions in this study. These focus groups were formed based on writing ability in the initial phases of the study. Most case study research includes some type of participant interview
(Creswell, 2013), and because group interviews, particularly within a group of similar ability
levels, provide students a non-threatening, social, and peer-based platform to share their
thinking, the focus group format was used. Incoming first year college students were the
participants in this study, and since they were new to the college environment, they could have
found one-on-one semi-structured interviews with a college professor intimidating and/or
threatening, which could affect the quality of their responses. According to Morgan (1996), focus
groups can support and empower participants as well as amplify and deepen the knowledge
gleaned from the research. Further, collaborative planning could be identified as a supportive
self-regulatory strategy, and if so, it would be important to have the focus groups based upon
ability to determine the perceived effectiveness for all writing skill levels (low, medium, or high)
or whether only certain ability groups find it effective. In this study, focus groups were led and
audio recorded by a moderator not involved in this study.

After the initial focus group interviews, follow-up reflective questionnaires linked in
e-mails were sent to each participant. Sussman, Burton, Dent, Stacy, and Flay (1991) stated these
confidential follow-up reflections ensure all participants’ voices are heard equally and their
opinions are accurately represented. The third form of qualitative data collected was a research
reflection and field notes journal I kept to record observations from writing conferences and
whole group discussion, research notes, and memos. These three forms of qualitative data, the
focus groups, the follow-up reflective questionnaires, and the research reflection and field notes
journal allowed for triangulation of the data collected during the independent and collaborative
small group planning phases.
Qualitative data was gathered in two rounds during each planning phase - after each essay was planned as well as after students published and submitted their true crime essays for a grade. This resulted in a total of 12 focus group meetings, four meetings for each of the three focus groups.

**Quantitative Data Collection**

For the quantitative component of this study, I chose a matched pairs design. The quantitative measures included student writing samples scored using a university-established writing rubric, a self-efficacy writing scale, and a writing anxiety scale. Research has shown that self-efficacy and writing anxiety are associated with writing quality and are foundational to writing success or writing failure (Schunk, 2001; Zimmerman, 1989). Therefore, in studies focused on writing ability, data from self-efficacy and writing anxiety scales should be included to determine their effects on writing ability. Quantitative data was collected in two rounds; during the independent planning phase and the collaborative planning phase. For each participant, essay scores and survey scores from both planning formats used were matched using the Wilcoxon signed-ranks test (Wilcoxon, 1945) data analysis to determine if collaborative planning had a significant effect on writing skill, self-efficacy, and writing anxiety.

**Study Context**

This study took place in a first year Core One seminar course during the fall 2019 semester. The Core One seminar was a required course for all in-coming, first semester students and was designed to introduce students to the academic culture of postsecondary education and provide them with knowledge to make informed decisions to support intellectual and personal
development. Students were expected to develop their communication skills and learn about the scholarly writing expectations of higher education through researching relevant topics within the seminar course.

The writing goal for this course was to produce a total of 10 to 12 pages of polished writing in several smaller essays throughout the semester building up to a three to six page sustained academic argument essay incorporating four to six credible sources. The non-academic themes for these courses were selected by instructors and students were allowed to pick the top five courses they would most like to enroll in from a list of 17 topics. They were then assigned one of those five courses. The theme-based course for this research setting was true crime and cold case investigation, incorporating true crime case study research and persuasive essay writing.

Eighteen students wrote four research-based essays of various lengths over the course of the semester, each adding to the overall 10 to 12-page course goal and based on different true crime themes. The general topics for the essays were historical crime cases, missing persons cases, mass murder, and serial killing, with mass murder the topic for independent planning and serial killing the topic for collaborative planning. These essays were formatted in either a descriptive or persuasive text structure; however, the two essays used for this study’s data collection followed the persuasive text structure format. This text structure requires an introduction, three or more arguments supported with evidence and reasoning, and a conclusion. The persuasive text structure format was chosen for its fundamental importance to academic writing at the collegiate level (MacArthur et al., 2015). In addition, it is the structure most often assigned for the final artifact essay within the first year Core One seminar course. The essays
included four to six reliable sources with one to two of those sources coming from scholarly journals; the essay length was three to six pages. All essays were published online to a true crime blog.

Each student was placed in two different groups during this study (Figure 3.1). The first group included students of all levels of writing (mixed-ability) and was formed based upon the crime each student chose to research. These groups changed with each essay written and were identified as Research Teams. The second group was ability-based and was used for the focus group discussions. These groups were identified as either Writing Groups or Focus Groups. These groups were formed based upon pre-study quickwrite essays and the first two short essays written. Students with similar writing levels (low, medium, high) were grouped together. The writing groups were used for data collection and were established for the course of the semester. However, as with all ability-group formats, they were considered fluid with the option of changing membership based on student performance or personality, however the need to move students to different groups did not occur during this study.

Figure 3.1

*Two Group Formats for Each Student*

I was the primary researcher for this study as well as the lead instructor for the course. A teacher-librarian and a first-year academic advisor served as support instructors, leading the class
occasionally throughout the semester. These two support instructors and I made up the Core One instructional team. My dual role of primary researcher and instructor was a limitation to this study as it could have caused students’ responses to be influenced by social desirability and potentially affected the results of this study. To reduce this bias effect, focus groups were moderated by an independent party, research reflections and field notes were shared with the Core One instructional team for their input and triangulation, and a summary of each focus group discussion was shared with the participants for member checking.

Setting and Participants

Setting

This study took place in a private, liberal arts university situated in an urban setting of a major city in the Midwestern United States. IRB approval was obtained from both Iowa State University and the university where the study took place (Appendix A). The university had a diverse student body and at the time of the study, had an enrollment of approximately 2,000 students. The average class size was 16 with a 13:1 student-to-faculty ratio. It offered 40 undergraduate degrees and four graduate majors. Ninety-eight percent of full-time students received financial assistance and according to Prep Scholar (2019), the average ACT score was 21 with a range from 18 to 23; however, according to university admissions, ACT scores lower than 18 had been accepted. Close to half of the students enrolled at the university were college athletes on scholarship.

Participants

The participants for this study were students enrolled in the first year Core One course, “True Crime and Cold Case Investigation Seminar.” For all students enrolled, this course was taken during their first semester of postsecondary education. Eighteen students participated in this study. Table 3.1 provides general demographic information for the participants of this study.
Table 3.1

*General Student Demographics*

<table>
<thead>
<tr>
<th>Descriptors</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>8</td>
</tr>
<tr>
<td>Females</td>
<td>10</td>
</tr>
<tr>
<td>In-state students</td>
<td>16</td>
</tr>
<tr>
<td>Out of state students</td>
<td>2</td>
</tr>
<tr>
<td>Number of student athletes enrolled</td>
<td>18</td>
</tr>
<tr>
<td>Students living on campus</td>
<td>15</td>
</tr>
<tr>
<td>Students living off campus</td>
<td>3</td>
</tr>
</tbody>
</table>

The process of students selecting this course and the nature of convenience sampling for participant selection could be identified as a limitation and is reported as such in the conclusions drawn from this study. Because all students enrolled in the course gave consent to participate in the study, the participants are identified as students throughout the rest of this paper.

**Data Sources**

Both quantitative and qualitative data sources were used in this study. Qualitative data included transcripts of the ability-grouped focus groups (writing groups) discussions, reflective post-group follow-up questionnaires and emails, writing conference discussions, and my research reflections and field notes. Quantitative data included student writing samples scored with a university-established rubric, the Self-Efficacy in Writing Scale (SEWS; Bruning, Dempsey, Kauffman, McKim, & Zumbrunn, 2013), and the Writing Apprehension Test (WAT; Daly & Miller, 1975, 2013). See Table 3.2 for a list of these instruments, the schedule used for administration, and the construct and research question measured. Detailed description of each data source follows.
### Table 3.2

**Instruments Used to Measure the Extent of the Experimental Variable**

<table>
<thead>
<tr>
<th>Data Source</th>
<th>When administered</th>
<th>Construct being measured and corresponding research question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcripts from ability-grouped focus groups (writing groups)</td>
<td>Independent planning phase</td>
<td>Self-efficacy; writing anxiety; research questions #1 and 2</td>
</tr>
<tr>
<td>Reflective post-focus group questionnaires linked in emails (Sussman et al., 1991)</td>
<td>Independent planning phase</td>
<td>Overall perceived inclusion and satisfaction with focus group discussion as a platform to voice opinions; research questions #1 and 2</td>
</tr>
<tr>
<td>Writing conference discussions</td>
<td>Pre-study and Get-to-know phase</td>
<td>Self-efficacy; writing anxiety; research questions #1 and 2</td>
</tr>
<tr>
<td>Research reflections and field notes</td>
<td>Pre-study and Get-to-know phase</td>
<td>Evidence of: engagement with instruction; planning formats; strategy instruction; collaborative interactions; questions #1 and 2</td>
</tr>
<tr>
<td>Student writing samples scored with a university-established rubric</td>
<td>Pre-study; before instruction</td>
<td>Writing ability; research question #3</td>
</tr>
<tr>
<td>Self-Efficacy in Writing Scale (SEWS; Bruning et al., 2013)</td>
<td>Independent planning phase</td>
<td>Self-efficacy; research question #4</td>
</tr>
<tr>
<td>Writing Apprehension Test (WAT; Daly &amp; Miller, 1975, 2013)</td>
<td>Independent planning phase</td>
<td>Writing anxiety; research question #5</td>
</tr>
</tbody>
</table>
Qualitative Data Sources

Ability-grouped Focus Groups

Focus groups are a qualitative method of data collection defined as interviewing a group of subjects for a specific purpose using a structured set of questions (Morgan, 1996). Stier Adler and Clark (2008) defined focus groups as consisting of two or more participants with one interviewer or moderator, and stated the benefits of using focus groups as “releasing the inhibitions of individuals” (p. 274) who are otherwise reluctant to disclose personal information or opinions in a one-on-one setting. Morgan (1996) identified another benefit of focus groups as providing participants a voice in research. In addition, they provide more than just the sum of the individual voices heard in a group format. Since “participants both query each other and explain themselves to each other” (p. 7), this adds an additional dimension to the data not found in individual interviews. Xerri (2018) agreed, supporting the value of focus groups as providing access to participants’ “meanings and conceptualizations as they interrogate and debate the issues raised” (p. 143). Another value of focus groups for this study addressed the idea that first year postsecondary participants may have felt apprehensive to be interviewed one-on-one with college professors; focus groups could have reduced this apprehension.

Within the classroom, ability-grouped focus groups (writing groups) were used to collect data specific to students’ perceptions about their essay writing, writing self-efficacy, and writing anxiety specific to the independent planning session and the collaborative planning session. There were three groups formed using students’ scores from the pre-study quickwrites and first short essays written: a lower writing ability group with scores ranging from 6 to 13 points, an average writing ability group with scores ranging from 14 to 21 points, and a high writing ability group with scores ranging from 22 to 30 points. All scores were approximate. According to
Morgan (1996), segmenting focus groups into ability groups builds a comparative dimension to the research project and can facilitate and enhance the discussion since participants are more similar to each other. It also provided evidence on the perceived effectiveness of the collaborative small group planning variable that was analyzed by writing ability level.

The moderator for these focus groups was a professor of literacy education independent of this study and the university in which this study took place. All focus group discussions were held in a space separate from the classroom and audio-recorded. The structure of the meetings was informal with discussion norms established at the beginning of the study and reviewed at each subsequent meeting thereafter. Each focus group meeting began with a structured set of questions specific to the planning session being implemented: either independent or collaborative. Because the essay rubrics, self-efficacy survey, and writing anxiety survey tended to gather data that was more general in nature, the focus groups provided data more nuanced and specific to each planning session.

This study incorporated the funnel pattern (Morgan, 1996) of questioning to structure the meeting agenda. Focus group meetings always began with the fixed set of core questions, but throughout the discussion, students were allowed to bring up specific issues or topics that arose out of the group’s unique experiences, thoughts, or opinions related to each planning format. Morgan (1996) asserted that using the funnel pattern maintains comparability across groups while allowing for recognition of emergent needs specific to each group and to the research overall. Secondary benefits are that the fixed set of core questions establishes a set agenda for the discussion so students can identify their opinions and ideas prior to meeting. This promotes a more effective discussion and decreases group effects. Table 3.3 includes the set of fixed core questions planned for the focus group discussions immediately following the planning of the
essays. Table 3.4 includes a set of fixed core questions planned for the post-writing focus group discussions. All audio recordings and the associated transcriptions were saved to a secure, cloud-based storage.

Table 3.3

<table>
<thead>
<tr>
<th>Question</th>
<th>Social cognitive writing model constructs being discussed (Zimmerman &amp; Risemberg, 1997)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How satisfied are you with the essay planning you just completed? Why?</td>
<td>Writing self-efficacy; reciprocal feedback loop</td>
</tr>
<tr>
<td>2. Did you find the planning format to be helpful as you were planning your essay? In what ways? Why?</td>
<td>Environmental self-regulating strategy</td>
</tr>
<tr>
<td>3. How confident are you in your ability to use your planning notes and research to write the essay? Why?</td>
<td>Writing self-efficacy; reciprocal feedback loop</td>
</tr>
<tr>
<td>4. How confident are you in your ability to write an essay that will be scored proficient or excellent? Why?</td>
<td>Writing self-efficacy; reciprocal feedback loop</td>
</tr>
<tr>
<td>5. How do you feel about writing this essay at a proficient level and submitting it on time?</td>
<td>Writing anxiety</td>
</tr>
<tr>
<td>6. What goals did you set (include time management, process goals, and product goals)? How confident are you in your ability to meet these goals?</td>
<td>Behavioral and personal self-regulating strategy; self-efficacy</td>
</tr>
<tr>
<td>7. What other parts to the planning process would you like to discuss?</td>
<td>--</td>
</tr>
</tbody>
</table>

Reflective Post-focus Group Emails

A limitation to focus group interviews is the impact of the group itself on the data collected, known as group polarization effect (Morgan, 1996). Sussman and colleagues (1991) researched the impact of group discussion on data collection and found small effect sizes but provided two methods to reduce the effects of group polarization. One method was to have participants fill out a pre-discussion questionnaire. This supported participants in forming their
own opinions or ideas prior to the focus group discussion. An alternate form of the questionnaire, an established agenda for all focus group meetings that incorporates a fixed set of core questions, was utilized in this study. Sussman and colleagues found this method reduced the possibility of students’ input being swayed by the group’s collective dialogue. In this study, the fixed set of questions was shared with the students prior to all focus group meetings via a handout thus providing them time to develop their own thinking before groups meet.

Table 3.4

<table>
<thead>
<tr>
<th>Core Questions Planned for The Post-Writing Phase of Focus Group Discussions</th>
<th>Social cognitive writing model constructs being discussed (Zimmerman &amp; Risemberg, 1997)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>1. How confident are you that your completed essay will receive a proficient or excellent score? What score do you think your essay deserves?</td>
<td>Writing self-efficacy</td>
</tr>
<tr>
<td>2. What strategies did you find most helpful in completing this essay?</td>
<td>Reciprocal feedback loop; cognitive and process strategies; environmental/behavioral/personal self-regulating strategies</td>
</tr>
<tr>
<td>3. Did you find the planning format helpful in completing this essay? Rate how helpful it was on a scale of one to five. Why?</td>
<td>Environmental self-regulating strategy</td>
</tr>
<tr>
<td>4. How did you feel while you were writing? Did you enjoy writing this essay? Why or why not?</td>
<td>Writing anxiety</td>
</tr>
<tr>
<td>5. In what ways did you meet your goals while writing this essay?</td>
<td>Feedback loop; behavioral and personal self-regulating strategies</td>
</tr>
<tr>
<td>6. Rate your overall satisfaction with the essay you turned in? Why?</td>
<td>Writing ability, feedback loop, and personal self-regulating strategy</td>
</tr>
<tr>
<td>7. What else would you like to discuss about writing this essay?</td>
<td>--</td>
</tr>
</tbody>
</table>
The second method Sussman and colleagues (1991) provided, a post-group questionnaire, ensures all participants’ voices are heard and their ideas are recorded accurately. This provides a platform for participants to share their feelings after the group meets, regarding the discussion and the extent to which they were able to share their true opinions on topics discussed. In this study, a short reflective post-group questionnaire was sent to individual students linked in an email following their focus group meeting. This post-group questionnaire ensured the members of each focus group had a safe and private platform to share their perceptions about the planning format used, the group discussion, and/or the instructional framework. Table 3.5 lists the general questions included in this reflection. The students were asked to fill out and submit the questionnaire during class time to ensure completion; however, this direction was not always followed with students occasionally completing the questionnaire out of class. All questionnaire responses were copied into a data table and saved to a secure, cloud-based storage system.

Table 3.5

<table>
<thead>
<tr>
<th>Reflective Post-Focus Group Email Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions</td>
</tr>
<tr>
<td>All information shared in this questionnaire will be kept confidential.</td>
</tr>
</tbody>
</table>

1. On a scale of 1 to 5, with one being low and five being high, please rate how well you were able to voice your opinions and ideas in the writing meeting you just participated in?

2. If you feel you could not voice your opinions in the writing meeting, what would you like to say or add?

3. On a scale of 1 to 5, with one being low and five being high, please rate how frequent you feel your opinions and ideas were heard and recognized in the writing meeting you just participated in?

4. If you feel your opinions and ideas were not heard or recognized in the writing meeting, why do you think that happened? What suggestions do you have to ensure all voices are heard and recognized in future writing meetings?

5. Please share any additional information you would like to add.
Research Reflections and Field Notes

Writing conference discussion notes, classroom research reflections, and field notes were collected to understand more deeply how students responded to the two planning formats on an individual basis as well as whole-class dynamics. In addition, reflections and field notes were used to record how collaborative learning affected the overt behaviors of the students and the overall climate of the classroom in real time. I collected these reflections from a participant-as-observer perspective. A reflection protocol was incorporated into the process (Creswell, 2013). Within my research calendar and lesson plan notebook, a section was reserved for research reflections and field note collection. This section was divided into three parts—the effects of the two planning formats on individual student and whole-class dynamics, the effects of independent and collaborative learning on the overt behaviors of the students and the overall climate of the classroom, and an “Other” section to allow for unforeseen student responses. Each page was divided into two columns; the left side was for classroom reflections or descriptive notes from the classroom and the right side for personal notes or memos (Creswell, 2013).

As I interacted with students during instruction, during research team meetings, conferences, or independent work times, I recorded reflections, notes, and/or conversations in my lesson plan spiral journal. These reflections were usually written after each class meeting; however, occasionally between each group or student interaction. After each class, these notes were sorted and transferred to the corresponding field notes section of the research journal with memos (Miles & Huberman, 1994), coding ideas, and personal reflections entered next to them. These reflections were reviewed on a weekly basis with additional notes and memos added as needed. According to Miles and Huberman (1994) the use of memoing “is one of the most useful and powerful sense-making tools” (p. 72) and should occur throughout the data collection
process to promote validity of results. When not being used, this research journal was kept in a locked drawer in my university office. All reflections and notes recorded included student initials when applicable to ensure only data from those students who gave consent to participate were used; however, this proved unnecessary as all students agreed to participate in the study.

**Quantitative Data Sources**

**Writing Samples**

Consistent with the research literature reviewed for this study, writing samples were collected early in the course to determine each student’s writing ability. There were two student essays collected as data to determine the effects of the planning formats on writing performance. The two essays were assessed using the university-established Core One Written Communication rubric (Appendix B). According to Beck and colleagues (2015), rubrics have been found to be an effective assessment tool for writing ability.

This rubric was analyzed for reliability via inter-rater reliability checks by members of the university’s Core Oversight Committee (COC; 2013). The process used to determine reliability of the rubric follows. The COC evaluated papers from two core classes by sampling from sections and rating the papers. Interrater tests showed that the raters were within one degree on average in comparison with the average faculty evaluation of a student, thus showing that the results of the faculty assessment of these outcomes could be considered reliable. It was the finding of The Core Oversight Committee that the Written Communication rubric was a reliable scoring tool.

The Core One rubric had six criteria: audience, purpose, organization, process, detail, and standard American English. The five scoring levels range from Excellent (5 points) to Unsatisfactory (1 point) with a maximum of 30 points and a minimum of six. For this study,
essays were scored by the Core One teaching team members independently. The Core One team then met to discuss scoring. Independent scores were compared, and if discrepancies were found, the team discussed and analyzed the scores to agree on a final grade. This process provided a space to discuss the scoring and decision-making processes each instructor used and resulted in consistent and reliable grading within the team and better inter-rater reliability.

**Self-Efficacy in Writing Scale**

The Self-Efficacy in Writing Scale (SEWS; Bruning et al., 2013) was chosen over other instruments not only because of its reliability (e.g., overall alpha of 0.882), but also because it most closely measures writing self-efficacy related to the social cognitive model of self-regulatory writing instruction (Zimmerman & Risemberg, 1997). Bruning and colleagues (2013) adapted other self-efficacy scales (McCarthy, Meier, & Rinderer, 1985; Pajaras, 2007; Shell et al, 1989) to incorporate three specific dimensions of writing in SEWS that are found in research from Zimmerman and colleagues (Zimmerman, 1989; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 1999; 2002). They are ideation, which relates to cognitive strategic processes of writing such as generating ideas and ordering thoughts; writing conventions, the ability to articulate ideas into writing forms (writing process strategies); and self-regulation, relating to a writer’s confidence in their ability to direct themselves successfully through the steps of the writing process (Bruning et al., 2013). According to Bruning and colleagues (2013), SEWS is an adapted scale that is more closely tailored to the specific domains of interest within the act of writing and “dimensions of writing judged to be both theoretically and practically important” (p.27).
The SEWS consists of 16 items grouped into three categories: writing ideation (five items), writing conventions (five items), and self-regulation (six items). For each item, students rate their self-efficacy using a scale of 0 (no confidence) to 100 (complete confidence). Students’ self-efficacy scores were calculated by adding all 16 responses together; a similar process was used to compute sub scores for each category. The maximum total score possible was 1,600 and the minimum score was zero. The SEWS has alpha values for the ideation category at 0.913, convention category at 0.853, and self-regulation category at 0.879. Because these alpha measures are above 0.70 level, the scale is assumed to be a reliable instrument (DeVellis, 2017). The SEWS survey questions and scale were entered into Qualtrics and students completed this survey online. A list of the questions included in this instrument can be found in Appendix C.

**Writing Apprehension Test**

This study used the Writing Apprehension Test (WAT; Daly & Miller, 1975; 2013) to measure writing anxiety. There are two versions of the WAT: a 26-item scale intended for classroom use, and a 20-item scale intended for settings outside of the classroom. The 26-item classroom scale was chosen for this study. The scale is grouped into 13 positive statement value (PSV) items and 13 negative statement value (NSV) items and incorporates a five-point Likert scale with a rating of one equaling strongly agree to five equaling strongly disagree.

This instrument provides further analysis of writing anxiety by categorizing the items into specific types of apprehension. The first category (16 items) is evaluation apprehension which includes a writer’s expectation to do poorly even before the writing course or writing act begins. The second category (seven items) is stress apprehension which relates to the writer’s fear early
in the writing process, sometimes even before the writing act begins. The third category (three items) is product apprehension which relates to the writer’s belief that expressing ideas in writing is a waste of time.

The WAT developers note that students’ writing anxiety scores are determined using the following equation: $WA = 78 + PSV - NSV$ with 78 representing the mean score for the WAT assessment (Daly & Miller, 1975, 2013). The higher the score, the lower the amount of writing anxiety reported; scores close to 78 are considered average. The maximum score for this test is 130 (lower levels of writing anxiety) and the minimum is 26 (higher levels of writing anxiety). The WAT in its original 26-question form was chosen because it is a reliable instrument with an alpha value of 0.940 and because it has been used successfully in postsecondary settings (Autumn & Kelly, 2017; Daly & Miller, 1975, 2013; Limpo, 2018). The WAT survey questions and scale were entered into Qualtrics and students completed this survey online. A list of the questions included in this instrument can be found in Appendix D.

**Procedures**

The procedures of the study were divided into three phases. All writing instruction within each phase followed Zimmerman and Risemberg’s (1997) multilevel model of sequential skill acquisition including explicit instruction of cognitive, writing process, and self-regulatory strategies. Tables 3.6 and 3.7 include the timeline followed for each phase, planned procedures, and planned data collection. Table 3.6 includes the Pre-Study and Get-to-Know phase and Table 3.7 includes the timeline for the Independent Planning and Collaborative Planning phases. A brief narrative follows providing details within each phase.
Table 3.6

**Pre-Study and Get-to-Know Phase Procedures Timeline**

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Class Activities</th>
<th>Qualitative data collection</th>
<th>Quantitative data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>August and September:</strong> Pre-study and Get-to-know phase</td>
<td><strong>-Consent process</strong>&lt;br&gt;-Pre-study baseline writing ability collected&lt;br&gt;-Two true crime short-essays assigned – descriptive and persuasive&lt;br&gt;-Multilevel, gradual release writing instruction focused on introducing students to the scholarly expectations of academic writing</td>
<td><strong>Research reflections and field notes</strong>&lt;br&gt;(This data was used for grouping students and planning instruction only; it was not used for data analysis.)</td>
<td><strong>Timed quickwrite essay scored with rubric</strong>&lt;br&gt;(This data was used for grouping students and planning instruction only; it was not used for data analysis.)</td>
</tr>
<tr>
<td>True crime focus: Introduction to the categories of crime and cold case investigation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pre-study and Get-to-know Phase**

During the first weeks of the semester, student consent forms were distributed in class and collected by an impartial staff member from the education department who was independent of this study. Consent was kept confidential until after the course had concluded and grades were submitted to ensure all students were provided unbiased and equal treatment throughout the study. After consents were collected and base-line writing skill assessed and collected, the Get-to-know phase of instruction began. Two essays were written using the IRRC (Introduction, Reasons, Rebuttal, Conclusion; Appendix E & F) and WWW (Who, What, When, Where, and how; Appendix G) planning organizers and mnemonics; COPS (Capitalization, Organization, Punctuation, Spelling; Appendix H) was used for peer review.

The purpose of these two short writing assignments was to begin introducing students to the structure of the class and the academic expectations for scholarly writing at the college level and to ensure all students had a basic understanding of how to compose in the persuasive writing.
genre before the independent and collaborative planning phases began. Controlling for extraneous variables was important to ensure the findings of this study were accurate; if the procedures for writing a persuasive essay were introduced in the independent planning session but reviewed in the collaborative planning session, increased familiarity could have skewed the results as more favorable for the collaborative planning format than they actually were due to the reduced cognitive load of the task. These essays were also used to place students in the ability-leveled focus groups.

**Table 3.7**

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Class Activities</th>
<th>Qualitative data collection</th>
<th>Quantitative data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>October</strong></td>
<td>- Research teams formed based upon case chosen within crime category</td>
<td>Ability-grouped focus groups (writing groups)– two meetings</td>
<td>True crime persuasive essay scored with rubric</td>
</tr>
<tr>
<td>(5 weeks): Independent planning phase</td>
<td>- True crime-related persuasive essay assigned planned independently</td>
<td>Reflective post-focus group emails</td>
<td>SEWS survey</td>
</tr>
<tr>
<td>True crime focus: Mass murder case study</td>
<td>- Multilevel, gradual release writing instruction based upon student need, specific type of crime, and publishing options</td>
<td>Research reflections and field notes</td>
<td>WAT survey</td>
</tr>
<tr>
<td><strong>November and December</strong></td>
<td>- Research teams formed based upon case chosen within crime category</td>
<td>Ability-grouped focus groups (writing groups)– two meetings</td>
<td>True crime persuasive essay scored with rubric</td>
</tr>
<tr>
<td>(5 weeks): Collaborative planning phase</td>
<td>- True crime-related persuasive essay assigned planned within the</td>
<td>Reflective post-focus group emails</td>
<td>SEWS survey</td>
</tr>
<tr>
<td>True crime focus: Serial murder case study</td>
<td>- Multilevel, gradual release writing instruction based upon student need, specific type of crime, and publishing options</td>
<td>Research reflections and field notes</td>
<td>WAT survey</td>
</tr>
</tbody>
</table>
**Independent and Collaborative Planning Phases**

The procedures and data collection for the independent and collaborative planning phases were identical with the exception of the planning format (Table 3.7). Each planning phase lasted approximately five weeks. Table 3.8 includes the theoretical constructs associated with each stage of the independent and collaborative planning phases.

**Table 3.8**

*Theoretical Constructs Incorporated into The Independent and Collaborative Planning Sessions*

<table>
<thead>
<tr>
<th>Component</th>
<th>Social Cognitive writing model theoretical construct connection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specific planning format</strong></td>
<td></td>
</tr>
<tr>
<td>Get-to-know and independent planning phases – individually</td>
<td>Cognitive and process strategies; environmental/behavior/personal self-regulating strategies</td>
</tr>
<tr>
<td>Collaborative planning phase – in research teams</td>
<td></td>
</tr>
<tr>
<td><strong>Time management planning format</strong></td>
<td></td>
</tr>
<tr>
<td>Get-to-know and independent planning phases – individually</td>
<td>Process strategies; Environmental/personal self-regulating strategies</td>
</tr>
<tr>
<td>Collaborative planning phase – in research teams</td>
<td></td>
</tr>
<tr>
<td><strong>Persuasive essay</strong></td>
<td></td>
</tr>
<tr>
<td>Independently written</td>
<td>Cognitive strategies; writing ability</td>
</tr>
<tr>
<td><strong>Peer Review</strong></td>
<td></td>
</tr>
<tr>
<td>Independent planning phase – random topic partner</td>
<td>Cognitive and process strategies; environmental/behavior/personal self-regulating strategies</td>
</tr>
<tr>
<td>Collaborative planning phase – a partner from students’ research team</td>
<td></td>
</tr>
</tbody>
</table>

Students met in their research teams to find and share source information specific to their chosen crime case for both planning phases. However, when each team determined they were ready to begin the process of writing their essays, the students began planning. In the independent planning phase, the planning was completed independently; in the collaborative planning phase, it was completed with their research team. In both planning formats, the IRRC and COPS graphic organizers and mnemonics were used, color-coded by topic; however,
drafting the essays was completed independently. Both phases included peer review, time to
revise and edit essays independently after the peer editing meeting, and publishing to an
authentic online audience chosen by the class – the true crime blog.

Data Analysis

There were five data sources collected during this study: focus group data, reflective
post-group emails, writing conference and research reflections and field notes, writing
performance levels gathered via student essays, and perceived self-efficacy and writing anxiety
survey responses, Table 3.9 lists these data sources and the method for data analysis.

Table 3.9

<table>
<thead>
<tr>
<th>Data Source and Method for Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data source</td>
</tr>
<tr>
<td>Ability-grouped focus group audio recording and transcripts; reflective post-group emails (Sussman et al., 1991)</td>
</tr>
<tr>
<td>Writing conference discussion reflections, research reflections, and field notes</td>
</tr>
<tr>
<td>Writing performance based on rubric scores</td>
</tr>
<tr>
<td>Self-Efficacy in Writing Scale (SEWS; Bruning et al., 2013)</td>
</tr>
<tr>
<td>Writing Apprehension Test (WAT; Daly &amp; Miller, 1975, 2013)</td>
</tr>
</tbody>
</table>

Qualitative Analysis

The qualitative data analyzed for this study was the focus group transcripts created from
audio recordings, the reflective post-group questionnaire responses copied into data tables,
writing conference discussions, and research reflections and field notes documented in a research journal. This data provided a detailed picture of how students perceived the effectiveness of collaborative small group planning, in real time, as the writing process was occurring (research questions one and two). According to Maxwell (2013), there is no one correct way for qualitative analysis; the use of data analysis “strategies need to be planned (and modified when necessary) in such a way as to fit the data you have, to answer your research questions, and to address any potentially serious validity threats to your conclusions” (p. 105). The analysis of this data followed a multi-step procedure suggested by Creswell (2013) and Maxwell (2013).

Focus group transcripts and reflective emails were organized into electronic files (Creswell, 2013). Writing conference discussions, research observations, memos, and reflections were organized into a three-subject spiral journal. When analysis began, a data analysis matrix was created (Maxwell, 2013) with research questions listed across the top and empty cells underneath. As coding began, descriptors, categories, and themes were entered into these cells with evidence for each added in rows across the page. The writing conference discussion reflections, observation notes, memos, and reflections were transferred to this matrix as their content was coded.

The second step was reading and memoing (Creswell, 2013; Maxwell, 2013; Miles & Huberman, 1994). To get a sense of the data as a whole, transcripts, notes, memos, and reflections were reread multiple times. Maxwell (2013) and Miles and Huberman (1994) both stated that memoing is important to include throughout the data collection and analysis process to track the thought processes, connections, and generalizations formed and is a valuable tool when the coding process begins. These memos focused on the qualitative data, research reflections, and observations connected to the research questions of this study: writing skill, self-
efficacy, writing anxiety, and student perception. Reading and memoing was incorporated into the second step of data analysis.

The next step to this study’s qualitative data analysis was the actual coding process, defined as “the process of building detailed descriptions, develop[ing] themes or dimensions, and provid[ing] an interpretation” (Creswell, 2013, p. 184) based upon personal interpretations of the data. Coding is like “fracturing” (Maxwell, 2013, p. 107) the data and rearranging it into categories. Open coding (Corbin & Strauss, 2007) was used in this process, to capture new insights beyond those established by the study’s goals and research questions.

To begin the coding process, the data was compared, looking for similarities and differences as well as finding connections within each source and between sources. This is called the organizational level of coding (Maxwell, 2013). Established categories, sometimes called topics, from the research questions acted like “sorting bins” (p. 107) for further analysis (Maxwell, 2013). For this study, topics such as planning methods, time management goals, or the value of modeled instruction were determined as possible organizational categories or topics.

The next step was to find the descriptive categories (Maxwell, 2013) based upon explicit information from the data such as students’ characteristics, beliefs, or concepts expressed during class, in the writing meetings (focus group discussions), from conference conversations, and from their writing samples. For this study, it was determined that possible categories could be characteristics relating to the first-year college experience, adjustment and transition struggles, challenges with academic expectations or roommates, managing athletic and academic expectations, managing library resources, interpersonal relationships, or true crime concepts.

Identifying theoretical concepts occurred next. These abstract categories came from the theoretical framework of the study, from inductively derived theory as the data was analyzed, or
from participant comments or ideas (Maxwell, 2013). According to Creswell (2013), these are sometimes called themes and five to seven themes are recommended as a manageable number. The goal of coding at this stage is “winnowing the data, reducing … to a small manageable set of themes to write into [the] final narrative” (p. 186). For this study, the seven foundational components from the Zimmerman and Risemberg model (Ch. 2, pp. 20-33; 1997), such as the triadic nature of strategy use or socially based learning, were hypothesized as possible constructs from which the themes emerge. The final step of the coding process was going back to the original context of the transcripts and field notes to ensure the categories and themes found still represented the context in which the data was collected.

Once the major themes of the data were identified and supported with evidence from the data sources, including all rival models (Yin, 2009), interpretations were made and connected to the research questions. Creswell (2013) referred to this as simply making sense of the data or identifying the overarching lessons learned. To finalize the qualitative data analysis, a visual display was created to provide a big picture representation. Visual displays can “supply the basic material for explanations – plausible reasons for why things are happening as they are” (Miles & Huberman, 1994, p. 90) and according to Miles and Huberman (1994) are a requirement for a valid analysis of the conclusions drawn from the data set. This final abstraction of the lessons, themes, topics, descriptors, rivals, and display of the data was then linked with the conceptual framework of this study to construct a narrative representing the effects of the two planning formats from the students’ perspective.
Quantitative Analysis

Writing Performance

To determine if there was a relationship between collaborative planning on writing ability, I used descriptive statistics, mean rubric scores, and matched pairs statistical tests. Data from this analysis answered research question three, how does collaborative small group planning affect the quality of students’ persuasive essay writing? The university-established writing communication rubric was used to score all student essays. All students submitted both essays so missing data was not an issue. Essay scores were loaded into an Excel spreadsheet. Once both sets of data were collected, the descriptive statistics and matched pairs analysis for dependent samples were run. According to De Vaux, Velleman, and Bock (2012), the most common way to compare subjects with themselves before and after a treatment is through matched pairs analysis. Because this study compared essay scores before and after the introduction of collaborative small group planning, this statistical test was appropriate. This statistical test used the differences between the two essay scores as the data set.

Before the matched pairs analysis was run, the data was checked to ensure it met the required assumptions for matched pairs t-test analysis. This assumptions check included the use of histogram and box plot graphic representations. I checked four required assumptions: 1) the data was drawn from a paired, dependent sample, 2) the data was independent, 3) the data was drawn from a random sample, and 4) the data followed a normal model (Triola, 2010).

The data collected in this study met the first required assumption of paired dependent data as each student’s pre- and post-essay scores were being matched. The second required assumption was met as the individual differences between the paired data of each student are independent of each other (DeVaux, Velleman, and Bock, 2012). The sample for this study was a
convenience sample and the treatment was applied to all students in a specific order so the third required assumption was not met. This was reported as a limitation of this study as the fact that students were required to take the course yet chose the section they would attend could affect the reliability, validity, and generalizability of these results. The fourth assumption, the normal or nearly normal condition of the data was not met based upon histogram graphics. Because the number of pairs was small in this study ($n=18$) and because the data set was not normally distributed, a matched pairs $t$-test was not appropriate. Instead, I used the Wilcoxon Signed-Ranks Test for Matched Pairs (Wilcoxon, 1945) for analysis. According to Triola (2010), the Wilcoxon signed-ranks test is a nonparametric test with a 95% efficiency rating that uses signed ranks to test “a null hypothesis that the population of matched pairs has differences with median equal to zero” (p. 701). The requirements for this test are: 1) the matched pairs are a simple random sample and 2) the distribution of the differences is roughly symmetric on the left and right side of the histogram. There is no requirement for normal distribution (Triola, 2010). One benefit of this test over other nonparametric matched pairs tests is its use of signed-ranks which results in conclusions that better reflect the true nature of the data (Triloa, 2010). After the data was checked for these assumptions, the Wilcoxon signed-ranks test was run using Microsoft Excel spreadsheet software, Windows 10 version.

For this data analysis, hypotheses were established. The null hypothesis was $[H_0 = \text{medians are equal}]$, or the matched essay score pairs have differences that come from a population with a median equal to zero indicating no relationship between collaborative planning and writing ability. The alternate hypothesis was $[H_A \neq \text{medians are not equal}]$, or the matched essay score pairs have differences that come from a population with a nonzero median indicating there was a relationship between the collaborative planning method and overall essay writing.
quality. A one-tailed, 95% confidence value was used in this test. All cases that resulted in a zero difference were deleted before analysis began (Triloa, 2010). To determine statistical significance, the difference between the two essay scores were calculated, ranked, and then the total sum of the signed-ranks were determined. To obtain the test statistic, the lesser of the two sign-rank sums were used to compare to the critical value $t$, found in a Critical Values of $T$ for the Wilcoxon Signed-Ranks Test table (Triloa, 2010, p. 792). If the test statistic was less than the critical value, the null hypothesis was rejected indicating that the independent planning and collaborative planning medians were not equal. Additional analysis was completed comparing the signed-rank sums. If the total positive ranked sums are greater than the total negative sums, it could indicate that essay scores increased and could provide evidence to suggest that the experimental variable of collaborative planning did have an influence on students’ writing ability.

**SEWS and WAT Scales**

Students completed the SEWS self-efficacy scale (Bruning et al., 2013) and the WAT writing apprehension test (Daly & Miller, 1975, 2013) online using Qualtrics surveys. Once these surveys were completed, results were downloaded to a Microsoft Excel document, Windows 10 version. For the SEWS survey, there was one incomplete case and so that case was deleted before analysis began. The data analysis completed for these two surveys included descriptive statistics to compare overall scores as well as individual category sums for the SEWS survey. The Wilcoxon signed-ranks test for matched pairs was run. These results were organized into a data table and used to either reject or fail to reject the null hypothesis [$H_0 = \text{medians are equal}$] or the matched essay score pairs have differences that come from a population with a
median equal to zero indicating no relationship between collaborative planning and writing ability. A two-tailed, 95% confidence value was used for analysis with these tests.

The data analysis methods for the Wilcoxon signed-ranks test for matched pairs followed the procedures outlined above in the writing ability section; however, the matched pairs consisted of survey sum scores collected after using the independent planning method to the survey sum scores collected after using the collaborative planning method. To determine statistical significance, the difference between the two survey scores were calculated, ranked, and then the total sum of the signed-ranks were determined. Data analysis from these two scale differences provided evidence for research question four, how does collaborative small group planning affect students’ overall perceived self-efficacy for persuasive essay writing, and question five, how does collaborative small group planning affect students’ level of writing anxiety for persuasive essay writing? If the collaborative small group planning method did show a relationship on self-efficacy and writing anxiety, the test statistic would be less than the critical value.

*Mixing of Data for Interpretation and Corroboration of Findings*

Once the qualitative and quantitative data were analyzed separately, these complementary results were then merged for validation and corroboration purposes (Creswell, 2011). This mixing of the data at the interpretation stage helped to ensure the results were trustworthy and represented a broad picture of students’ responses to the two planning formats. In addition, converging the results provided a type of pragmatic postsecondary strategy-based writing “umbrella paradigm” (Creswell, 2011, p. 79) to the research study. All five research questions were analyzed by multiple methods so that students’ perceptions of different planning styles as
well as their outcomes in writing, self-efficacy, and writing anxiety were converged, diverged, related, and were represented within the study’s interpretation.
CHAPTER 4

RESULTS

The purpose of this study was to determine if a relationship existed between two pre-write planning formats, independent planning and collaborative planning, with overall essay quality, self-efficacy, and writing anxiety. The social cognitive model for self-regulated writing (Zimmerman & Risemberg, 1997) provided the theoretical framework, specifically the environmental processes and the personal processes of this model. Concurrent triangulation mixed methods was the research design for this study (Creswell, 2002; Guetterman & Fetters, 2018). Quantitative and qualitative data were collected concurrently during the research process and analyzed separately. The two sets of data were then merged to triangulate the results and form an overall corroborated interpretation (Creswell, 2011). The discussion of results in this chapter is organized first by the research method, then by the research questions guiding the study. The five research questions were:

1) How did students perceive their experiences while participating in collaborative small group planning?
2) How effective did students perceive collaborative small group planning to be in supporting their ability to write?
3) How did collaborative small group planning affect the quality of students’ writing?
4) How did collaborative small group planning affect students’ overall perceived self-efficacy for writing?
5) How did collaborative small group planning affect students’ level of writing anxiety for writing?
This chapter is organized into three sections: Qualitative Data Results, Quantitative Data Results, and Qualitative and Quantitative Results Compared.

**Qualitative Data Results**

The qualitative data collected for this study were transcripts from 12 focus group discussions, writing conference discussion notes, classroom observation notes, and the reflective post-focus group emails. To ensure accuracy after transcribing, I listened to the recordings twice and compared them to the transcript. I also compared the transcripts to the notes the moderator took while conducting the focus group discussions.

Objectivity and non-judgmental analysis were important considerations in reporting the results of this study as the participants were students enrolled in a course where I was the primary instructor. To reduce bias, several processes were incorporated into the data analysis. The information known about each student was acknowledged but a conscious effort was made to set aside that knowledge during the data collection phase, while I was transcribing and coding the focus group and writing conference discussions, when analyzing classroom observations and research notes, and throughout the reporting phase of the project. In addition, with each finding reported, alternate explanations were explored and acknowledged (Miles & Huberman, 1994; Yin, 2009). All essay scores were triangulated with the Core One team to ensure nonbiased grading. In terms of preconceived attitudes surrounding the two planning formats, I was indifferent towards either one as the literature reviewed in this study prepared me to expect a mixed preference for either one. I used a moderator not connected with the university for the focus group meetings and we held meetings to debrief after every set of focus group discussions to note any important observations or takeaways from the student conversations. A final step
used to ensure validity was sharing the transcripts with the students on a shared course document to ensure their words were accurately represented. There were no identification labels used in these shared transcript documents.

The focus groups were divided into three ability groups - low, middle, and high - based on pre-study quick writes and short papers. These focus groups were identified as A, B, and C respectively and demonstrated a marked difference in the length and depth of discussion recorded during the meetings. Each focus group met four times for a total of 12 focus group meetings. Based on the total number of words produced by the students in these discussion groups, focus group A provided a considerably higher number of words spoken during their four meetings over the other two groups (See Table 4.1). Though the discussions of the three focus groups resulted in similar themes, focus group A provided more insight and contributed more data and evidence to the results of this study.

**Table 4.1**

<table>
<thead>
<tr>
<th>Focus group</th>
<th>Total number of words spoken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus group A - low</td>
<td>7,033</td>
</tr>
<tr>
<td>Focus group B - middle</td>
<td>4,847</td>
</tr>
<tr>
<td>Focus group C – high</td>
<td>2,806</td>
</tr>
</tbody>
</table>

The qualitative data of this study related to research questions one and two. A multi-step procedure was used to analyze this data including organizing the data, memoing, and coding. Through coding all qualitative data sources, descriptive categories of the students, organizational themes, and subthemes were found. The descriptive categories of the students will be summarized first, then the major themes organized by research question will follow.
Descriptive Categories of the Students

There were five general categories that emerged from the data that described the student participants (see Figure 4.1).

![Descriptive Categories of Student Participants](image)

**Figure 4.1**

*Descriptive Categories of Student Participants*

The first category was the students’ participation in sports and the impact this had on their college experience. All students were full-time students and athletes competing in the NAIA conference. The students participated in a variety of sports such as football, soccer, wrestling, baseball, track, softball, and dance. Though some of these students were more actively involved in competition during the fall semester, all had either practice at least two times a day or weight training in the morning and/or evening. As one student stated, “Most people don’t know it is an all year commitment; we are either competing or in weight training. It is a huge
time commitment.” Some also held jobs. Many of the students stated juggling these dual and sometimes triple roles resulted in high amounts of stress and anxiety. As one student stated, My management is awful to be honest ‘cuz I feel like if I play a sport … it will really take a huge toll on you. Like you’re tired and you just want to sleep but you can’t sleep because you have things to do and then one, I work too so work can take a toll on top of school work and you have more than one class but then some teachers…will try to make their class like a bit more important but it’s really not. Another student agreed with this and stated he rarely even got back to his dorm room before 10:00 PM due to practice or class schedules resulting in “no time for homework.” Most students agreed with teachers trying to make their class seem more important over others and how this caused stress for the students. In addition, on one occasion, I observed a student in tears at the beginning of class due to the increased demands of practice in preparation for a competition and the academic demands of preparing for multiple finals.

To further understand the athlete experience within this university, the athletic departments of the university in which this study took place used weekly progress checks to promote student accountability and open communication between coaches and professors. Student athletes in active competition were to obtain written progress reports on grades and attendance from their professors once a week. At the time of this study, students participating in wrestling, football, and track had these progress checks for me to sign. Some of the athletes who participated in this study were diligent in getting my signature, while others were more inconsistent and needed reminders to complete the check-ins.
Several of the students stated they had dropped their standards of excellence as they transitioned to postsecondary education due to the stress of other classes, athletics, and work. As one student stated, “Well, I’m not going to lie, my standards have really dropped since entering college.” All students in that focus group immediately agreed, stating in high school A’s were the goal and now B’s are good enough. All agreed when that same student stated, “C’s get degrees.”

The students appeared to be metacognitive in their ability to identify what they needed to become better writers as well as better students in general. This metacognitive ability related to the personal and behavioral processes of the social cognitive model as they were able to self-monitor; however, most were not self-regulated writers or learners. All focus groups stated they needed structure and support from their professors and coaches to be able to manage their schedules and complete their assignments on time and to the best of their ability. Many stated time management was a challenge for them, due to the many demands placed upon them from their professors, coaches, and employers. All focus groups stated they procrastinated and were not agentic. This was evident as I rarely received appeals for help or support in finishing the assignments for the course; most support was provided during class meeting times. However, they did state that when support was provided by professors, it helped them get their work done. Many reported their appreciation for the structured and organized nature of this course and attributed their success with completing their assignments for the course to that structure. Specific supports identified by the students were help with time management, assignment planning graphic organizers, checklists and rubrics, and time in class to work.

The students of this study valued autonomy within a structured environment such as being allowed to pick which crime cases to research within a bounded choice group or even
suggesting other topics not provided within that bounded group. Often students mentioned that class was interesting and fun because they were studying crime cases they had chosen to research, evidence of students’ connecting their affective domain to further their cognitive domain of writing skill, similar to the theoretical perspective of Bandura (1986, 1988, 2001) and social cognitive theory. For example, a student from focus group A, who had picked his own topic based on where his family lived, shared,

   I liked my topic. I felt like planning it ‘cuz it was from Houston so I was like it was interesting to find out something that was close to me, Dean Corll. He was … a serial killer in the 70s from Houston. It was really interesting just to be able to pick someone I wanted to do, I enjoyed it more.

Other students sought out their own cases as well if my suggestions were not interesting to them. After picking a notorious serial killer for their research topic, one triad decided to find a less known female serial killer for equal representation within the group of criminals the class was investigating.

   The students who participated in this study were very social and did appreciate the ability to work with peers. As one student stated,

   Instead of everyone having to write an essay about something different, there is someone else in your group that can help you make your paper better and they can edit it; kind of show you how other things can be written and how you can change your thinking.

This statement provides evidence for the theoretical perspective of Vygotsky (1978) and the social interactive nature of learning. Their ability to work with peers was important but did not
always influence how they picked their topics to research. For most students, based on classroom observations, the crime cases they researched were more important than who else would be in their research group.

Finally, students who participated in this study advocated for one another and supported one another inside and outside of class as well as providing suggestions to make the class more equitable for all students. For example, one research group met outside of class to help one another catch up due to absences from sports and illness. Another group advocated for a student who did not find the planning process supportive in her ability to write the independent planning essay by voicing,

When it comes to the planning pages, I think that those should be extra credit ‘cuz like if it doesn’t help people … and doesn’t do anything for them and so I don’t feel they should have to do it if it is just a waste.

The following sections present the dominant themes and subthemes that emerged from the focus group discussions, the classroom observations, reflections from instruction and writing conferences, and anecdotal notes. First, the overarching theme that emerged from the study is reported. Then related subthemes are reported by research question. This section summarizes the subthemes relating to students’ perceptions about planning overall and then compares their perceptions of independent planning to collaborative planning. In both sections, subthemes relating to students’ perceptions of self-efficacy and writing anxiety are discussed. Throughout the rest of this paper, when referring to a specific focus group, the abbreviation FG will be used followed by the specific focus group identification marker A, B, or C (e.g., focus group A will be abbreviated FG-A).
Theme One: Supportive Strategic Instruction.

Based on the 12 focus group discussions, student comments when conferencing, and observations recorded in the research journal, one overarching theme emerged – postsecondary students still need and want a learning environment that provides self-regulated support and strategic writing instruction. Students voiced an appreciation for instruction that teaches students how to be self-regulated writers. This is similar to the Hayes and Flower (1986) writing model and what Zimmerman and Risemberg (1997) posited in their theory of social cognitive model for self-regulated instruction: the belief that no matter the age of the writer, explicit instruction in the cognitive, motivational, writing process, and self-regulated strategies results in improved writing; especially if the writing task is challenging. Students in this study cited all of the processes of the Zimmerman and Risemberg (1997) writing model as supporting their ability to write (Table 4.2).

Table 4.2

<table>
<thead>
<tr>
<th>Environmental process</th>
<th>Behavioral process</th>
<th>Personal process</th>
</tr>
</thead>
<tbody>
<tr>
<td>The physical and social setting in which writing takes place</td>
<td>Self-observation, self-judgement, and self-regulation of writing</td>
<td>Cognitive beliefs and knowledge, metacognitive processes, and the affective states of writing</td>
</tr>
</tbody>
</table>

Note: Adapted from Zimmerman & Risemberg, 1997

Students found the support of the planning process and planning documents very helpful in writing their essays independently and submitting them on time at the proficient level. When the moderator for the focus groups asked if they thought they still needed support and structure in the classroom at this stage in their life, all said yes. For example, one student from FG-A shared,
I like when she gives us those sheets that tell us … what should be in there [the essay] and like all the other stuff that goes with it and I just write down what should be in there and the little notes that she also made for us as well (Appendices E and F).

Another student followed up with “It’s like she is setting us up for success basically.” Comments from students in other focus groups stating appreciation for support were, “It’s really nice to keep everything in order and the way she sets it up is really nice just so you know where you are typing [and] where to put it” and “It is extremely organized and it basically sets up how your essay is going to go so really [you] don’t have to do much besides go back and it also helps with your citing sources.”

The students voiced a general appreciation for the high level of teacher support, flexibility, and grace provided them throughout the semester. Their perspectives connected directly to self-regulation research and the supportive nature of the learning environment theorized by Zimmerman and Risemberg (1997). Students in FG-B stated, “She is always there to … talk about your paper. Like she will read it for you and give you pointers” and “She always says email me over the weekend if you have questions.” Another dialogue relating to teacher support was noted in FG-A after the students finished planning their first longer essay for the course. Through this conversation, an interesting perspective was voiced by the students in regards to how students view instructors’ responses to absences and class attendance.

Student A: With this paper we’re writing specifically, she helped us find some of the links, like especially the scholarly ones that are more difficult to find.

Student B: If we don’t know something she’ll be sure to like…

Student A: Yeah, she helps you out and does her best to answer the question.

Student B: And if she doesn’t know it, she will make sure to get it to you.
Student C: She is always trying to figure it out if you are stuck on something.

Student A: She is super helpful too ‘cuz like the first two weeks of school, I was not coming to class. It was … hard for me. I was homesick and didn’t want to go to class and I emailed her and I was like, ‘I got to start coming to class’ and then she was like, ‘Don’t worry, I will help you with everything’, so she was really helpful with like the transition and stuff.

Student B: I think that impacts the student because if she were to say get your act together, like I would have reacted like, well…

Student A: I’m not coming now.

Student C: You’re going to act like that, I’m skipping that class.

Student A: I’m dropping it.

Student B: She is a very understanding teacher and that goes a long way.

The moderator then asked if this was especially important when you are in college. The response from one of these students was “Yeah, first year a long way from home, for sure.” Overall teacher support in self-regulated writing, based upon this dialogue, other student comments, and student conference observations, contributed to keeping the students coming to class, completing the work, and passing the course.

**Subthemes**

Included under this overarching theme of supportive strategic instruction were several subthemes students identified as supportive or constructs enhanced by this support. They can be found in Figure 4.2.

When sorting these subthemes of support into the self-regulating processes of the social cognitive model of self-regulated writing, two processes appeared to be the dominant self-
regulating behaviors these students found most supportive (Figure 4.3). They were the environmental process and the personal process, with the behavioral process including self-monitoring and transfer.

In the following sections, organized by research question, these subthemes are discussed and supported with evidence from the focus group and writing conference discussions and classroom observations. As each research question is discussed, the environmental processes are reported first followed by the behavioral and personal processes. It is important to note that not all subthemes were identified as evidence for every research question. In addition, many of these subthemes overlapped and were interconnected. Many related to more than just one research question or process. Therefore, many of these subthemes may be referred to more than once when reporting the results in this section.

**Figure 4.2**

*Overarching Theme and Subthemes*
Research Question One: Perceptions of Collaborative Small Group Planning

The first research question guiding this study was, how do students perceive their experiences while participating in collaborative small group planning? As stated above, all students voiced their need and preference for a supportive learning environment and guided support from their instructors at the postsecondary level. The planning process in general, using graphic organizers and mnemonics modeled explicitly using the coping method, was identified by these students as supportive in writing an essay scored at a proficient level. The subthemes identified by students as influencing their perceptions of not only collaborative small group planning, but the planning process used in this study in general, related to the environmental and personal process and can be found in Figure 4.4. A discussion of these themed categories follows.
Subthemes Influencing Students’ Perceptions for Collaborative Small Group Planning – Research Question One

Environmental Processes

Evidence revealing students’ perceptions for the collaborative planning process and planning process in general related to five of the environmental processes found in the social cognitive model of self-regulated writing (Zimmerman & Risemberg, 1997). They were environmental structuring and the learning environment, pre-write planning strategies, modeling, peer review, and deliberate practice and time to write.

Environmental Structuring and the Learning Environment. The students of this study identified many components of the learning environment as supportive when discussing their perceptions of collaborative planning and planning in general. Students identified the
socially-based research groups as a supportive and helpful structure in writing their essays. One student referred to her research group as her “people resources.” Evidence to support this claim can be found in student comments such as,

I think it’s helpful that she puts us into groups like she does ‘cuz we get to talk about what we’ve all learned and if we have any questions we can go to people that are working on the same thing as we are,

and “We can get their perspective too. I like to see how other people are taking what we have and turning it into their way; how they are doing [it]. I just like to see what the peeps are doing.” These statements correlate with the second theoretical component of this study; specifically, the importance of social learning theory to skill acquisition and self-regulated strategies (Bandura 1986, 1988, 2001; Vgotsky (1978); Zimmerman and Risemberg, 1997).

**Pre-write Planning Strategies.** The second subtheme students identified as supportive when discussing their perceptions of collaborative planning and planning in general was the planning page graphic organizer used for all essays written. This perceived support of the planning process is evidence for the writing models of Hayes and Flower (1986) and Hayes (1996; 2000) as well as the social cognitive model for self-regulated writing instruction (Zimmerman & Risemberg, 1997). This page included an assignment checklist, a time management section, and a planning graphic organizer similar to the IRRC (Introduction, Reasons, Rebuttal, Conclusions). Students were explicitly taught, through a coping model method, how to use the page to support their pre-write planning process. Overall, students found this page to support their ability to write a proficient essay with comments including, “It kind of gives you a format of what is … required of you for the final product. It really helps you figure out what she wants so you don’t get a bad grade” and “It helps you see how many paragraphs
you need or how much information you really do have ..., how long they [the paragraphs] should be, and what you should add so you are not just writing” and “I feel like it forces you to be organized and have all your information planned out.”

**Modeling.** The third environmental process subtheme students identified as supportive when discussing their perceptions of collaborative planning and planning in general was modeling. Modeling was used as an instructional strategy and is part of the social cognitive model of skill acquisition (Zimmerman & Rosenthal, 1974), the fourth theoretical component and primary instructional framework used in this study. According to Zimmerman and Rosenthal (1974), novice learners acquire cognitive, writing process, and self-regulatory skills most rapidly from social learning experiences such as models and interactions with peers and teachers. In this study, students voiced an overall appreciation and value for the student-instructor relationship, the inclusion of the *coping* model for instruction, and the teacher-as-learner classroom learning format supported by the research of MacArthur and colleagues (2014), Wischgoll (2016), and Zimmerman and Kitsantas (2002). For example, a student in FG-C stated, “I didn’t really know what to base my writing around until she gave me an example of what she was doing.” In addition, a student from FG-A shared, “Well she is not just saying go write this paper, you can actually see the process of how you are supposed to do it.” Both students were referring to lessons where I modeled how to write a persuasive essay using the research notes and planning graphic organizer using the coping model method. Students in FG-A provided evidence for the supportive nature of coping modeled instruction and the teacher-as-learner format in the following conversation:

Student A: It’s kind of cool ‘cuz it’s like she is not a criminal justice major and it’s like she is learning with us at the same time, so it’s kind of cool.
Student B: She does papers with us most of the time.

Student C: I do like how she literally does the research with us.

Student D: She does the homework with us.

Student A: The crime journal and everything.

Student B: And she lets us look at hers as an example so like if we need help we can just go back to that and alright we just got to make sure it looks like that and yeah, she’s really helpful; I’m not even going to lie.

Student C: When it comes to the topics, she will pick out a few of the people and she’s also open to hearing our suggestions and if like someone is working alone, like [student’s name], she did the research with her so she wasn’t alone and the rest of us were all in groups so that’s nice.

These quotes are evidence of the students’ perceptions of the coping model and teacher-as-learner instructional format, demonstrating the value they placed on these strategic instructional methods as supporting their learning and refinement of their writing skills. These quotes also provide evidence for the overarching theme of this study: postsecondary students need and appreciate supportive strategic writing instruction.

**Peer Review.** Peer review was the fourth environmental process subtheme identified by most students as supportive when discussing their perceptions of collaborative planning and planning in general. An interesting caveat found in this study was that students identified peer review as part of the planning process; not commonly identified as a planning practice in writing research. Students’ perceptions of its effectiveness in supporting their writing ability was mixed. In one of the first focus group discussions, students in group B voiced their apprehension for participating in the peer review process because they didn’t feel like they were skilled enough in
writing to give advice to another writer. In addition, they didn’t want to say something negative about a classmate’s paper. For example,

Like I’m one of those people… you have me peer review stuff, I’m not good at telling you what’s wrong and first of all I’m really nice and I don’t like saying that’s not right. I don’t know like bad [writing] and other times I just don’t know what to say and … ‘cuz I’m not … a really good writer myself so I don’t know how to tell them it’s not right.

Students in this same focus group provided insight into the thinking of those students who want constructive feedback but do not get it from their peer editor when they shared,

There was one thing that was kind of frustrating and that was when we had to read our paper back to our other partner and say like your partner doesn’t know what you need to correct or make better. I didn’t have anything to change.

Another student added, “It’s kind of hard to change your paper and I remember I had a paper and I couldn’t change anything because I got so much good feedback from it, I was kind of frustrated; I wanted constructive criticism.” Immediately following these comments, another student in that focus group gave this advice,

Maybe to piggyback on that … we could get together in our research groups and edit papers and see if we missed anything and see what we can work on. And with peer editing, like work on peer editing in class so then … it’s more constructive and we can kind of realize how we can say this without the other person getting mad.

These comments are similar to the social feedback research of Moore and Teather (2013) who also had students react negatively to peer editing at the beginning of their study for similar
reasons cited by students in this study. They then taught their students how to peer edit using checklists and examples. Upon conclusion of the study, their participants rated the peer review process more positively.

In the present study, after hearing about these comments from the moderator, I too explicitly taught the process, provided a checklist, and changed the name of the process to Peer Sharing in an attempt to alleviate some of the anxiety of participating in this process voiced by the students. Comments in future focus groups were still mixed. Most students found it to be more beneficial if they peer edited with someone from their research group, i.e. collaborative planning group. For example, in the final round of focus group meetings, a student from FG-B stated, “I felt more confident when they were reading it [collaborative planning essay] because they were editing it correctly ‘cuz they were doing the same stuff.” Based on submitted revised and edited rough drafts, more evidence of revising and editing was found on the collaborative planning essays than on the independent planning essay where their peer review partner was writing about a different topic.

Evidence to support the “learning by reviewing” peer review research of Cho and colleagues (2011) was voiced by a student in FG-B who identified the peer review process as supporting their own writing. “The editing process [was helpful] because you have the same sources so seeing what they put in theirs helps me with mine.”

However, even with direct instruction and checklists, one student did not find the peer review process helpful. Again, in the final round of focus group meetings, a student from group C stated,
I like how my group was helping me find resources but when it was time to proofread each other’s paper, I felt like they were kind of scared to tell me what was wrong with my paper so I didn’t really have a lot to go back and work on.

This student’s research group was made up of students from FG-A and B, lower leveled writers who may be still developing their own writing skills or lack the confidence to give advice to other students about their writing.

**Deliberate Practice and Time to Write.** Deliberate practice and time to write was the last environmental process subtheme students identified as supportive when discussing their perceptions of collaborative planning and planning in general. In every focus group, during every meeting, time was a recurring topic for discussion, usually in relation to assignment completion and their need for support in managing their time. For example, when the moderator asked FG-B if they felt they needed to be forced to be organized even at the postsecondary level, students responded with “I do for sure” and “Absolutely.”

Discussions regarding time management were associated with the question, “How did you feel while you were writing your essay?” Students usually responded with feelings such as “good” and “confident”, sometimes even “fun” and stated the reason for these positive feelings was mostly because they were given enough time to write; not only enough days to complete the writing process from start to finish, but also time to write in class. For example, a student in FG-C attributed time to his high level of overall satisfaction with his essay when he shared, “I’d say it’s probably my best work because we just took so much time in class to prepare and stuff like that; I felt like I was pretty well prepared and got it done pretty well.” Similar to this, other students stated, “She gives us a lot of notice in advance like it’s not, oh this paper is due in two
days, it’s like a couple weeks and then you have time to plan everything out” and “I feel good because it’s a good long time to write the paper and still keep up with all your other classes instead of crunching everything.”

There was a negative relationship between time and students’ level of stress. Due to constraints in the moderator’s availability, the focus group meetings for the collaborative planning essay had to be scheduled sooner than was ideal. Because of this, the due date for the rough draft was sooner than was customary for the course. Many students commented on the lack of time given to write the rough draft for the collaboratively planned essay before it was due. For example, students in FG-B discussed this lack of time with one stating, “I was nervous about our rough draft that it is going to be due on Friday; usually we have a little bit more time” then went on to say, “but the final draft will be ok because we have Thanksgiving break to work on it.” Other comments relating to the time management section of the planning page were,

- When we do the outline and just … the writing process we have that [leads] up to it, it gives us enough time to write a good essay and turn it in on time. I don’t feel rushed … ‘cuz you get weekends … she always gives us a good enough amount of time to find sources and write what we think then write a good essay.

From FG-C, a student voiced, “I think it made me realize how much time the paper is going to take so I can set aside time to do it.” The time management section made the abstract concept of time more concrete.

These five environmental process subthemes were voiced by students when discussing their perceptions of collaborative small group planning and planning in general. Most students found all five categories supportive of their writing ability with one student identifying pre-write
planning as unsupportive in writing the independent planning essay and one finding peer review unproductive for both essays.

**Personal Processes**

Evidence revealing students’ perceptions of collaborative small group planning and the planning process in general related to four personal processes found in the social cognitive model of self-regulated writing (Zimmerman & Risemberg, 1997). These processes were self-efficacy and writing anxiety, assessment documents and rubrics, goal setting, and cognitive load.

**Self-efficacy and Writing Anxiety.** Students identified self-efficacy, writing anxiety, and confidence in writing subthemes when discussing their perceptions of collaborative planning and planning in general. Research states that students’ perceived self-efficacy is impacted by providing a structured, supportive environment, modeled explicit instruction, and an opportunity to self-reflect. Self-efficacy and writing anxiety can have a direct effect on writing ability and achievement (Zimmerman, 1989; Schunk, 2001, 2008). This study incorporated these structures into its instructional framework which resulted in topics relating to self-efficacy and writing anxiety being frequent subjects discussed during focus group meetings. Most of the questions asked by the moderator during the focus group discussions had some thread of self-efficacy, writing anxiety, or confidence theory woven into them (see Table 3.3 and 3.4, pp. 68-69 for a list of the focus group questions).

Overall, students in this study found the planning process in general to increase their writing self-efficacy and relieve writing anxiety with collaborative planning enhancing that confidence. Feedback such as “It’s like she’s setting us up for success basically” was testament to the students’ growing confidence in their writing ability. This perceived efficacy was voiced in all the focus group discussions and was attributed to four main components of the course:
organization of the course, the consistent nature of the planning process, deliberate, repeated writing practice, and assessment documents and graphic organizers. This last component will be reported in a separate section.

**Organization of the Course.** All focus groups attested to how helpful organization was in their ability to complete the assignments. For example, a student from FG-A stated, “Everything is really organized in that class, super organized, it's really not that hard to keep up with stuff” and from FG-B, “With the planning and having the deadlines that she sets with the checkpoints for every paper, it's really nice to stay on top of things.” Finally, based on classroom observation, the color-coding of all paper documents by assignment was voiced by several students as supporting their ability to organize their planning pages and checklists.

**Consistent Nature of the Planning Process.** Evidence from student opinions to support this component included comments such as,

I feel pretty confident since we have been able to do this with every paper now, I feel really comfortable with using what I have written on my planning page in my paper since we have seen it multiple times.

Another student from FG-B stated,

I feel like without it I would be less confident in myself, but with this, like we have done this with every paper and even short papers and I have found that I get better grades on the papers I have planned …because I was more organized writing and figuring out what I need to have on the paper.

**Deliberate, Repeated Practice.** This writing routine has been attributed to skill acquisition and the development of becoming automatic process writers (Applebee & Langer, 2011; Bereiter & Scardamalia, 1987; Hayes, 2000; Kellogg & Whiteford, 2009). As students
become more skilled in writing, their self-efficacy increases and writing anxiety decreases (Schunk, 2001, 2008). During this study, deliberate repeated practice was incorporated into the structure of the course through the true crime journal, set up as an annotated bibliography. Students wrote entries in their true crime journals at the beginning of almost every class about true crime current events or the specific cases they were researching for their essays. Students reported finding this helpful and supportive of their writing ability.

The sheer number of essays that students wrote during the semester, four in total, also provided repeated practice. Students found this increased confidence in their writing ability. Evidence supporting this component were student comments such as, “I also feel confident because since we have been doing these papers it's added up to this one, it’s like the best one. I feel just using the same format and getting better with practice has helped me write” and “[I feel] pretty confident since we have been doing it all semester and … feel like each paper has gotten better and better.”

**Assessment Documents and Graphic Organizers.** Students identified the personal process subtheme of assessment documents and graphic organizers as supportive when discussing their perceptions of collaborative planning and planning in general. The assessment documents were in the form of an assignment checklist. The course writing rubric, established by the University, was the same for each paper and was given to the students at the beginning of the semester. Based upon this general rubric, a handout containing a detailed checklist of required components for each paper was given to the students on the day each paper was assigned. In addition to this handout, a planning graphic organizer was used to plan the essays. At the top of this graphic organizer was a section that included the assignment checklist in an abbreviated form (Appendices E and F). The students stated they found this planning graphic organizer with
the assignment checklist especially helpful in writing their essays. Students from focus groups A, B, and C respectively provided evidence for this component. “I’m feeling good about this one. I really looked at the checklist this time and … really wanted to get a good grade”, “I feel like I’m confident just because I know what I need to write with the outline and working in a group”, and “I feel confident too because we have the checklist and we know all the things we have to have to get a good score.”

**Goal Setting.** Students identified this third personal process subtheme as supportive when discussing their perceptions of collaborative planning and planning in general. Students were responsible for planning and setting their own writing goals. They reported setting both process and product goals (Schunk & Swartz, 1993; Zimmerman et al., 1996) for each essay they wrote; however, this was not a self-regulated, automatic process for them and required prompting to reflect on what each student wanted to work on. The primary overall product goal voiced by all students was to get a good grade on their assignments and for the course. This was evident in the response of a student in FG-C when asked what goals he set for writing his essay, “My goals are always to get a good grade on the paper and I’m happy with all the grades I have gotten so far so I guess it's worked for me pretty well.”

Other goals set by these students were based mostly upon teacher feedback from previous essays and included both process goals and product goals. The most common process goal voiced by this group of students was time management and striving to get the essay submitted on time. Though there was a section on their planning page for time management, it was a common theme brought up by the students during the focus group discussions. For example, one student in FG-A stated, “I set goals like getting my stuff done… not necessarily completely done on time
but … mostly done before the day that it’s due.” The most common product goals voiced were specific components of the paper such as setting a counter claim, the use of formal language, using all sources in the essay, and following the persuasive text structure.

**Cognitive Load.** The last personal process subtheme that emerged in relation to the students’ perception of participating in collaborative planning and planning in general related to cognitive load and the value students placed on being a member of the research groups when completing a challenging task. In this study, the challenging task was writing the two longer persuasive essays, three to six pages each, on true crime cases. Research suggests that the challenge for novice learners is that cognitive resources available for learning a difficult task are limited, and any one challenging task can consume so much of the available cognitive resources that other tasks cannot be completed; the cognitive load is simply too great to do two tasks at once (Flavell, 1979; Samuels et al., 2005). Focus group comments from the students of this study provided evidence to support these findings. Based on classroom observations and student conferencing during class, most students found it very difficult to apply a persuasive essay structure to true crime. Establishing a thesis with reasons and evidence situated them in a taxing cognitive load condition. Because of this, most turned to their research group members for support, demonstrating the other-regulated learning strategy suggested by Pintrich and Zusho (2002). For example, a student from FG-A described how she turned to others, her research group, for support in writing the essay’s thesis.

> When she has us arguing a serial killer, I think that’s a lot easier with the group. There are … times I prefer to do it alone, just do my own stuff, but with these, ‘cuz it is hard to come up with a thesis for … what am I arguing against with this serial killer, having a group you can come up with ideas.”
These four personal process subthemes: self-efficacy and writing anxiety, assessment documents and rubrics, goal setting, and cognitive load, joined with the environmental processes, provide a clearer picture as to how students perceive their experiences while participating in the collaborative planning process and planning processes in general for writing persuasive essays.

**Question Two: Perceptions of Collaborative Small Group Planning and Writing Ability**

As stated above, all students voiced their need and preference for supportive strategic writing instruction with planning in general identified as a valuable strategy in writing an essay scored at a proficient level. The subthemes identified by students influencing their perceptions of collaborative small group planning, planning in general, and their writing ability are related to the environmental, behavioral, and personal processes of the social cognitive model for self-regulated writing (Zimmerman & Risemberg, 1997) (see Figure 4.5)

![Figure 4.5](image)

**Subthemes Influencing Students’ Perceptions for Collaborative Small Group Planning and Writing Ability – Research Question Two**
Environmental Processes

Environmental processes included pre-write planning strategies, modeling, and peer review. Within the pre-write planning strategies subthemes, students’ perceptions regarding general planning strategies are discussed first with specific evidence relating to collaborative planning compared to independent planning following.

Prewrite Planning Strategies. Overall, students reported the general planning support provided in this study improved their writing ability. General planning strategies were provided in the form of a structured research notes graphic organizer (Appendix I), research groups, and the planning page graphic organizer color-coded and tailored specifically to each persuasive essay (Appendices E and F). In addition, a time management section was included on the planning page graphic organizer where suggested dates were set for each stage of the writing process. This was completed with each essay. I set these dates collaboratively with the students in a whole group setting. Students reported finding these pages and this time management section extremely helpful. Each general planning strategy used will be discussed below.

Research Notes Graphic Organizer. Many students found the research groups and the structured research notes graphic organizer to help with their ability to write an essay by organizing the content, finding credible sources, organizing sources, and including parenthetical citations into their paper. Students stated, “[It] was easy to get all your information down instead of having to trace back [to sources] every time” and “With each source it was like a summary of the site … and we don’t have to go back to the same websites every single time.” Students also stated that sharing sources from the group research notes page supported them in finding more
sources, resulting in more information to use when writing their essay. Not all students found the research notes graphic organizer helpful though, and one student stated it was too much unnecessary writing.

**Planning Page Graphic Organizer.** The general theme found for the planning page was the value of organizing the students’ writing and simplifying the actual writing of the essay. A student from FG-A stated,

I don’t think I could have wrote the paper without the planning page, I’m not going to lie…because I had all my ideas already organized…like it helped me really organize it. I would see something I wrote and then expand off of [that].

Other comments were, “I used to not be pretty confident with writing [but] the way she gives us a sheet [to] plan everything out, it helps a lot with writing essays and writing professional essays” and “I suck at writing but when it came to this planning stuff, it really helped me at writing a good essay.” The moderator of the focus groups asked this student if he still felt like he sucked at writing and he responded by saying he felt more confident when he planned using the planning sheet. Building on this, a student from FG-B stated the planning page “helps me organize out what you are going to do for each paragraph and … have all the information set in front of you before you write your paper … so you are not typing willy nilly.” Other students reported that it helped them be more focused in the writing process and prevented procrastination. For example,

Yeah it really … forces you to think about it before you start writing it so I mean if you are going to procrastinate you are going to procrastinate either way, but it makes you think about it before you actually start writing it so I think it encourages people to start earlier.
Connections to the benefits of planning included comments relating to writing traits such as flow, “Yeah, I think the planning really helps your flow when you write” and cohesion, “I felt like I had more information to put down and it fit right in, it fit together better.” Students stated planning reduced confusion, for example, “Having it all laid out before you was helpful” and “I felt focused writing the paper. It felt good to just have everything there.” Finally, students stated it improved their grades and took the mystery out of how to write a proficient essay, “I’d say it’s probably my best work because I really looked at the checklist on the planning page this time” and “I’d say just having the checklist on our planning page … just going through that just makes it a lot easier for me.”

For some students this was a new process while others stated past instructors have told them to plan but have not given them time and explicit guidance and modeling in how to plan. These statements provided evidence to support the self-regulated body of research and the findings of Torrance (2016) and Thomas and colleagues (1987) who stated that if teachers devoted specific periods of time to plan within the classroom setting, students incorporated it into their composing process more. For example, comments regarding explicit instruction in planning were “In my composition class we don’t really do the same planning that we do in this class so it’s like two different ways of … how to write ‘cuz like in comp …” with another student finishing the sentence for the first student by stating, “it wasn’t as laid out and easy as it is [here].” Further, another student stated “They kind of expect you to do it on your own time where this paper really kind of sets a foundation.” Finally, one student from FG-B shared, “I’d say I plan more for this class than I have for any other class and that really helps me find what I need to type my paper.”
Collaborative Planning and Writing Ability. In this study, the collaborative planning phase was structured so that students researched and planned their essays in a group, however all students wrote their essays independently. When comparing thesis statements of submitted essays between group members, some used the same thesis but the majority did not. However, all shared sources and ideas to include in their writing. These results were based on analysis of submitted planning pages, research notes, and final essays.

Overall, most students preferred collaborative planning over individual planning. Student responses from the focus group discussions referring to collaborative planning in general were “There is nothing negative about it” (FG-B), “It’s just good stuff” (FG-C), “Every class should use this format (FG-C)”, and “It’s more fun working with peers” (FG-B). Students stated that the communication between the group members helped in writing their essays. A student in FG-A stated “I think it kind of sucks that we are doing it on the last paper.” When asked why, he stated he would have preferred to use collaborative planning for the whole semester as it made writing a well-written essay so much easier and communicating with peers supported his ability to write a “nice paper.”

Students stated several specific reasons for their preference for collaborative planning. First, collaborative planning supported students in completing the writing process. They stated it helped them in finding sources and information because, “I felt like I had more information to put down ‘cuz it’s more of a group effort” (FG-A) and “There is more information and it was easier to plan out rather than trying to come up with your own pieces [of information] (FG-A).”

Students reported examples demonstrating how collaborative planning helped them in generating ideas and planning such as, “I think the format is really helpful just because it helps plan out the paper and it’s nice to do it with a group ‘cuz then you can hear how they are
planning their paper” (FG-A). Other comments providing evidence to improved ideation include, “I think working in a group is a lot better than done individually because we’re in a group and we all have the same topic so we can collab more, have a lot more stuff, and get ideas from each other” (FG-B), and “It really helped … having a group for my thesis because I was really struggling with that then my group came up with some ideas so I kind of went with one of their ideas” (FG-A). Based on student discussions surrounding their essay topics and analysis of their research note graphic organizers, students exhibited a deeper level of topic knowledge when collaborative planning was incorporated into the writing process. Many stated a higher level of satisfaction for the essay written with the collaborative planning format.

**Mixed Views.** Two students stated that they usually like to write alone but after experiencing the structure of the collaborative planning process, where the essay was planned with their research group but written independently, they preferred the collaborative process. A student from FG-B provided the following insight into this preference:

I normally like to plan alone actually but I found this fine …, I thought it was also very helpful planning with a group. Just usually I like to plan alone, like do things alone cuz I don’t want to risk my grade but it was different with this paper. We did our own twist on our own paper. You’re planning together but you are still writing your own paper; that’s what I like, but in general I’d rather plan alone.

Another student from the same focus group stated,
I like how we don’t have a combined paper…, we do it ourselves. Usually I hate having to work with a group ‘cuz you never know what [group members] are going to mess up in the final product but with this, you just get their ideas and you can take away what you want and what you don’t.

This student went on to say collaborative planning supported her ability to turn in an essay that would be graded at the proficient level.

**Rival Perspectives.** Not all students found the planning process helpful or supportive to their writing ability at the beginning of the study. During the independent planning round of focus group meetings, one student stated it really didn’t help her and a few felt they wrote their best by waiting until the night before the paper is due. For example, one student from FG-A shared “I am more confident when I am just winging it ‘cuz that is when I got my best grades is when it’s late at night the day before it’s due. I feel best when I’m winging it.” As the study progressed, this student did identify some value in using the planning documents such as, “It does help me organize my ideas.” Another student from FG-B stated at first, they found the planning process to be too time consuming. However, in a later focus group discussion, this same student stated that though he still felt it was time-consuming, he found that it was needed to write a well-written, organized essay.

**Modeling.** Peer modeling was a valuable resource for students’ writing ability. Students stated that the modeling process was enhanced with collaborative planning by allowing students to see how others were planning their essays. Based on focus group discussions, this in turn enhanced their ability to write their essays. For example, a student in FG-C stated, “It really helped having a group for my thesis because I was really struggling with that then my group came up with some ideas so I kind of got with one of their ideas” and “I preferred collaborative
[planning] because then you have someone else you can talk to about what you are thinking about your paper.” And finally, “We bounced ideas off of each other and it was hard to find an argument but then we talked about it and figured it out.” These statements provide evidence as to how collaborative planning enhanced the modeling process. Through conversation and shared ideas, students were exposed to peers’ ideas which provided an expanded representation as to the different ways to craft their essays.

**Peer Review.** Students also stated that collaborative planning enhanced the reviewing and editing process through advice and modeling from peers. Evidence voiced included, “I felt more confident when they were reading it because they were editing it correctly ‘cuz they were doing the same stuff [topic]” (FG-B) and “We had different arguments in our essay but we were still like bouncing back and forth ideas and I thought it was really helpful helping each other out like that” (FG-C). Collaborative planning was also identified by FG-B as allowing students to learn new writing skills or gain assets from group members. Prior to collaborative planning, a student in FG-B stated he did not feel skilled enough as a writer to edit someone else’s essays. However, in the focus group discussion held after finishing the collaboratively planned essay, he stated “The editing process [was helpful] because you have the same sources so seeing what they put in theirs helps me with mine.” This statement provides evidence of his perceived writing skill improvement by participating in the process, similar to the learning by reviewing research findings of Cho and colleagues (2011).

These three environmental process subthemes, pre-write planning strategies, modeling, and peer review were identified by students as being supportive when discussing their perceptions of collaborative small group planning, planning in general, and writing ability. Most found collaborative planning enhanced their writing ability.
Behavioral Processes

Evidence revealing students’ perceptions for the supportive nature of collaborative small group planning, the general planning process, and writing ability related to the behavioral process of self-monitoring and transfer.

Self-monitoring and Transfer. Evidence of transfer, revealed through the use of the planning page in other writing settings and in other classes, was found in this study. Self-monitoring and transfer are examples of the behavioral processes of the social cognitive model for self-regulated writing but is also considered an enactive environmental process, within this model as well. Dean (2005) called for more research in this area as evidence of transfer was limited and Torrance (2016) and Thomas and colleagues (1987) found that without teacher prompting, planning is rarely used in independent writing contexts.

In this study, students not only stated that the planning process could be used in other classes but three reported actually using the process in other classes for other essay assignments. This planning process transfer was completed by these students completely on their own volition without prompting or suggestion of any kind during the course of this study. One student in FG-B stated,

With my final papers I have been writing for other classes, I have been reverting back to what she has taught us with like the planning page. I have tried to make my own little planning page out of a scratch piece of paper just to keep myself organized.

A student from FG-A stated in a writing conference that he was drawing out the structure of the planning page to write essays for other classes. A third student from FG-B requested to meet outside of class for help in how to use the planning page graphic organizer to write an essay for an assignment in another class he was struggling with. After showing him how to diagram the
structure of his paper or to fold paper to create the graphic organizer used in class, he used diagramming to plan out his writing and complete the assignment. He stated he found diagraming a way for him to stay engaged in the assignment, “I like drawing it out because it…kept me interested … and helped me not forget anything.”

**Personal Processes**

Evidence revealing students’ perceptions for the supportive nature of the collaborative small group planning, the general planning process, and writing ability related to four personal processes: self-efficacy and writing anxiety, assessment documents and rubrics, goal setting, and time management.

**Self-efficacy and Writing Anxiety.** An increase in students’ perceived self-efficacy with a decrease in writing anxiety was another subtheme related to students’ preference for collaborative planning and writing ability. Students alluded to these constructs many times during focus group discussions by stating a higher level of satisfaction for their final essays and higher confidence in the quality of their writing. The following statements provide evidence for this theme: “[Collaborative planning] makes your paper stronger”, “It’s like really efficient and eases stress and stuff” (FG-B), “I feel good about it [turning in a proficient essay] just ‘cuz planning with a group is a lot better … trying to figure out how to make a longer essay” (FG-A), and “I feel confident because we all shared ideas so it was easier for us to plan on paper and make it as creative as possible” (FG-C).

In addition, when asked if the essay they wrote using collaborative planning was the same, better, or worse than the essay they wrote with independent planning, all focus groups indicated their collaborative planning essays were better. Collaborative planning enhanced
students’ self-efficacy by adding the social element of support from peers researching the same topic. Students found it to be “really efficient” and eased writing stress. For example,

It was really helpful today especially. We had morning practice for dance and me and [group member’s name] are in the same planning group and I had … last night I was kind of worried about what I was going to argue for my paper because it is not controversial and so she talked to me about what she was doing and it really helped.

**Assessment Documents and Graphic Organizers.** This is a process subtheme with evidence that overlaps research question one, student perception of collaborative planning, with research question two, student perception of collaborative planning on writing ability. The focus group discussions provided evidence connecting the assessment checklist, writing rubrics, and graphic organizers as perceived writing support (research question one) as well as students’ ability to write the assigned essays (research question two). Evidence cited previously, such as “I’m feeling good about this one. I really looked at the checklist this time and … really wanted to get a good grade” and “I feel confident too because we have the checklist and we know all the things we have to have to get a good score”. In addition, when students were asked how confident they were that their essay would get a proficient grade, students responded with, “I just went to the planning checklist and … checked everything off that she said I needed and I had everything so I think I will get a good grade”, “I am confident because we have the rubric”, and “Pretty confident. I mean it’s just great to have something to make sure I … am not forgetting anything and I can look back to make sure.”

**Goal Setting.** Overall, most students found collaborative planning to support their ability to plan and meet their goals. For many, the goal setting process was completed within their research groups. For example, for the collaborative planning essay, many of the members of FG-
B were in the same research group. Evidence for this group goal setting construct was found in the following comment from that focus group, “I think it’s when we got in our groups and we said … what we want to work on for this [paper]. Do you guys remember that and there were … time management goals and all that.” In that same group, another student stated, “I feel like [the group] kind of pushes you along the road to finish what you started.” The group provided the socially-based support these students needed to not only set goals but to advance toward meeting them.

**Time Management.** Students identified the time management section of the planning page helpful in supporting their ability to write the essays. Most students said they were not skilled at managing their time and these checkpoints helped in pacing their progress. Many students liked having the dates all set out, with comments such as,

*She has us write it out, there’s like a week of planning at the top of the blue paper [planning page] and it gives me like oh yeah, she says the rough draft is due on Wednesday, so that’s always in the back of my mind.*

Others said the time management checkpoints resulted in more time to complete the essay, as one student in FG-B stated, “It kind of pushes you along the road to finish what you started.”

Overall, when combining the environmental, behavioral, and personal processes of the social cognitive model for self-regulated writing to explore students’ perceptions of collaborative planning and writing ability, most students found collaborative planning to support their ability to write a proficient essay independently. Based on student comments, these self-regulating strategies provided the support these postsecondary students needed to write their essays.

**Rival View.** Finally, not all students preferred planning collaboratively, similar to the findings of Bhowmik and colleagues (2018) and Hillebrand (1994). The few students who
preferred planning alone prior to the study cited reasons such as group members being absent, not completing their work, and not carrying their weight, or as one student stated, “sponging off other group members.” Most agreed their degree of satisfaction was dependent on the quality of the group and the group dynamics. An interesting caveat to this theme was when one student stated that her preference for planning depended on her mood. When asked which format she preferred, she said,

I’d say both; it just depends on how I’m feeling that day. I guess … if I actually want to be … social and talking about the discussion [or if] I just wanted to write because I’m … in the head space like I’m ready to go.

The Rival Model and Teacher Feedback

An interesting rival subtheme, teacher feedback, emerged during the last round of focus group data collection. It was evident in only FG-A. Social feedback given to the writer by others has consistently shown to be linked to higher achievement and a greater motivation to learn (Zimmerman & Kitsantas, 2002). For about a third of the students in this study, teacher feedback was more helpful and supportive than collaborative planning. The following conversation from FG-A was in response to the prompt, “Rate your overall satisfaction with the essay you turned in” and provides evidence to this subtheme:

Student A: I’m satisfied. I feel like this one was my best because … the other one, I didn’t have goals but with the feedback from the mass murder that she gave, I really tried applying what she gave me [to my writing].

Student B: Yeah same. With this being the last paper and with the other paper you can see what you did wrong and go on from there and fix it.

Moderator: Do you all feel that feedback was helpful?
Choral response: Yeah, oh yeah.

The moderator then asked the group if collaborative planning was the reason this last paper was the best ever or was it the teacher feedback that made it the best. Students’ responses were, “Feedback was more helpful than the collaborative planning” and “The collaborative planning was nice and it did help, but between the two, it would be the feedback.” Focus group B and FG-C, when asked the same question, cited collaborative planning as the main contributing factor as to why the last essay was their best one submitted in the course.

Post-focus Group Email Responses

Upon conclusion of each focus group meeting a follow-up email was sent to the students which included a link to a Google form questionnaire. This questionnaire (Table 3.5, p. 70) provided a space to reflect on the discussion; specifically, if they felt their voice was heard, and if not, providing them an opportunity to share their opinions in a private manner. A five-point Likert-type scale was used with five indicating the student felt their voice was definitely heard to one indicating they felt their voice was not heard. Though the response rate to these emails was not consistent (see Table 4.3), of those who did respond, 91.50% of the students replied with either a five - very high or a four - somewhat high in their ability to voice their opinion during the independent planning phase focus group meetings. The response rate was significantly lower to these emails for the collaborative planning phase of the research project but of those who did respond, 100% replied with a five or a four. Few comments were provided giving positive feedback. Of those providing negative feedback, students stated their voice was not heard because students blurted out or they were too shy to talk. Suggestions given were to structure the discussion more by going around in a circle or raising hands.
Table 4.3

<table>
<thead>
<tr>
<th>Planning phase</th>
<th>Response rate percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent planning:</td>
<td></td>
</tr>
<tr>
<td>Planning focus group meeting</td>
<td>66.67</td>
</tr>
<tr>
<td>Final focus group meeting</td>
<td>55.56</td>
</tr>
<tr>
<td>Collaborative planning:</td>
<td></td>
</tr>
<tr>
<td>Planning focus group meeting</td>
<td>44.44</td>
</tr>
<tr>
<td>Final focus group meeting</td>
<td>44.44</td>
</tr>
</tbody>
</table>

Quantitative Data Analysis

The quantitative data collected for this study were matched scores from three sources: essay quality scores, the Self-Efficacy in Writing survey (SEWS; Bruning et al., 2013), and the Writing Apprehension Test (WAT; Daly & Miller, 1975, 2013); with one score for each participant from each condition (independent and collaborative planning formats). These data relate to the following research questions respectively:

3) How did collaborative small group planning affect the quality of students’ persuasive essay writing?

4) How did collaborative small group planning affect students’ overall perceived self-efficacy for persuasive essay writing?

5) How did collaborative small group planning affect students’ level of writing anxiety for persuasive essay writing?

The results of the quantitative data analyses are reported below by each research question.

Research Question 3: Writing Quality

To find evidence for this question, the essay scores of the independent planning essay were matched to the collaborative planning essay. The null hypothesis was \[ H_0 = \text{medians are equal}, \] or the matched essay score pairs have differences that come from a population with a median equal to zero indicating no relationship between collaborative planning and writing.
ability. The alternate hypothesis was $[H_A \neq \text{medians are not equal}]$, or the matched essay score pairs have differences that come from a population with a nonzero median indicating there was a relationship between the collaborative planning method and overall essay writing quality. A one-tailed, 95% confidence value was used. The total number of essays analyzed was 16 with two essay pairs excluded as their difference resulted in zero (Triola, 2010). The Wilcoxon signed-ranks test was used to determine statistical significance.

First, descriptive statistics were calculated and a box plot and histogram chart were made to determine if the rank difference sums data set was normally distributed. See Tables 4.4 for the descriptive statistics, Figure 4.6 for the box plot, and Figure 4.7 for the histogram.

**Table 4.4**

*Essay Score Descriptive Statistics*

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Independent planning</th>
<th>Collaborative planning</th>
<th>Ranked differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>17.69</td>
<td>22.38</td>
<td>4.69</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>3.31</td>
<td>5.05</td>
<td>3.58</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.25</td>
<td>-0.78</td>
<td>-0.12</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.99</td>
<td>0.41</td>
<td>-0.79</td>
</tr>
<tr>
<td>Lowest score</td>
<td>12</td>
<td>11.5</td>
<td>-1.5</td>
</tr>
<tr>
<td>Highest score</td>
<td>22.5</td>
<td>29</td>
<td>10</td>
</tr>
<tr>
<td>Distribution range</td>
<td>10.5</td>
<td>17.5</td>
<td>11.5</td>
</tr>
<tr>
<td>Total number of scores</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Number of distinct scores</td>
<td>12</td>
<td>11</td>
<td>13</td>
</tr>
</tbody>
</table>

**Figure 4.6**

*Essay Score Box Plots*
Figure 4.7

*Essay Scores Ranked Differences Histogram*

Because the sample size was small \((n=16)\) and the data set of matched essay score differences were approximately symmetric, with “the left half of the histogram … roughly a mirror image of its right half” (Triola, 2010, p. 701), the Wilcoxon signed-ranks test was run to test the hypotheses. Because \(n<30\), the \(T\) test statistic \((T – \text{statistic})\) was used (Triola, 2010). To obtain the test statistic, the lesser of the two sign-rank sums was used to compare to the critical value \((T – \text{critical})\), found in the Critical Values of \(T\) for the Wilcoxon Signed-Ranks Test table (Triloa, 2010, p. 792). See Table 4.5 for these results. Because the test statistic was less than the critical value, the null hypothesis was rejected indicating that the population of essay score medians were not equal with a significant difference between the independent planning and collaborative planning medians. Additional analysis was completed comparing the signed-rank differences. See Table 4.6 for these results.
Table 4.5

*Wilcoxon Signed-Rank Results for Matched Essay Scores*

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>$T$ - statistic</td>
<td>3</td>
</tr>
<tr>
<td>$T$ – critical</td>
<td>35</td>
</tr>
</tbody>
</table>

Table 4.6

*Comparison of the Signed-Rank Differences*

<table>
<thead>
<tr>
<th>Sum of the signed-rank differences</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive ranked differences</td>
<td>133</td>
</tr>
<tr>
<td>Negative ranked differences</td>
<td>3</td>
</tr>
</tbody>
</table>

The positive ranked values were greater than the negative values indicating essay scores increased with the collaborative planning format. Combining the Wilcoxon signed-ranks test results and these results offers evidence to suggest that the experimental variable of collaborative planning did have a significant influence on students’ writing ability.

**Additional Analyses**

The mean scores were compared for independently planned essays and collaboratively planned essays. The mean score for the independent planning essay was 17.67 out of 30 which is 59% or a D+. For collaborative planning, the mean essay score was 21.83 out of 30 which is 73% or a C. The mean essay scores by focus group can be found in Table 4.7. Of the 18 students who submitted essays, 78% of the students improved their score with collaborative planning, 11% earned the same score for both essays, and 11% earned a score of one point less on their collaborative planning essay.

Table 4.7

*Comparison of Mean Essay Scores by Focus Group*

<table>
<thead>
<tr>
<th>Mean essay score</th>
<th>FG-A (low)</th>
<th>FG-B (middle)</th>
<th>FG-C (high)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent planning</td>
<td>14.75</td>
<td>18.75</td>
<td>19.5</td>
</tr>
<tr>
<td>Collaborative planning</td>
<td>17.08</td>
<td>22.25</td>
<td>27.66</td>
</tr>
</tbody>
</table>
**Research Question Four: Self-efficacy**

To determine if there was a relationship between the students’ perceived self-efficacy and the two planning formats, students completed the Self-Efficacy in Writing Survey (SEWS) upon completion of writing each essay. To determine the survey score, the sum of all the rankings was calculated. The two scores were matched to examine research question four, to what extent do two planning formats affect students’ overall perceived self-efficacy for persuasive essay writing? The process for this analysis was similar to the matched essay score analysis with the null hypothesis \[ H_0 = \text{medians are equal} \], or the matched survey score pairs have differences that come from a population with a median equal to zero, indicating no relationship between collaborative planning and self-efficacy. The alternate hypothesis was \[ H_A \neq \text{medians are not equal} \], or the matched survey score pairs have differences that come from a population with a nonzero median, indicating there was a relationship between the collaborative planning method and overall self-efficacy. A two-tailed, 95% confidence value was used. The total number of survey scores analyzed was 16 with one survey score pair discarded as their difference resulted in zero and one survey score discarded due to incomplete data (Triola, 2010). The Wilcoxon signed-ranks test was used to determine statistical significance.

Descriptive statistics were calculated and box plot and histogram charts were made to determine if the data set was normally distributed. See Tables 4.8 for the descriptive statistics results and Figure 4.8 for the box plot and Figure 4.9 for the histogram.
### Table 4.8

*SEWS Scores Descriptive Statistics*

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Independent planning</th>
<th>Collaborative planning</th>
<th>Ranked differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1327.5</td>
<td>1393.43</td>
<td>65.94</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>152.8</td>
<td>123.51</td>
<td>99.88</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.15</td>
<td>0.15</td>
<td>-0.53</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-1.44</td>
<td>-1.14</td>
<td>0.12</td>
</tr>
<tr>
<td>Lowest score</td>
<td>1080</td>
<td>1202</td>
<td>-136</td>
</tr>
<tr>
<td>Highest score</td>
<td>1555</td>
<td>1600</td>
<td>222</td>
</tr>
<tr>
<td>Distribution range</td>
<td>475</td>
<td>398</td>
<td>358</td>
</tr>
<tr>
<td>Total number of scores</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Number of distinct scores</td>
<td>16</td>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

**Figure 4.8**

*SEWS Scores Box Plots*

**Figure 4.9**

*SEWS Scores Ranked Differences Histogram*
Because the sample size was small \( n=16 \) and the data set of matched survey score differences were somewhat symmetric (Triola, 2010), the Wilcoxon signed-ranks test was run to test the hypotheses. Because \( n<30 \), the \( T \) test statistic \( (T – \text{statistic}) \) was used. To obtain the test statistic, the lesser of the two sign-rank sums were used to compare to the critical value \( (T – \text{critical}) \), found in the Critical Values of \( T \) for the Wilcoxon Signed-Ranks Test table (Triola, 2010, p. 792). See Table 4.9 for these results.

**Table 4.9**

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>( T - \text{statistic} )</td>
<td>3</td>
</tr>
<tr>
<td>( T – \text{critical} )</td>
<td>29</td>
</tr>
</tbody>
</table>

Because the test statistic was less than the critical value, the null hypothesis was rejected indicating that the medians were not equal with a significant difference between the independent planning and collaborative planning medians. Additional analysis completed compared the signed-rank differences. See Table 4.10 for these results.

**Table 4.10**

<table>
<thead>
<tr>
<th>Sum of the signed-rank differences</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive ranked differences</td>
<td>133</td>
</tr>
<tr>
<td>Negative ranked differences</td>
<td>3</td>
</tr>
</tbody>
</table>

The positive ranked values were greater than the negative ranked values indicating students perceived self-efficacy increased with the collaborative planning format. Combining the Wilcoxon signed-ranks test results with these results provides substantial evidence to suggest that the experimental variable of collaborative planning did have a positive influence on students perceived self-efficacy.
**Additional Descriptive Calculations**

The mean survey scores were compared for the independently planned phase and the collaboratively planned phase. The overall mean self-efficacy score for the independent planning essay was 1,335.23 out of 1,600 or 83%. For collaborative planning, the mean self-efficacy score was 1,395.86 or 87%. The overall mean score for each focus group by planning format can be found in Table 4.11.

**Table 4.11**

*Comparison of The Overall Mean SEWS Score by Planning Format for Each Focus Group*

<table>
<thead>
<tr>
<th>Mean essay score</th>
<th>FG-A (low)</th>
<th>FG-B (middle)</th>
<th>FG-C (high)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent planning</td>
<td>1,259.2</td>
<td>1,268.67</td>
<td>1,477.83</td>
</tr>
<tr>
<td>Collaborative planning</td>
<td>1,295.4</td>
<td>1,386.5</td>
<td>1,505.67</td>
</tr>
</tbody>
</table>

Because the SEWS instrument is organized into three categories closely matching the three dimensions of the social cognitive model for self-regulatory writing instruction: writing ideation, writing conventions, and self-regulation, additional analyses were run to determine if there was a relationship between the two planning formats and the three dimensions of writing instruction. This comparison could provide a more detailed understanding of the relationship between planning format and students perceived self-efficacy. See Table 4.12 for a comparison of the mean scores for independent planning and collaborative planning within each of these three dimensions of writing instruction and Figure 4.10 for a bar graph of this comparison.

**Table 4.12**

*Comparison of the SEWS Social Cognitive Dimension Categories and Mean Survey Scores by Planning Format*

<table>
<thead>
<tr>
<th>Dimensions of writing instruction</th>
<th>Independent planning</th>
<th>Collaborative Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideation</td>
<td>395.05</td>
<td>423.21</td>
</tr>
<tr>
<td>Writing conventions</td>
<td>455.51</td>
<td>461.45</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>484.67</td>
<td>511.2</td>
</tr>
</tbody>
</table>
A final descriptive calculation of the data was completed based on focus group. For each focus group, the mean SEWS score for each dimension was calculated. See Table 4.13 for this analysis.

Table 4.13

Comparison of the SEWS Social Cognitive Dimension Categories and Mean Survey Scores by Planning Format for Each Focus Group

<table>
<thead>
<tr>
<th>Dimensions of writing instruction</th>
<th>Independent planning</th>
<th>Collaborative Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>FG-A (low)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideation</td>
<td>375</td>
<td>390.6</td>
</tr>
<tr>
<td>Writing conventions</td>
<td>435.2</td>
<td>430.2</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>449</td>
<td>474.6</td>
</tr>
<tr>
<td>FG-B (middle)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideation</td>
<td>374.83</td>
<td>417.83</td>
</tr>
<tr>
<td>Writing conventions</td>
<td>435.16</td>
<td>463</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>458.67</td>
<td>505.67</td>
</tr>
<tr>
<td>FG-C (high)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideation</td>
<td>435.33</td>
<td>461.16</td>
</tr>
<tr>
<td>Writing conventions</td>
<td>496.17</td>
<td>491.16</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>546.33</td>
<td>553.33</td>
</tr>
</tbody>
</table>

To determine if there was a significant relationship between the SEWS mean scores organized by writing dimension and the two planning formats, the Wilcoxon signed-ranks test was run on the nine pairs as a group. The null hypothesis was [H₀ = medians are equal], or the
matched writing dimension survey score means have differences that come from a population with a median equal to zero, indicating no relationship between collaborative planning and self-efficacy. The alternate hypothesis was \[ H_A \neq \text{medians are not equal} \], or the matched writing dimension survey score means have differences that come from a population with a nonzero median, indicating there was a relationship between the collaborative planning method and self-efficacy. A two-tailed, 95% confidence value was used. The total number of SEWS writing dimension survey score mean differences analyzed was nine. See Figure 4.11 for a histogram for this data.

![Figure 4.11](image)

**Figure 4.11**

*SEWS Writing Dimension Survey Score Mean Differences Histogram*

Because the sample size was small \((n=9)\) and the data set of matched writing dimension survey score mean differences were approximately symmetric (Table 4.8; Triola, 2010), the Wilcoxon signed-ranks test was run to test the hypotheses. Because \(n<30\), the \(T\) test statistic \((T – \text{statistic})\) was used. To obtain the test statistic, the lesser of the two sign-rank sums were used to
compare to the critical value \( (T – \text{critical}) \), found in the Critical Values of \( T \) for the Wilcoxon Signed-Ranks Test table (Triloa, 2010, p. 792). See Table 4.14 for these results.

Because the test statistic was less than the critical value, the null hypothesis was rejected indicating that the medians were not equal with a significant difference between the independent planning and collaborative planning medians. Additional analysis completed compared the signed-rank differences. See Table 4.15 for these results.

**Table 4.14**

*Wilcoxon Signed-Rank Results for Matched SEWS Writing Dimension Survey Score Mean Differences*

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>( T - \text{statistic} )</td>
<td>3</td>
</tr>
<tr>
<td>( T – \text{critical} )</td>
<td>5</td>
</tr>
</tbody>
</table>

**Table 4.15**

*Wilcoxon Signed-Rank Results for Matched SEWS Writing Dimension Survey Score Mean Differences*

<table>
<thead>
<tr>
<th>Sum of the signed-rank differences</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive ranked differences</td>
<td>42</td>
</tr>
<tr>
<td>Negative ranked differences</td>
<td>3</td>
</tr>
</tbody>
</table>

The positive ranked values are greater than the negative ranked values indicating students’ writing dimension means increased with the collaborative planning format. Combining the individual matched pairs Wilcoxon signed-ranks test results with these results provides substantial evidence to suggest that the experimental variable of collaborative planning did have a positive influence on students’ perceived writing dimension mean scores.

**Research Question Five: Writing Apprehension**

To determine if there was a relationship between the two planning formats and writing anxiety, the WAT was administered upon the conclusion of writing each essay. Students’ writing anxiety scores were calculated using the following equation: \( \text{Writing Apprehension (WA)} = 78 + \)
Positive Statement Values (PSV) – Negative Statement Values (NSV; Daly & Miller, 1975). Higher scores are associated with lower levels of writing anxiety. The two scores were matched to examine research question five, to what extent do two planning formats affect students perceived level of writing anxiety for writing.

The process for this data analysis was similar to the analysis summarized above for the essay scores and SEWS scores with the null hypothesis \([H_0 = \text{medians are equal}]\), or the matched survey score pairs have differences that come from a population with a median equal to zero, indicating no relationship between collaborative planning and writing anxiety. The alternate hypothesis was \([H_A \neq \text{medians are not equal}]\), or the matched survey score pairs have differences that come from a population with a nonzero median, indicating there was a relationship between the collaborative planning method and writing anxiety. A two-tailed, 95% confidence value was used. Eighteen total survey scores were analyzed, no survey score differences equaled zero and all data pairs were complete (Triola, 2010). The Wilcoxon signed-ranks test was used to determine statistical significance.

Descriptive statistics were calculated and box plot and histogram charts were made to determine if the data set was normally distributed. See Tables 4.16 for the descriptive statistics results and Figure 4.12 for the box plot and Figure 4.13 for the histogram.

Because the sample size was small \((n=18)\) and the data set of matched survey score differences were approximately symmetric (Triola, 2010), the Wilcoxon signed-ranks test was run to test the hypotheses. Because \(n<30\), the \(T\) test statistic \((T – \text{statistic})\) was used. To obtain the test statistic, the lesser of the two sign-rank sums were used to compare to the critical value \((T – \text{critical})\), found in the Critical Values of \(T\) for the Wilcoxon Signed-Ranks Test table (Triloa, 2010, p. 792). See Table 4.17 for these results.
Table 4.16

WAT Scores Descriptive Statistics

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Independent planning</th>
<th>Collaborative planning</th>
<th>Ranked differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>96.33</td>
<td>102.83</td>
<td>6.5</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>11.67</td>
<td>13.29</td>
<td>11.07</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.08</td>
<td>-0.37</td>
<td>1.82</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.06</td>
<td>1.65</td>
<td>5.93</td>
</tr>
<tr>
<td>Lowest score</td>
<td>72</td>
<td>69</td>
<td>-10</td>
</tr>
<tr>
<td>Highest score</td>
<td>118</td>
<td>126</td>
<td>42</td>
</tr>
<tr>
<td>Distribution range</td>
<td>46</td>
<td>57</td>
<td>52</td>
</tr>
<tr>
<td>Total number of scores</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Number of distinct scores</td>
<td>15</td>
<td>16</td>
<td>13</td>
</tr>
</tbody>
</table>

Figure 4.12

WAT Scores Box Plots

Figure 4.13

WAT Scores Ranked Differences Histogram
Table 4.17

| Wilcoxon Signed-Rank Results for Matched WAT Scores |
|---------------------------------|----------------|
| Statistic                      | Results |
| $T$ - statistic                | 6.5     |
| $T$ - critical                 | 40      |

Because the test statistic was less than the critical value, the null hypothesis was rejected indicating that the medians were not equal with a significant difference between the independent planning and collaborative planning medians. Additional analysis completed compared the signed-rank differences. See Table 4.18 for these results.

Table 4.18

| Comparison of the WAT Signed-Rank Differences |
|-----------------------------------------------|--------|
| Sum of the signed-rank differences            | Results|
| Positive ranked differences                    | 161    |
| Negative ranked differences                    | 6.5    |

With this survey, the higher the score, the lower the student’s perceived writing anxiety. The positive ranked values are greater than the negative ranked differences indicating that although the students’ scores increased, their perceived writing anxiety decreased with the collaborative planning format. Combining the Wilcoxon signed-ranks test results with these results provides substantial evidence to suggest that the experimental variable of collaborative planning did have a positive influence, lowered anxiety, on students writing apprehension.

An additional descriptive calculation of this data set was completed. The overall mean writing apprehension score for independent planning was 96.33 out of 130, or 74%. The overall mean writing apprehension score for collaborative planning was 102.83, 79%. The overall mean score for each focus group by planning format can be found in Table 4.19.
Table 4.19

Comparison of The Overall Mean WAT Score by Planning Format for Each Focus Group

<table>
<thead>
<tr>
<th>Focus group</th>
<th>Independent planning</th>
<th>Collaborative Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>FG-A</td>
<td>94.33</td>
<td>97.17</td>
</tr>
<tr>
<td>FG-B</td>
<td>90</td>
<td>100.83</td>
</tr>
<tr>
<td>FG-C</td>
<td>104.67</td>
<td>110.5</td>
</tr>
</tbody>
</table>

Qualitative and Quantitative Results Compared

Once the qualitative and quantitative data were analyzed separately, they were then merged for analysis in preparation for the triangulated and corroborated analysis in Chapter Five. Side-by-side comparison of the data can be found in Tables 4.20 and 4.21 in a T-chart format to allow for easier review. Because students did not differentiate between self-efficacy and writing anxiety during focus group discussions, these two data sets were combined for the qualitative column in Table 4.21. However, these two data sets are reported separately in the quantitative column of Table 4.21, since there were two separate quantitative measures: the Self-efficacy Writing Survey (SEWS) and the Writing Apprehension Test (WAT) for writing anxiety. The data are organized into the three main focus areas of this study: writing ability (Table 4.20), self-efficacy, and writing anxiety (Table 4.21). Research questions (RQ) and data sources have been listed under each focus area to support interpretation of the merged data.
Table 4.20

Comparing Qualitative and Quantitative Results for Writing Ability

<table>
<thead>
<tr>
<th>Qualitative Data</th>
<th>Quantitative Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Writing ability</strong></td>
<td><strong>RQ3) How did collaborative small group planning affect the quality of students’ persuasive essay writing?</strong></td>
</tr>
<tr>
<td>RQ1) How did students perceive their experiences while participating in collaborative small group planning?</td>
<td><strong>Data sources</strong></td>
</tr>
<tr>
<td>RQ2) How effective did students perceive collaborative small group planning to be in supporting their ability to write?</td>
<td>Persuasive essays</td>
</tr>
<tr>
<td><strong>Data sources</strong></td>
<td><strong>Results</strong></td>
</tr>
<tr>
<td>Student focus group and writing conference discussions, classroom observations</td>
<td>Significant positive relationship between collaborative planning and writing ability.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Mean essay score increased for collaborative planning.</td>
</tr>
<tr>
<td>Most students found collaborative planning supportive of writing ability over independent planning.</td>
<td>Independent planning essay mean = 17.69 Collaborative planning essay mean = 22.38</td>
</tr>
<tr>
<td>Three students had mixed opinions regarding collaborative planning.</td>
<td></td>
</tr>
</tbody>
</table>

"Table 4.20

Comparing Qualitative and Quantitative Results for Writing Ability

<table>
<thead>
<tr>
<th>Qualitative Data</th>
<th>Quantitative Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Writing ability</strong></td>
<td><strong>RQ3) How did collaborative small group planning affect the quality of students’ persuasive essay writing?</strong></td>
</tr>
<tr>
<td>RQ1) How did students perceive their experiences while participating in collaborative small group planning?</td>
<td><strong>Data sources</strong></td>
</tr>
<tr>
<td>RQ2) How effective did students perceive collaborative small group planning to be in supporting their ability to write?</td>
<td>Persuasive essays</td>
</tr>
<tr>
<td><strong>Data sources</strong></td>
<td><strong>Results</strong></td>
</tr>
<tr>
<td>Student focus group and writing conference discussions, classroom observations</td>
<td>Significant positive relationship between collaborative planning and writing ability.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Mean essay score increased for collaborative planning.</td>
</tr>
<tr>
<td>Most students found collaborative planning supportive of writing ability over independent planning.</td>
<td>Independent planning essay mean = 17.69 Collaborative planning essay mean = 22.38</td>
</tr>
<tr>
<td>Three students had mixed opinions regarding collaborative planning.</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.21

**Compared Qualitative and Quantitative Results for Self-efficacy and Writing Apprehension**

<table>
<thead>
<tr>
<th>Qualitative Data</th>
<th>Quantitative Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-efficacy and Writing apprehension</strong></td>
<td><strong>Self-efficacy</strong></td>
</tr>
<tr>
<td>RQ1) How did students perceive their experiences while participating in collaborative small group planning?</td>
<td>RQ4) How did collaborative small group planning affect students’ overall perceived self-efficacy for persuasive essay writing?</td>
</tr>
<tr>
<td>RQ4) How did collaborative small group planning affect students’ overall perceived self-efficacy for persuasive essay writing?</td>
<td></td>
</tr>
<tr>
<td>RQ5) How did collaborative small group planning affect students’ level of writing anxiety for persuasive essay writing?</td>
<td></td>
</tr>
</tbody>
</table>

**Data sources**
Student focus group and writing conference discussion and classroom observations

**Results**
Most students reported increases in perceived self-efficacy and decreases in writing anxiety with collaborative planning. Students reported higher levels of satisfaction for final essays with collaborative planning and higher confidence in writing quality.

**Self-efficacy**

Data sources
SEWS: Self-efficacy writing survey

Results
Significant positive relationship between collaborative planning and SEWS scores.
Mean survey score increased for collaborative planning. Independent planning essay mean =1,327.50 Collaborative planning essay mean=1,393.44

**Writing anxiety**

Data sources
WAT: Writing Apprehension Test

Results
Significant positive relationship between collaborative planning and WAT scores.
Mean survey score increased for collaborative planning. Independent planning essay mean = 96.33 Collaborative planning essay mean =102.83
Because data from “multiple research methods adds to the strength of evidence” (Brewer & Hunter, 1989, p. 89), the two data sets were merged, triangulated, and corroborated to obtain a complementary data set resulting in a more detailed understanding of the relationship collaborative planning had on students’ writing ability, self-efficacy, and writing anxiety. Upon reviewing this merged data set, it appeared that both qualitative and quantitative results indicated a significant positive relationship between collaborative planning and all three focus areas. According to Jick (1979), when multiple measures result in similar outcomes, there is greater certainty in the accuracy of those result. With both data sets indicating the same outcomes, it is more likely these results are accurate for this sample of student.
CHAPTER 5

DISCUSSION AND IMPLICATIONS

In this study, eighteen first year college students participated in a strategy-based writing seminar course where two planning formats were used to write true crime persuasive essays. The purpose of this study was to explore the impact these two environmentally structured planning formats had on student perceptions of their writing experiences, overall essay quality, self-efficacy for writing, and writing anxiety. The research questions that guided this study were:

1) How did students perceive their experiences while participating in collaborative small group planning?
2) How effective did students perceive collaborative small group planning to be in supporting their ability to write?
3) How did collaborative small group planning affect the quality of students’ writing?
4) How did collaborative small group planning affect students’ overall perceived self-efficacy for writing?
5) How did collaborative small group planning affect students’ level of writing anxiety for writing?

The research design for this study was concurrent triangulated mixed methods where qualitative and quantitative data were collected concurrently and analyzed separately. In this chapter, the two sets of data have been merged to triangulate the results and form an overall corroborated interpretation. The merged findings and theoretical implications of this study, based on the literature reviewed in Chapter Two and the research questions that guided this study, are
presented. Instructional implications for the delivery of postsecondary strategy-based writing instruction are discussed, limitations of the study are identified, and finally, possibilities for future research are proposed.

**Theoretical Implications**

This study provides a unique and valuable perspective on postsecondary writing research since the primary findings were based predominantly on the insights and opinions voiced in real time by the students who participated in the research project. Their perceptions, triangulated with the quantitative data, confirm and extend previous findings as well as propose new ideas to the current field of postsecondary writing research and best practices in writing instruction. The primary theoretical foundation and literature review framework for this study was based on the social cognitive model for self-regulated writing instruction (Zimmerman & Risemberg, 1997), a strategy-based writing model that emphasizes socially-based writing instruction and the importance of environmental structuring and the use of self-regulatory strategies for the act of composing. Based on this model, three major groups of corroborated findings emerged from the data. Because the data has been merged, the research questions guiding this study were merged as well. All questions related to collaborative planning. Questions One and Two relating to student perceptions, and Questions Three, Four, and Five relating to quantitative data have been merged into three groups of findings:

1) Writing ability, collaborative planning, and student perception

2) Self-efficacy, collaborative planning, and student perception

3) Writing anxiety, collaborative planning, and student perception

These three groups of findings provide the structure for reporting the theoretical implications of this study.
Writing Ability, Collaborative Planning, and Student Perception

The first group of corroborated findings from this study draws on data collected from student focus groups, writing conferences, classroom observations, and essay scores and is related to writing ability, collaborative planning, and student perception. Five domains of implications emerged from analysis of this data. They are general planning process, collaborative planning, socially-based writing instruction, teacher feedback, and strategy-based writing instruction including a discussion related to graphic organizers, checklists, and transfer.

General Planning Process

Independent planning was used for the first true crime essay and collaborative planning was used for the second. In both planning formats, students wrote their essays independently. Overall, students stated that the general planning process used in this study supported their writing ability; reinforcing the findings of Hayes and Flower (1986), Graham and Perrin (2007), and Santangelo and colleagues (2016) who found planning to be an important process for effective writing, with high effect sizes, and positive student perceptions for prewrite planning. Many students in this study stated the planning process taught within this course was a new writing strategy for them and one they had not used, or rarely used, in prior writing settings. Overall, students identified explicit instruction, time allowed in class to write, and the use of the planning graphic organizer as the most supportive planning strategies when writing their true crime essays. These findings confirm those of Torrance (2016) who stated that without direct instruction and guided practice, it is unlikely students will incorporate planning into their writing process.
**Collaborative Planning**

Overall, seventeen students preferred using collaborative planning over independent planning when preparing to write their essay, noting it supported their ability to write better essays. Three students stated their level of preference was dependent on the group they were in. Essay scores of the two planning formats corroborate this student opinion: there was a statistically significant positive relationship between collaborative planning and improved essay scores. Additional data showed that 78% of the students submitted an essay that was scored higher when using collaborative planning versus independent planning. The findings of this study are similar to those reported in the research literature. Four broad categories emerged from the review of literature on collaborative planning. The first category examined collaborative planning and ideation, defined as idea generation in the planning and drafting stage of the writing process. This study confirmed the findings of Amiryousefi (2017), Clayson (2018), Higgins and colleagues (1991) and Neumann and McDonough (2015) that collaborative planning has positive effects on idea generation and organization. Using this study’s corroborated results, not only did essay scores increase with collaborative planning but students identified collaborative planning as supporting their ability to plan and write their essay. This finding was supported by SEWS data, scores in the ideation category increased by 28.16 points with collaborative planning.

The second category of the literature reviewed focused on improved writing performance with the use of collaborative planning (Amiryousefi, 2017; Clayson, 2018; Higgins et al., 1991; Mirazi & Mahmoudi, 2016; Neumann & McDonough, 2015) and this study confirmed these findings as well. The majority of students who participated in this study improved their writing performance. When looking at writing performance by ability level, mean scores for all focus groups improved. Evidence from the focus group discussions corroborates this finding as most
students felt the essay they wrote using collaborative planning was better than the essay written using independent planning. For example, all members of FG-C raised their hand when asked by the moderator if they thought the essay they wrote with collaborative planning was better and a student in FG-B stated, “I’d say it is my best work so far.”

The third category found in the literature focused on students’ perception of collaborative planning. Results from this study showed overall favorable perceptions as well, confirming the findings of Patterson and colleagues (2017), especially in the areas of ideation and evaluating ideas. However, not all students preferred working in groups all the time confirming the findings of Amiryousefi (2017), Clayson (2018), Higgins and colleagues (1991), Mirazi and Mahmoudi (2016), and Neumann and McDonough (2015).

Shi (1998) and Neuman and McDonough (2015) found that explicit instruction on how to collaboratively plan was needed to promote student use. This study confirmed these results as well. Two students stated they usually preferred to plan alone but found collaborative planning an effective alternative after using it in this study and one student stated her preferred planning format depended on her mood and where she was at in the writing process. Twelve students voiced appreciation for being allowed to plan collaboratively but write their essay independently.

The final category emerging from the literature focused on implications for classroom use. Most of the literature reviewed stated the importance of providing explicit instruction in how to plan collaboratively (Flower et al, 1991; Neumann & McDonough, 2015; Shi, 1998). Compared to these studies, less explicit instruction was needed in the present study to prepare the students for collaborative planning. The students seemed to naturally transition into this planning format needing only a quick mini-lesson in collaborative planning procedures. This could be due to the ongoing explicit instruction in planning throughout the course as a general writing strategy
and their participation in the socially-based same-topic research groups throughout the semester prior to the use of collaborative planning. Working in groups had become a natural routine in the course structure which supported the transition to planning collaboratively.

The findings related to student preference for collaborative planning over independent planning could be linked to the high cognitive load and level of anxiety postsecondary writing places on students. Bruning and Kauffman (2016) and Zimmerman and Risemberg (1997) both pointed out that college composition requires students to write about unknown topics in new domains; something the students of this study were required to do. Higgins and colleagues (1991) identified college writing as complex, involving multiple goals and strategies. In addition, Pintrich and Zusho (2002) contended that when learning is difficult, students tend to be “other-regulated.” However, the collaborative planning groups in this study supported the students’ ability to incorporate their self-regulatory strategies for planning their essay and peer modeling supported their ability to plan and write better essays. Collaborative planning provided supportive planning groups that lessened the cognitive load and allowed students to focus on selecting and adapting ideas for writing their essays (Higgins et al., 1991). Data from focus groups supported this finding with comments such as,

I think working in a group is a lot better than done individually because we’re in a group and we all have the same topic so we can collab more, have a lot more stuff, and get ideas from each other (FG-B).

By providing a space for students to plan with peers who were researching the same topics, students were supported by the social learning environment and peer modeling and were able to
construct their own understanding for when and where to use their cognitive, metacognitive, and self-regulated strategies through interacting with peers (MacArthur & Lembo, 2009; Zimmerman, 2002).

This study also confirms writing research findings focused on prewrite planning and the relationship collaborative planning has on writing ability. However, it extends these findings by privileging student voice on the importance of providing time in class to plan and to allow students who are writing about similar topics to plan their essays together. Torrance (2016) and Graham and Perin (2007) called for more research within this area, and this study provides additional evidence on how to implement pre-write planning strategies and the collaborative planning format into postsecondary writing instruction based on student preference.

It is important to recognize other factors besides collaborative planning that could have contributed to improved essay scores. The collaborative planning phase of this research came at the end of the semester when the students were becoming more familiar with college life, the course content, the routine, and one another as well as me, their instructor. This familiarity could have increased their self-efficacy and decreased their level of writing anxiety, which in turn allowed them more cognitive space for writing the content of the essays, thus higher scores. Additionally, the students may have had more prior knowledge about the serial killer topic used for collaborative planning. Finding sources could have been easier as many students voiced frustration in finding sources about mass murder cases as one student stated, “There tends to be very few eye witnesses and so credible sources as to the killer’s motives are hard to find,” but had a much easier time finding sources on serial killers. Based on student data from focus group discussions, the students found the topic more engaging. This, combined with the specificity of the topic, could have been a contributing factor to higher essay scores.
Socially-based Writing Instruction

The Zimmerman and Risemberg (1997) social cognitive model for self-regulated writing emphasizes an importance of environmental structuring for writing ability and was a main focus of this study, which incorporated environmental, socially-based writing instruction in a variety of ways. First, students were members of same-topic research groups. Students peer reviewed each other’s papers with different-topic and same-topic peers depending on the planning format (different-topic for independent planning and same-topic for collaborative planning), and they collaboratively planned the final essay of the course. Overall, students voiced positive feedback for these environmentally structured writing strategies.

Peer Review. Three key findings emerged in this study relating to the peer review process. First, students voiced a preference for peer review when working with a partner who was writing about the same topic. Evidence for these findings came from student comments such as, “I felt more confident when they were reading it because they were editing it correctly ‘cuz they were doing the same stuff” (FG-B). Observational evidence on rough drafts submitted revealed that the number of revisions increased with the collaborative planning peer review partner. Based on these results, it could be inferred that same topic peer review dyads provided a more effective setting for peer review. Research group discussions and the level of prior knowledge about the case could enhance this process and make it more effective.

Same-topic peer review dyads could also support students’ ability to learn from reviewing (Cho et al., 2011). Student data indicated that peer reviewing their collaboratively planned essay with a same-topic peer review partner helped them with writing their own paper, for example, “… it helps with the editing process because you have the same sources so seeing what they put in theirs helps me with mine.” The ability to revise, edit, and learn from their peers
could have provided additional support for improved essay scores as well since 78% of the students’ essay scores improved with collaborative planning.

Similar-ability dyads provided a more effective setting as well. Evidence to support this comes from a student dyad that was not formed based on similar ability. A student in the high-ability group (FG-C) shared his frustration with his peer review partner who was a lower-ability writer (FG-A) stating,

I like how my group was helping me find resources, but when it was time to proofread each other’s [paper], I felt like they were kind of scared to tell me what was wrong with my paper so I didn’t really have a lot to go back and work on.

Other students voiced similar impressions. Again, prior knowledge and group discussions as well as basic writing ability could provide insight into this finding.

The use of same-topic, similar-ability peer review dyads extends the field of postsecondary writing research. It adds a layer to the many options of how to plan for peer review in the socially-based writing classroom. This arrangement may be preferable in some writing settings.

**Teacher Feedback**

The fourth and rival finding of this study is situated under the umbrella of socially-based writing instruction: the relationship between writing ability and teacher feedback. For FG-A, the lower writing ability group, teacher feedback was identified as more supportive than collaborative planning. All students in group A stated that collaborative planning was good but the teacher feedback they received supported their ability to write better essays more. This finding confirms the research of Pintrich and Zusho (2002), Schunk and Zimmerman (2007), and Zimmerman and Risemberg (1997) who all found evidence supporting socially-based support in
the form of teacher scaffolding when a task is difficult. It could be concluded that because these students struggled more with writing, they needed a higher level of support beyond peer review and collaborative planning. Lowered self-efficacy, voiced by statements from FG-A such as “I suck at writing”, as well as overall lower mean SEWS scores of 1,295.4 compared to 1,386.5 for FG-B and 1,505.67 for FG-C, could also explain why the lower ability writers needed additional support.

Other explanations could be that teacher feedback was more useful for the lower writing ability group simply because they received more feedback and suggestions. Their essays were scored lower and so they had more opportunities for improvement, resulting in receiving more feedback than students in other focus groups who scored higher. Three students from FG-C, the higher ability group, wrote essays that received very high scores, mean score of 28.67 out of 30 points. Because of these higher scores, they received significantly less teacher feedback, therefore, these students were not likely to identify teacher feedback as more useful than collaborative planning simply because they received very little. This outcome provides additional evidence that the perceived value of teacher feedback could be dependent on student writing ability and the amount of feedback received.

**Strategy-based Writing Instruction**

These findings are linked to the strategy-based design of the course, the use of graphic organizers and checklists, and transfer.

**Design of the Course.** Students stated that the supportive nature of the course and the use of self-regulated strategic writing methods supported their writing ability. This support was provided in the use of research groups, explicit writing instruction using coping models, social feedback, deliberate practice, and pre-write planning strategies including use of uncomplicated
mnemonic-based graphic organizers and checklists (see Appendix J for a complete list of strategies incorporated into the instructional format of this study). This finding reinforced the research of Zimmerman and Risemberg (1997) and the social cognitive model for self-regulated writing since most students identified the components posited by this model’s environmental processes as supporting their ability to write. This finding also confirms the meta-analyses of Graham and Perin (2007), Santangelo and colleagues (2016), and Graham and colleagues (2016). Many of the strategy-based components resulting in positive effect sizes on writing ability mentioned in these meta-analyses were incorporated into classroom instruction within this study.

This evidence supports the conclusion that self-regulated, strategic writing instruction is pedagogically appropriate for supporting writers in the postsecondary classroom. It also suggests that, because the lower ability focus group was significantly more vocal in their reactions to the supportive nature of strategic writing, the amount and kind of support needed by students varies based on their writing ability. This finding corroborates the research of Pintrich and Zusho (2002) who suggested that when a student finds a task difficult, they tend to be more “other regulated” (p. 258) through instructional support and teacher scaffolding. It could be inferred that those students who struggle with writing found the supportive nature of the instruction more helpful and so were more vocal during the focus group compared to the higher-ability students who found the support helpful but to a lesser degree and preferred collaborative planning and socially-based learning formats.

It is important to note however, that the variation in word counts between focus group discussions could indicate that certain students were more vocal than others. For example, the three students who contributed the most to whole-group discussions in class were members of
the lower ability focus group. In addition, it was these same three students who talked the most during their focus group meetings.

**Graphic Organizers and Checklists.** Graphic organizers were used for planning content, structure, and time management, and checklists were provided to ensure all components of the paper were included. Students in all three focus groups identified the self-regulating nature of these planning tools as supporting their ability to write a proficient paper. Risemberg (1993) found that organizing pre-writing notes with graphic organizers led to better writing and MacArthur and Lembo (2009) used the IRRC mnemonic (Introduction Reason Rebuttal Conclusion) with students working toward their GED and found improved essay quality. Zimmerman and Risemberg (1997) found checklists to have positive effects on essay quality as well. The findings of the present study suggest that students at the postsecondary level still need that type of high-level structure and support for their writing instruction; especially first year students dealing with the cognitive load of adjusting to the high expectations of postsecondary education, their new living environment, and athletic practice expectations.

**Transfer.** Finally, this study found evidence of student transfer, an area of writing instruction in need of additional research (Dean, 2009). Transfer was revealed by the independent re-creation of the graphic organizer or similar method of planning used in this study. All focus groups stated they thought the planning graphic organizer could be used for writing assignments in other classes but three students stated they had already transferred its use to plan papers for assignments and end-of-semester finals in other classes. The uncomplicated and straightforward nature of the graphic organizers and checklists, the ease of re-creating them independently without the need for copies or blackline masters, and the explicit instruction used to teach students how to use them for planning enabled students to transfer their use more easily
to other classes by recreating them on a “scratch piece of paper just to keep … organized.”

Torrance (2016) stated without explicit instruction in the use of planning, students will not use it. Thomas and colleagues (1987) found similar results. Graham and colleagues (2005) found that participation in collaborative writing and planning promotes transfer as well. The present study provides insight into a possible way to promote transfer; teach planning with uncomplicated, straightforward graphic organizers in collaborative writing contexts to support students’ ability to recreate them with ease independently for writing projects in other classes or domains.

These five domains of implications: general planning process, collaborative planning, socially-based writing instruction, teacher feedback, and strategy-based writing instruction; are significant because they confirm previous research. They also provide additional insight into the field of best practices for postsecondary writing instruction, an area of writing that has a limited scope of research, especially in environmental structuring and pre-write planning practices (MacArthur et al., 2016; Wischgoll, 2016). The findings of this study have broadened the scope of this research.

**Self-efficacy, Collaborative Planning, and Student Perception**

After merging qualitative and quantitative data, it was determined the findings relating to self-efficacy and writing anxiety are closely connected and intertwined with the boundaries between these two constructs blurred. Students in this study did not separate the two when discussing how they felt when writing each essay. Bruning and Kauffman (2016) could provide insight as to why. According to these researchers, writing anxiety can have significant effects on self-efficacy resulting in an inverse relationship. Lower levels of writing anxiety correlate with higher levels of self-efficacy, whereas higher levels of anxiety correlate with lower levels of self-efficacy. In the present study, words like “confident” and “good” were voiced often by students.
when sharing how they felt about their writing and could be interpreted as feelings of higher self-efficacy and lower writing anxiety. Words like “frustration”, “stressed”, or “freaking out” were voiced frequently by students as well and could be inferred to relate to levels of lower self-efficacy and higher writing anxiety. Because there is specific quantitative data that relates to these two constructs separately, the Self-efficacy Writing Survey (SEWS) and the Writing Apprehension Test (WAT), the findings and implications will be reported independently.

**Self-Efficacy**

Both SEWS scores and student perception data revealed that self-efficacy increased when using the collaborative planning format. There was a statistically significant increase in overall SEWS scores and within the three writing dimensions with collaborative planning. Descriptive data collected from focus group discussions also revealed an increase in self-efficacy. Collaborative planning provided an extra layer of support for students while writing their essays. Schunk (2001, 2008) reported that modeling enhanced self-efficacy, specifically when models are perceived to be similar in age. The collaborative planning research groups could have provided those models.

Zimmerman and Risemberg (1997) stated that with increased self-efficacy, writing achievement increases as well. This study confirms this finding as essay scores did improve when collaborative planning was used. Student comments and classroom observations could provide one explanation. When students were working together in their research groups, each member was responsible for bringing a source relating to their case for a group reference list. Peer accountability could contribute to engagement in the writing process. Same-age collaborative groups, where members were not only classmates but teammates, roommates, and friends, raised the level of accountability to ensure students were engaged, responsible, and not
disappointing their group. In turn, this could have had an effect on their writing. According to research in the field of self-efficacy, students who work harder, persist longer, and use higher quality learning strategies have higher perceived self-efficacy (Kurtz & Borkowski, 1984; Pajares, 2008; Zimmerman, 1989). The collaborative planning groups used in this study could have provided a climate similar to that, resulting in higher self-efficacy, reduced writing anxiety, and better writing.

Another implication relating to self-efficacy is the disparity found in this study between perceived self-efficacy, based on SEWS scores, and demonstrated writing ability. There was a difference between the students’ actual grades and their levels of perceived self-efficacy, with perceived self-efficacy higher than their actual grades earned. Zimmerman and Kitsantas (2002) found a similar disparity in their study as well, indicating that there could be a general disconnect between perceived self-efficacy for writing and actual writing performance.

When looking to the SEWS data for explanations as to this disparity, scores collected after the independent planning phase were compared to the scores collected after the collaborative planning phase. These survey scores were broken down into the three writing dimensions most closely associated with the social cognitive model for self-regulated writing (Zimmerman & Risemberg, 1997): writing ideation, writing conventions, and writing self-regulation. Inconsistent results were found among the ability-based focus groups. All three focus groups scored higher in writing ideation and writing self-regulation after the collaborative planning phase. In the writing conventions domain, FG-B scored higher after the collaborative planning phase and FG-A and FG-C scored lower.

It is not a surprise that all students raised their scores in writing ideation after the collaborative planning phase as this study focused on planning and generating ideas for essay
writing throughout the length of the study. At the time students were concluding the collaborative planning phase, the semester was drawing to an end resulting in approximately four months of planning instruction. It appears there is a relationship between extended explicit instruction in planning and a student’s level of self-efficacy in the writing ideation dimension. Zimmerman and Risemberg (1997) stated that many students define proficient writing as possessing knowledge of vocabulary and grammar yet the results of this study do not coincide with their findings. The students of this study did not rate the writing conventions dimension highest in either planning format and FG-A and FG-C scored lower in this dimension with collaborative planning.

It is possible that the process of planning with a group, the support from group members, and the increased number of sources and amount of information collected during the collaborative planning phase caused the students to feel more confident in their ability to write the essay. However, their actual ability for crafting the essay did not match their level of confidence causing this disparity between the two scores. According to Bruning and Kauffman (2016) and Pajares (2008), learners obtain information from writing models, feedback from peers and teachers, and their physiological and emotional reactions in order to determine self-efficacy. Fernández Dobao (2012) found that participants working collaboratively challenged one another beyond their individual performance levels and Storch (2015) found that students were more willing to take risks in their writing behaviors when working collaboratively.

Students’ experiences collaborating within their research groups could have led them to end their collaborative planning session feeling high levels of confidence and self-efficacy in their ability to write the essay. However, when they sat down to actually write their essay independently, their ability may not have matched those high levels of self-efficacy. Another
possible explanation could be that through peer modeling and feedback, students took risks in crafting their essays that they might not have taken if planning independently. Those writing risks could have lowered their scores. If these high levels of self-efficacy can be maintained throughout their college career, will their writing ability catch up? According to Zimmerman and Risemberg (1997), it may. Based on their research, the level of perceived self-efficacy has positive effects on writing ability.

If the students of this study can maintain high levels of writing self-efficacy, it is possible that their writing ability will improve over time and the two levels will eventually match. Are high levels of self-efficacy important for continued growth in writing ability? The literature reviewed for this study found few studies focused on the disparity between self-efficacy and actual writing ability. Disparity between self-efficacy and writing ability is an area that needs additional research in the form of longitudinal study design.

**Writing Anxiety, Collaborative Planning, and Student Perceptions**

Based on both student perceptions and WAT survey scores, writing anxiety did decrease, indicated by statistically significant higher survey scores when using the collaborative planning format. When merging the data, this decrease in writing anxiety that students described in focus group discussions could have affected the overall increase in SEWS scores. According to Bruning and Kauffman (2016), writing anxiety can have significant effects on self-efficacy resulting in an inverse relationship. When triangulating the data from this study, student perception data indicated that participating in the collaborative planning groups decreased anxiety and increased writing self-efficacy. WAT scores and SEWS scores corroborate these findings.
A finding from the WAT survey to note was the overall low levels of anxiety these students had for writing throughout the course compared to the mean score of 78 established by the survey. The independent writing phase mean score was 96.33 and the collaborative planning phase mean score was 102.83. Both scores are substantially above the mean score of 78, indicating this group of students were not reporting overall high levels of writing anxiety based on the norms of the survey. This could be due to the socially-based, peer-centered make-up of the course, environmental structuring, and the teacher-student relationship. Another contributing factor could be the lowering of these students’ standards once they entered into postsecondary education, evidenced by the statement “C’s get degrees” voiced during a focus group discussion.

As stated earlier, learners obtain information about self-efficacy and writing anxiety from writing models, feedback from peers, and their physiological and emotional reactions (Bruning & Kauffman, 2016; Pajares, 2008). It is possible that with an overall belief that their grades will be lower in college, and the added support from their peers and the structure of this course, the students of this study were able to buffer themselves somewhat from the anxiety postsecondary education can cause. Administration of the WAT survey at the beginning of the semester before any instruction was delivered could have provided more insight as to these students’ levels of anxiety throughout the course.

**Implications for Practice**

The findings of this study suggest several considerations for postsecondary writing instruction. Many of the theoretical implications found within this study confirmed what is already known about best practices in writing instruction. However, according to Applebee and Langer (2011), the challenge is not in the conceptual understanding of how to teach writing but in the actual application of those theoretical practices within the writing classroom. The goal, then, is to provide instructors with practices that can be applied easily to any course design. The
instructional practices incorporated into the design of this study were uncomplicated and clear in nature yet demonstrated a significant positive relationship on writing ability, self-efficacy, and writing anxiety and could be applied easily to any writing course. These practices fall into five general areas: supportive strategic instruction, differentiation, socially-based learning experiences, teacher feedback, and teaching for transfer.

**Supportive Strategic Instruction**

First, the findings of this study suggest the importance of providing postsecondary students supportive, strategic writing instruction. Instruction that incorporates a strategy-based writing model as the foundation for the writing course, such as the social cognitive model for self-regulated writing instruction, and includes the environmental, behavioral, and personal processes and classes into planned instruction has shown to improve writing ability and increase self-efficacy (Zimmerman & Risemberg, 1997). The same result was found in this study. General writing strategies identified by the students of this study as most supportive to their writing ability were modeled, explicit instruction using the coping model format, same-topic research groups, and choice in topics studied, and peer and teacher feedback. Strategies specific to the collaborative writing phase identified as most supportive to writing ability were socially-based writing formats in the form of collaborative planning groups and same-topic and similar-ability peer review dyads.

Other strategies found to have a positive relationship on writing ability, self-efficacy, and writing anxiety in this study were the use of pre-write planning pages with graphic organizers and mnemonics, and deliberate practice. The students of this study found the planning pages highly supportive for writing the course essays. These pages, uncomplicated and clear in nature, not only focused on planning the content of the essay but incorporated time management and
assignment checklist sections as well. All three were identified as supporting students’ writing skill.

Based on the research of Hayes and Flower (1986), Hayes (2000), and Torrance (2016), providing explicit instruction in how to plan for writing and time management for assignment completion is needed. Based on the findings of the present study, these practices are still pedagogically appropriate at the postsecondary level. Deliberate practice was also found to be effective in this study, with students voicing the use of daily writing and consistent writing routines as elements contributing to their writing ability, self-efficacy, and success in the course.

Multiple studies have demonstrated that these writing strategies are effective tools for improved writing ability (Graham et al, 2005, 2009, 2016; Graham & Perin, 2007; MacArthur et al., 2009, 2013, 2014; Santangelo et al., 2016; Schunk & Swartz, 1993; Zimmerman & Kitsantas, 1999, 2003; Zimmerman & Risemberg, 1997). This study confirmed these findings. By incorporating a strategy-based writing model and supportive, strategic writing instruction into course design, no matter the content area, students writing ability could improve, writing self-efficacy could increase, and writing anxiety could decrease.

**Socially-based Writing Experiences**

Students described the socially-based writing experiences as not only enjoyable but supportive of their writing ability. Students voiced that working with a group of peers who shared a similar topic and purpose supported their ability to find resources, plan for writing, and improved their actual writing ability. Statistically significant evidence to support these claims was found in this study. Because of this, it is important to provide time for students to collaborate in either research groups, planning groups, or both. Instructors should model explicitly how to work in a group and how to plan collaboratively as Bhowmik and colleagues
(2018) and Dean (2010) suggested and provide students choice since some prefer to work alone as Hillebrand (1994) found. Finally, based upon the comments of the students of this study, instructors should avoid group writing projects, where students not only plan together but write together as well, or provide choice as some students, particularly the higher-ability students, may find group writing stressful. Many students who participated in this study appreciated the autonomy of writing their essay independently.

Peer review was also named as a supportive, socially-based learning experience. Though not all students identified it as an effective instructional practice, most stated that it not only helped them with revising the paper they were writing, but provided peer-modeling that supported their overall writing ability. These findings supported the research of Cho and colleagues (2011) who found that when a writer takes on the reader’s perspective while reviewing a peer’s writing, the reviewer’s own writing improves. Nicol and MacFarlane-Dick (2006) found that when reviewing the work of peers and providing feedback, students were able to develop an understanding of the standards and quality of the writing task, which they potentially transfer to their own work. This study supported this research but added an additional layer to best practices for how to format peer review within the postsecondary classroom. The students in this study voiced a preference for same-topic, similar-ability peer review dyads. It was within this arrangement that students found peer review most effective. Incorporation of this socially-based strategy could be a powerful instructional routine for postsecondary writing assignments.

**Differentiation**

Based on focus group transcripts, it was found that getting to know postsecondary students personally as well as writers, in order to learn about their interests, their writing ability,
their perceived writing self-efficacy and anxiety level, and the many roles they engage in at the postsecondary level, provides the necessary data to differentiate students’ writing instruction. For example, Bruning and Kauffman (2016) stressed the importance in identifying students who experience writing anxiety early to provide the support needed to alleviate these feelings and limit its effect on writing ability and self-efficacy. Identification of other identities in writing could prove beneficial as well.

Establishing a positive teacher-student relationship based on open communication will not only provide insight as to the level of support the student needs in writing but also in the responsibilities they have outside of the classroom. Based on the student athletes in this study, the anxiety of juggling the schedules of academics, practice, and work schedules can be challenging. Postsecondary students participating in multiple activities or having multiple responsibilities may need an extra layer of support and additional time to complete assignments. In addition, open communication with coaches was also found to be effective in supporting students’ classroom work and grades. Though not part of this study’s design, it was observed that weekly progress reports, circulated by the university’s athletic departments, promoted student athlete accountability and open communication between coaches and professors. Differentiated writing instruction, based on each student’s needs both academically and in managing their busy schedules, could support students’ writing ability, increase self-efficacy, and reduce writing anxiety.

**Teacher Feedback**

Findings of this study suggest the use of timely written and oral feedback from instructors as students found this helpful for improved writing ability, similar to the findings of Zimmerman and Kitsantas (2002). In this study, teacher feedback was identified as more supportive than
collaborative planning with peers for lower ability writers. Differentiating writing instruction based on ability is an important instructional routine to include in course design as was observed in this study. Though all writers can benefit from teacher feedback, providing lower writing ability students with higher levels of oral and written feedback should be considered as students from this study found it more valuable for supporting their writing skills than socially-based learning experiences. Conversely, higher ability writing students may require less teacher feedback, but may value the opportunity to collaborate with peers in socially-based learning experiences more. Supportive, strategic, self-regulated writing strategies are personal and are not generalizable (Schunk, 2001, 2008) requiring teachers to provide differentiated instruction as much as is feasible within the postsecondary classroom.

**Teaching for Transfer**

Finally, teach students how to transfer learned writing skills to other writing tasks. In the present study, three students applied the planning format explicitly taught in class to assignments for other courses. Two recreated the graphic organizer and the third drew out a similar planning structure. All three did this on their own volition. The uncomplicated and straightforward nature of the planning documents facilitated students’ ability to transfer their use to other domains. Based on these findings, an instructional implication for writing instructors would be to incorporate uncomplicated, straightforward planning graphic organizers that can be easily re-created by students independently for their own use, and teach students how to apply these organizers to other classes and other writing assignments. Instructional methods to promote independent use are drawing, paper folding, or outlining, and collaborative, socially-based learning environments. These practices may promote transferring the planning process to other writing courses and writing domains.
Limitations

This semester-long mixed methods study was based in a postsecondary first year seminar course where I was the primary instructor and researcher. There were 18 student participants. Because the sample size was small (n=18), the ability to generalize these findings to other writing contexts was reduced. However, multiple validation strategies were used in the analysis of data for this study. This lends elements of trustworthiness to the results. Even so, there were limitations associated with this study. They were the study environment, unequal representation of qualitative data, effects of prior knowledge on writing ability, and course design.

The first major challenge in the design of this study was to provide an environment where students felt like they could disclose their true feelings about the two planning formats without any consequence to their grade. I was the primary researcher and instructor for the course set within this study, which could have produced perceptions of social desirability for the students. In addition, the participants of this study were the students enrolled in the course, representing a convenience sample. Additionally, there were many similarities among students in the sample: all were athletes and true crime enthusiasts who had chosen to take this course. Validation strategies to counteract these challenges were the use of prolonged and persistent semester long observations, the use of an independent moderator for the focus group discussions, clarifying researcher bias prior to and throughout data collection and analysis, triangulation of essay scoring with two additional university instructors, and triangulation of the qualitative and quantitative results (Creswell, 2011). A final validation strategy used was providing transcripts to all students of the study to ensure their voices were represented accurately, however there was no feedback received that required revisions to the data.

A second potential limitation of this study was the vastly different amounts of qualitative data provided by the three different focus groups: a total of 7,033 words compared to 4,847
words for FG-B and 2,806 words for FG-C. Focus group A provided more data on which to base the results. Therefore, this study could be slanted toward the opinions and perceptions of FG-A, which was made up of students with lower levels of writing ability than the other two focus groups. Though research for the struggling writer at the postsecondary level is valuable and is needed, best practices for the average or high leveled writer are important too. This study may not have addressed and voiced the opinions, perceptions, and needs of all writers equally, although it does add important data to the existing field of research on writing instruction for postsecondary students, and perhaps especially for those with lower writing abilities.

A third limitation of this study relates to content of the writing course and the inflated effects prior knowledge could have contributed to the results of the collaborative planning essay scores. There are many resources currently online and in the media about notorious serial killers and this could have contributed to higher essay scores; the students could have had more prior knowledge about their topic and it may have been easier to find information and sources. This could have reduced the cognitive load of the assignment which in turn could have improved the students’ ability to write the essay. In addition, data from focus group discussions revealed that students found the topic of serial killers (the collaborative planning format) more interesting to research than mass murderers (the independent planning format) which could have skewed the comparison of the two planning formats as well.

Another limitation relates to course design. Though students found the consistent nature of the course and writing routines supportive to their writing ability, this could be identified as a limitation to the results of this study. Throughout the semester the same routine was followed potentially skewing the results of the collaborative planning phase of the study which came last in the semester and data collection phase. Because the routine was so familiar to the students by
the time the collaborative planning essay was written, their cognitive load could have been reduced which allowed more space for crafting their essays. It is even possible that any planning condition used last could show the strongest performance levels. However, if this is the case, it provides support for utilizing a consistent routine designed to include research-supported elements of writing instruction.

Finally, although it was important to have an independent moderator to hold the focus group discussions, there were times throughout the study where this could be identified as a limitation. Because of the busy nature of the students’ schedule, it was determined that for students to provide the most accurate data, the ideal time to hold the focus group meetings was immediately following the planning phase of essay writing and then again when the students were submitting their completed essays for a final grade. This schedule seemed to enhance student recall. Scheduling challenges resulted in missing these optimal times by two days when holding the collaborative essay planning meeting phase. This could have affected students’ memory of their experiences while collaboratively planning. However, the positive outcomes of using an independent moderator for the focus group discussions far outweighed the limitations to the study. It not only added to the validity of the study, as it allowed for a delay in transcribing the focus group discussions until after grades were submitted, but also enabled me to control my potential influence on students’ responses, thus decreasing the potential for social desirability bias in students’ responses.

**Future Research**

Many studies have called for more research in the field of strategy-based writing instruction (Bruning & Kauffman, 2016; Dean, 2005; Graham, 2016; Wischgoll, 2016). This study is no different. However, the findings of this study have identified specific areas in need of
further inquiry, including study design, more exploration of specific gaps in writing research, and next steps for the present study.

First, longitudinal study design focusing on a variety of gaps in writing research is needed, specifically in the field of postsecondary writing. According to Klein and colleagues (2016), the expectation upon entering higher education is that students are no longer learning how to write, but are able to use writing as a process to demonstrate learning or as a tool for new learning. Graham and Perrin (2007) identified writing as the “gateway” for future opportunities in education, yet 73% of U.S. 12th graders are graduating non-proficient in writing (NAEP, 2012). Writing is “a complex social and cognitive process” (MacArthur & Graham, 2016) with self-efficacy and writing anxiety intricately tied to ability (Bruning & Kauffman, 2016). Research is needed in how to design fast-track writing courses to support incoming first year college students who are not proficient in writing and are not prepared to use writing as a tool to communicate their knowledge or level of learning. This is vital as their ability to communicate with professors in writing is foundational to postsecondary academia for evaluation purposes. An equal and fair education is the right of all students, not just those who possess the ability to express themselves in writing. Research in how best to support postsecondary struggling writers throughout their college careers is needed.

Specific writing research that expands on the findings of this study is needed, including longitudinal studies focused on teaching for transfer (Dean, 2005). Studies similar to this one, that follows groups of students throughout their college careers to determine if the planning strategies transferred to other classes in other domains over time could provide information on how to promote long-lasting transfer of writing process skills and strategies. Investigating how long instruction must be provided to promote transfer could help determine the amount of
explicit instruction and repeated practice needed to transfer the planning strategies to other writing courses, domains, and in students’ future professional writing.

Longitudinal studies examining the disparity between writing self-efficacy and writing ability could provide valuable insight as to how the two interact, the length of time for the two levels to eventually match, or the importance of maintaining higher levels of self-efficacy to promote continued writing improvement. Finally, additional research is needed focusing on the postsecondary student athlete experience in a variety of conferences and institutions. The students of this study, all athletes, identified the many expectations placed on them as highly stressful, especially in keeping up with the demands of postsecondary curriculum. Mixed methods, longitudinal studies that explore the effects of juggling the many expectations placed on student athletes and specific learning strategies to support this population of students, especially with writing instruction, could raise awareness and provide valuable information for professors and coaches on how to increase retention rates, and prepare student athletes for future employment.

Another area for future research involving study design is to address the lack of qualitative studies found in postsecondary writing research. The few studies found for this study’s literature review suggests more is needed. Though a few studies incorporated pre- and post-writing questionnaires or surveys (MacArthur & Philippakos, 2013; MacArthur et al., 2015), more qualitative research incorporating interviews or focus groups collecting data in real time could be beneficial to understand more deeply the most effective practices from the perspective of postsecondary students. In this study, the qualitative data provided clarity as to the what, how, and why of effective postsecondary writing instruction. Additional qualitative studies
that collect student opinions as the actual act of writing is occurring could provide further clarity on how best to support postsecondary students.

Additional research is needed to continue to address the gap in the body of research exploring pre-write planning strategies and environmental structuring for postsecondary writing instruction. Torrance (2016) found that few studies have directly researched the benefits of planning to writing quality. Though this study provides evidence of a positive and significant relationship between explicit instruction in pre-write planning with the use of graphic organizers and checklists and writing ability, more research is needed.

An important next step for this study is to increase and broaden the sample to determine generalizability to a wider range of populations. A limitation identified in this study was the small sample size and similarity of the students in terms of their roles and interests. By increasing the sample size and broadening it to include other college campuses both public and private, with various enrollment sizes, other domains, and other college grade levels, the qualitative and quantitative results could be more reliable and valid. Self-regulated strategy-based writing instruction is content-specific and is not necessarily generalizable across domains (Schunk, 2001, 2008), so strategies that support writing in one domain may not be effective in another. By incorporating other domains into a broad-based study, identifying specific strategies that work for each domain, ability, or grade-level could be important to determine the support needed for writing across the curriculum at the postsecondary level.

Finally, a study that controls for prior knowledge of the writing topic could provide clarity as to its effect on writing ability. In addition, a study designed to address the effects of course design familiarity on the two planning formats is needed. A parallel study in two classrooms with participants who have similar demographics where the sequence of planning
format order is switched, independent planning used first in one and collaborative planning used first in the second, could provide evidence as to the effects of course familiarity on planning format and writing ability.

**Summary**

The goal of this study was to explore the impact of the collaborative pre-write planning format on writing ability, perceived self-efficacy, and writing anxiety using a concurrent triangulation mixed methods research design. Qualitative data collected were ability-based focus group discussions, student comments when conferencing, and observations recorded in the research journal. Quantitative data collected were student writing samples and responses to surveys of writing self-efficacy and writing anxiety. Corroborated results showed statistically significant relationships, supported by student perceptions, between collaborative planning and writing ability, self-efficacy, and writing anxiety.

This study provides a unique and valuable student-voiced perspective to postsecondary writing research. By collecting both qualitative and quantitative data, the merged triangulated results of this study provide a corroborated interpretation that confirmed, extended, and provided new insight on the overall positive relationships collaborative planning had on postsecondary writing instruction. Based on the findings of this study, socially-based writing instruction including collaboratively-based essay planning was found to be effective in improving students’ writing ability, increasing writing self-efficacy, and reducing writing anxiety. Professors and instructors at the postsecondary level who teach composition or use writing as a tool to communicate learning may find the results of this study helpful in designing courses that support student writing. Though more research is needed in the field of postsecondary writing, this study has contributed a valuable student-centered perspective to the field of strategy-based, postsecondary writing research.
REFERENCES


The project referenced above has been declared exempt from most requirements of the human subject protections regulations as described in 45 CFR 46.104 or 21 CFR 56.104 because it meets the following federal requirements for exemption:

2018 - 1: Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

2018 - 2 (ii): Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) when any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

The determination of exemption means that:

- You do not need to submit an application for continuing review. Instead, you will receive a request for a brief status update every three years. The status update is intended to verify that the study is still ongoing.

- You must carry out the research as described in the IRB application. Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, nature or duration of behavioral interventions, use of deception, etc.), any change in privacy or confidentiality protections, modifications that result in the inclusion of participants from vulnerable populations, removing plans for informing participants about the study, any change that may increase the risk or discomfort to participants, and/or any change such that the revised procedures do not fall into one or more of the regulatory exemption categories. The purpose of review is to determine if the project still meets the federal criteria for exemption.

IRB D1/2015
• All changes to key personnel must receive prior approval.

• Promptly inform the IRB of any addition of or change in federal funding for this study. Approval of the protocol referenced above applies only to funding sources that are specifically identified in the corresponding IRB application.

Detailed information about requirements for submitting modifications for exempt research can be found on our website. For modifications that require prior approval, an amendment to the most recent IRB application must be submitted in IRBManger. A determination of exemption or approval from the IRB must be granted before implementing the proposed changes.

Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

Additionally:

• All research involving human participants must be submitted for IRB review. Only the IRB or its designees may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

• Please inform the IRB if the Principal Investigator and/or Supervising Investigator end their role or involvement with the project with sufficient time to allow an alternate PI/Supervising Investigator to assume oversight responsibility. Projects must have an eligible PI to remain open.

• Immediately inform the IRB of (1) all serious and/or unexpected adverse experiences involving risks to subjects or others; and (2) any other unanticipated problems involving risks to subjects or others.

• Approval from other entities may also be needed. For example, access to data from private records (e.g., student, medical, or employment records, etc.) that are protected by FERPA, HIPAA or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. An IRB determination of exemption in no way implies or guarantees that permission from these other entities will be granted.

• Your research study may be subject to post-approval monitoring by Iowa State University’s Office for Responsible Research. In some cases, it may also be subject to formal audit or inspection by federal agencies and study sponsors.

• Upon completion of the project, transfer of IRB oversight to another IRB, or departure of the PI and/or Supervising Investigator, please initiate a Project Closure in IRBManger to officially close the project. For information on instances when a study may be closed, please refer to the IRB Study Closure Policy.

Please don’t hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.

IRB 01/2019
APPENDIX B

UNIVERSITY-ESTABLISHED ESSAY GRADING RUBRIC

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Excellent</th>
<th>Good</th>
<th>Satisfactory</th>
<th>Poor</th>
<th>Unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audience</td>
<td>The student consistently addresses a clearly defined audience and makes choices to reach it effectively.</td>
<td>The student frequently addresses a clearly defined audience and makes choices to reach it effectively.</td>
<td>The student somewhat addresses a clearly defined audience but occasionally fails to make choices to reach it.</td>
<td>The student rarely addresses a clearly defined audience and fails to make choices to reach it.</td>
<td>The student never addresses a clearly defined audience and has no regard for the expectations of the assignment.</td>
</tr>
<tr>
<td>Purpose</td>
<td>The choices consistently achieve the identified purpose and goal of the assignment.</td>
<td>The choices frequently achieve the identified purpose and goal of the assignment.</td>
<td>The choices somewhat achieve the identified purpose and goal of the assignment.</td>
<td>The choices rarely achieve the identified purpose and goal of the assignment.</td>
<td>The purpose of the assignment is not achieved.</td>
</tr>
<tr>
<td>Organization</td>
<td>The organization of the piece consistently supports the intended purpose and audience.</td>
<td>The organization of the piece frequently supports the intended purpose and audience.</td>
<td>The organization of the piece somewhat supports the intended purpose and audience.</td>
<td>The organization of the piece rarely supports the intended purpose and audience.</td>
<td>The organization of the piece never supports the intended purpose and audience.</td>
</tr>
<tr>
<td>Process</td>
<td>The composition shows significant improvement from initial to final drafts.</td>
<td>The composition shows some improvement from initial to final drafts.</td>
<td>The composition shows adequate improvement from initial to final drafts.</td>
<td>The composition shows minimal improvement from initial to final drafts.</td>
<td>The composition shows no improvement from initial to final drafts.</td>
</tr>
<tr>
<td>Detail</td>
<td>The thesis of the piece is well-supported and appropriate to the assignment.</td>
<td>The student frequently uses appropriate detail to support the thesis of the assignment.</td>
<td>The student sometimes uses appropriate detail to support the thesis of the assignment.</td>
<td>The student rarely uses appropriate detail to support the thesis of the assignment.</td>
<td>The student never uses appropriate detail to support the thesis of the assignment.</td>
</tr>
<tr>
<td>Standard American English Grammar, word choice, and punctuation appropriate to context</td>
<td>Consistently appropriate for the assigned audience and purpose.</td>
<td>Frequently appropriate for the assigned audience and purpose.</td>
<td>Somewhat appropriate for the assigned audience and purpose.</td>
<td>Rarely appropriate for the assigned audience and purpose.</td>
<td>Never appropriate for the assigned audience and purpose.</td>
</tr>
</tbody>
</table>
APPENDIX C

SELF-EFFICACY FOR WRITING SURVEY (SEWS) QUESTIONS

**Ideation:**
I can think of many ideas for my writing.
I can put my ideas into writing.
I can think of many words to describe my ideas.
I can think of a lot of original ideas.
I know exactly where to place my ideas in my writing.

**Conventions:**
I can spell my words correctly.
I can write complete sentences.
I can punctuate my sentences correctly.
I can write grammatically correct sentences.
I can begin my paragraphs in the right spots.

**Self-regulation:**
I can focus on my writing for at least one hour.
I can avoid distractions while I write.
I can start writing assignments quickly.
I can control my frustration when I write.
I can think of my writing goals before I write.
I can keep writing even when it’s difficult.
APPENDIX D

WRITING ANXIETY TEST (WAT) QUESTIONS

(+) 1. I avoid writing.
(-) 2. I have no fear of my writing being evaluated
(-) 3. I look forward to writing down my ideas.
(+ )4. I am afraid of writing essays when I know they will be evaluated.
(+ )5. Taking a composition course is a very frightening experience.
(-) 6. Handing in a composition makes me feel good.
(+ )7. My mind seems to go blank when I start to work on a composition.
(+ )8. Expressing ideas through writing seems to be a waste of time.
(-) 9. I would enjoy submitting my writing to magazines or online for evaluation and publication.
(-) 10. I like to write my ideas down.
(-) 11. I feel confident in my ability to clearly express my ideas in writing.
(-) 12. I like to have my friends read what I have written.
(+ )13. I’m nervous about writing.
(-) 14. People seem to enjoy what I write.
(-) 15. I enjoy writing.
(+ )16. I never seem to be able to clearly write down my ideas.
(-) 17. Writing is a lot of fun.
(+ )18. I expect to do poorly in composition classes even before I enter them.
(-) 19. I like seeing my thoughts on paper.
(-) 20. Discussing my writing with others is an enjoyable experience.
(+ )21. I have a terrible time organizing my ideas in a composition course.
(+ )22. When I hand in a composition I know I’m going to do poorly.
(-) 23. It’s easy for me to write good compositions.
(+ )24. I don’t think I write as well as mother other people.
(+ )25. I don’t like my compositions to be evaluated.
(+ )26. I’m no good at writing.
Research Paper #1 Mass Murder/Familicide Persuasive Essay Planning Doc

First draft due Sunday, 10/27 / Peer edit on Monday, 10/28 / Final due Sunday, Nov. 3

<table>
<thead>
<tr>
<th>Completion goal dates:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Research &amp; planning</td>
<td>Rough draft</td>
</tr>
</tbody>
</table>

Required components of this paper:
- Persuasive text structure
- Purpose – you will determine your argument or stance and then persuade the reader to agree with you using evidence from your sources
- Text evidence in the form of 2 parenthetical in-text citations per source cited in the Works Cited section
- Counter claim recognized and discredited
- 3-5 pages
- 4-6 sources with 1-2 being scholarly
- 2 text features
- Thesis statement underlined
- MLA heading and format
- Works Cited section at the end

Heading:
Name
Instructor’s name
LIBA110
# Month year

Title

Content Planning:

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<tr>
<th>I</th>
<th>Introduction of case and thesis statement (stance or claim)</th>
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<tr>
<td>R</td>
<td>Reason #1 &amp; evidence</td>
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<tr>
<td>R</td>
<td>Reason #2 &amp; evidence</td>
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</tbody>
</table>

Fall 2019
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<tr>
<th>R</th>
<th>Reason #3 &amp; evidence</th>
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<td>Reason #4 &amp; evidence</td>
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<tr>
<td>R</td>
<td>Reason #5 &amp; evidence</td>
</tr>
<tr>
<td>C</td>
<td>Counterclaim (Can be included at any point in your paper)</td>
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<tr>
<td>C</td>
<td>Conclusion</td>
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<td>Works Cited</td>
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<td>*5.</td>
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<td>*6.</td>
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<Additional reasons with evidence may be included>
APPENDIX F

COLLABORATIVE PLANNING ESSAY PLANNING PAGE
APPENDIX G

WWW

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<th>LIBA110</th>
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WWW Descriptive Essay Planning Doc

Name:

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</tr>
<tr>
<td>Rough draft</td>
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<td>Revisions and edits</td>
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<td>Published</td>
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Content Planning:

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<th>Extra Info</th>
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### APPENDIX H

**COPS**

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<tr>
<th>C</th>
<th>Compliments</th>
<th>Find parts of the paper you identify as well written and/or interesting.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Capitalization</td>
<td>Check the paper for capitalization – proper nouns</td>
</tr>
</tbody>
</table>
| O | Organization & format | Check the paper for organization – find the introduction, thesis statement, 3+ reasons with evidence, rebuttal, and conclusions.  
Check the paper for in-text citations – were they included in the paper and are they formatted correctly?  
Check the paper’s Works Cited page – is it formatted correctly and do they have the correct number of sources overall as well as scholarly sources?  
Offer the author ideas to add, revise, or change the organization of their paper. |
| P | Punctuation | Check the paper for punctuation?  
Check for basic punctuation as well as how the author punctuated direct quotes, citations, and the Works Cited page. |
| P | Purpose | Does the paper meet the purpose of the assignment? Has it incorporated the criteria of the rubric and the specific requirements for the assignment? |
| S | Did it make sense | Does the writing and content make sense as you read it without input from the author?  
Does the content seem correct?  
When you read the paper, can you comprehend what the author is trying to say?  
If you were reading this paper alone, would you understand the author’s message, conclusions, or viewpoints? |
<table>
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<tr>
<th>Research Notes</th>
<th>UBA110-Fall 2019</th>
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<td>Case:</td>
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**Research group names:**

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<tr>
<td>Important Facts:</td>
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<tr>
<td>Quotes to use for parenthetical in-text citations:</td>
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<tr>
<td>Connections:</td>
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<tr>
<td>Questions for my research group:</td>
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<td>Short summary:</td>
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<td>Notes on this source:</td>
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<td>Connections to other sources?</td>
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<tr>
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<td>Scholarly?</td>
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APPENDIX J

SOCIAL COGNITIVE WRITING COMPONENTS PLANNED FOR GENERAL WRITING INSTRUCTION

<table>
<thead>
<tr>
<th>Social cognitive writing components included in writing instruction</th>
<th>Social cognitive writing model theoretical construct connection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Component</strong></td>
<td><strong>Connection</strong></td>
</tr>
<tr>
<td>1. Explicit instruction of cognitive, process, and environmental/behavior/personal self-regulating strategies</td>
<td>Strategy instruction; cognitive and process strategies; self-regulating behavior strategies; feedback loop</td>
</tr>
<tr>
<td>2. Goal-setting – process and product</td>
<td>Cognitive and process strategies, behavioral self-regulating strategies</td>
</tr>
<tr>
<td>3. Pre-write planning tools – graphic organizers and mnemonics; color-coded by assigned essay</td>
<td>Process strategies; Environmental self-regulating strategies</td>
</tr>
<tr>
<td>4. Coping models with think alouds</td>
<td>Social learning experiences; cognitive and environmental self-regulating strategies</td>
</tr>
<tr>
<td>5. Socially-based learning format – research groups, collaborative planning, and peer review</td>
<td>Social learning experiences</td>
</tr>
<tr>
<td>6. Deliberate practice</td>
<td>Cognitive strategies; power law of skill acquisition</td>
</tr>
<tr>
<td>7. Developmental model of skill acquisition</td>
<td>Developmental stages of writing ability</td>
</tr>
<tr>
<td>8. Assessment documents – rubrics and checklists; color-coded by assigned essay</td>
<td>Process strategies; Environmental self-regulating strategies</td>
</tr>
</tbody>
</table>

(Zimmerman & Risemberg, 1997)