

A CASE STUDY EXAMINING THE EXPLICIT METHOD OF CRITICAL  
THINKING INSTRUCTION IN A COMMUNITY COLLEGE ENGLISH  
CLASSROOM

by

Stacey Alwine  
A Dissertation  
Submitted to the  
Graduate Faculty  
of  
George Mason University  
in Partial Fulfillment of  
The Requirements for the Degree  
of  
Doctor of Arts  
Community College Education

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## **DEDICATION**

This is dedicated to my students, without whom this study would be impossible. They are more than participants; they are inspiration.

## **ACKNOWLEDGEMENTS**

I would like to thank, first and foremost, my amazingly supportive committee: Dr. John O'Connor, Dr. Jan Arminio, and Dr. Erin Peters-Burton. Not only did they provide invaluable help and support along the way, but they also instilled confidence in me as a student, as a writer, and as a researcher. I also want to thank my husband, who was my supporter along the way. And I want to thank my family, who has always been proud of me no matter what. I realize that I am doing this not just for myself, but I am also doing it to make them proud. And my supportive parents, and now in-laws, make that feel easy to do.

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## **ABSTRACT**

### **A CASE STUDY EXAMINING THE EXPLICIT METHOD OF CRITICAL THINKING INSTRUCTION IN A COMMUNITY COLLEGE ENGLISH CLASSROOM**

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George Mason University, 2014

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This case study explores the effects of an intervention lesson plan using the explicit method of critical thinking instruction. It has been shown that the explicit method of critical thinking instruction yields better learning results (Marin & Halpern, 2011). However, other studies have not investigated critical thinking abilities within the community college English classroom over a continuum--as a process with several products. The purpose of this study is to apply the explicit method of critical thinking instruction to my College Composition II class in hopes of improving students' critical thinking abilities and to discover what critical thinking learning looks like over a continuum. The methods for collecting data for this study will be qualitative using a case study methodology. The results of the study can be used to help other English instructors build lessons around critical thinking, specifically using the explicit method of instruction.

*Keywords:* critical thinking, explicit method, English, community college





## **CHAPTER ONE**

There is agreement within higher education that critical thinking skills are important. Derek Bok, the former President of Harvard University, said, “With all the controversy over the college curriculum, it is impressive to find faculty members agreeing almost unanimously that teaching students to think critically is the principal aim of undergraduate education” (Arum & Roksa, 2011, p. 2). As it turns out, it has been that way for a while. Popkewitz and Fendler (1999) stated that critical thinking skills have always been an element of formal education. In a study involving 66 colleges and universities, both public and private, Paul, et al. (1998) observed that 89% of the faculty they interviewed believed that critical thinking skills were an important component in their courses.

More recently, critical thinking has been at the forefront of educators’ initiatives. In a 2005 report, the AAC&U identified a general consensus about what learning outcomes every college student should achieve---one being “inquiry, critical and creative thinking” (p. 2). There was agreement from both “outside the academy” (i.e. accreditors) and inside the academy (i.e. the Faculty Survey of Student Engagement [FSSE] study) that critical thinking was one of the most important skills. An amazing 93% of respondents in the FSSE agreed that critical thinking was an important campus learning goal (AAC&U, 2005).

On October 18, 2012, at the *TIME* Higher Education Summit, U.S. Secretary of Education Arne Duncan spoke about changes that are needed to improve higher education in the U.S. In speaking about the importance of improving skills of college students, Secretary Duncan suggested that businesses should partner with community colleges in order to train students. He said, “And I’m not just talking about the technical skills, but the character, workplace, and critical thinking skills that ensure success in any workplace and the larger society long after graduation” (U.S. Department of Education, 2012, p. 2). Secretary Duncan’s comments suggest that critical thinking skills are not only an important competency for students to master before leaving college, but it is essential for them to have when they enter the workplace and society in general.

Secretary Duncan’s thoughts are supported with facts and figures in the media. *Forbes* published an article in December of 2012 entitled, “The 10 Skills That Will Get You Hired in 2013.” The number one skill on that list was critical thinking. Additionally, the number two and number three skills qualified as critical thinking skills: “complex problem solving” and “judgment and decision-making” (Casserly, 2012, p. 1). Pithers & Sodden (2000) discovered that employers want “university and college graduates who are curious, critical, analytic reflective thinkers” (p. 238). College professors agree. Delbanco (2012), a professor at Columbia University, published a book entitled *College: What It Was, Is, and Should Be*, in which he cited the ability to think critically as an important skill that college students should leave college, and enter the workplace, with.

In addition, the ability to think critically transcends individual course domains; it may help students be successful in other courses as well---not just the course in which

they are receiving critical thinking instruction. Williams & Worth (2001) concluded that critical thinking skills predict students' overall college success and serve as a criterion for success. The problem, then, is not that there is not agreement on whether or not critical thinking is important. The problem is that there is a disconnect between the belief that critical thinking should be taught and critical thinking actually being taught. In addition, there are so many different definitions of critical thinking that the lack of consistency creates confusion for both instructors and for students. These factors could possibly contribute to the fact that students' critical thinking skills are underdeveloped and low.

### **Statement of the Problem**

Arum and Roksa (2011) identified critical thinking as one skill that colleges are failing to successfully teach to students. In their book *Academically Adrift*, they found that even though many colleges admit critical thinking skills are important, this importance gets lost in practice. In their research, Arum and Roksa discovered that “three semesters of college education...have a barely noticeable impact on students' skills in critical thinking, complex reasoning, and writing” (2011, p. 35). Blaich (2007) used a multiple-choice format in a standardized test to assess students' critical thinking skills among nineteen colleges and universities. He concluded that “students have made no measurable improvement in critical thinking skills during their first year in college” (Blaich, 2007, p. 36).

Likewise, in a 2005 report on liberal arts outcomes and student achievement in higher education, the American Association of Colleges & Universities (AAC&U) noticed a disconnect between students' perception of their critical thinking abilities and

their actual performance. In the National Survey of Student Engagement (NSSE), 51% of respondents claimed to know “very much” about inquiry, critical, and creative thinking (AAC&U, 2005, p. 4). However, when these results were compared to data from the ETS Academic Profile, only 6% of seniors were “proficient” at these skills, while 77% were “not proficient” (AAC&U, 2005, pp. 4-5). These results suggest that students may be confused about what exactly critical thinking is, or they have false perceptions of their own critical thinking skills. It could also mean both. Additionally, the results show that students’ critical thinking skills were weak. In addition, Osborne, Kriese, Tobey, and Johnson (2009) argued that even though there is a heavy emphasis in the literature on theories of critical thinking, little has been done to discover how best to teach critical thinking. Choy and Cheah (2009) stated “although students have a natural ability to think critically, it is important for teachers to guide them in order to refine their skills” (p. 198).

The lack of development with critical thinking skills has long-term effects. Employers are also seeing college graduates’ weaknesses in critical thinking. Johnson (2011) cited a study conducted by the Accrediting Council for Independent Colleges and Schools where it asked 1,000 employers about the skill levels of incoming employees who recently graduated college. The employers said that, “on all hiring criteria included in the survey, such as adaptability and critical thinking, applicants were performing below employers' expectations” (Johnson, 2011, p. 1). If the purpose of college is to both educate students in a variety of fields and to prepare them for the workplace, colleges and universities are failing---especially with critical thinking.

Nosich (2005) found that instructors were attempting to teach critical thinking in the classroom, but the two common approaches that were used most often were not effective. One of these approaches is what he calls a “one of many” model, where instructors use critical thinking skills as one of the many ways to assess students’ knowledge on a topic. He likened this to questions at the end of textbook chapters; some ask students to recall what they read, and others require them to analyze what they read (Nosich, 2005). The problem with this “one of many” method is that it does not place a heavy emphasis on critical thinking. Instead, critical thinking is, literally, “one of many” ways to show learning, falsely suggesting that all the ways are the same, of equal importance.

The second model is “cover as much content as possible,” which is a method used in many content-heavy courses. This model involves a rushed curriculum where certain facts, concepts, and material must be learned in a short period of time. In this method, instructors may employ critical thinking, but there is not a focus on it (Nosich, 2005). Not only are these common models not incorporating critical thinking into the curriculum, but it may also be sending the wrong message to students: that critical thinking does not need to be part of the curriculum, and thus, is unimportant (Nosich, 2005).

Paul, Elder, and Bartell (1997)’s research foreshadows Nosich’s findings, showing that there is a disconnect between belief and practice. They surveyed faculty from 66 public and private universities about critical thinking instruction. Their findings suggested that although 89% of faculty believed that critical thinking was important, 91% of them did not teach it in their courses on a daily basis. In addition, 81% of faculty could

not articulate what critical thinking was. When it came to assessing critical thinking skills, faculty also struggled to effectively explain their methods of doing so. Even though 78% of faculty “claimed that their students lacked appropriate intellectual standards,” 92% of them could not explain how those “intellectual standards” were assessed (Paul, et al., 1997, pp. 1-3).

### **Research Questions**

The purpose of the study was to apply the explicit method of critical thinking instruction to my own classroom in an attempt to improve students’ critical thinking skills. The explicit method of critical thinking instruction involves defining critical thinking concepts before asking students to apply, or use, those skills with course content. This ensures that students understand the skill itself before being asked to use it. The purpose of my study directly relates to the research questions I used for the study:

- How does an explicit unit on critical thinking affect critical thinking skills?
- During a unit on critical thinking (using the explicit method of instruction), what evidence of critical thinking do students display?

I was able to answer these research questions using purposeful sampling for the site selection, participant selection, and methods of data collection and analysis (Creswell, 2013).

## **Limitations & Delimitations**

While the research design for this study was aligned with existing theory and research, there are always limitations within studies. One limitation to this study is the number of participants. Even though the course I used for my case study enrolled 22 students, only 18 of the students agreed to participate in the study. A case study approach, being under the umbrella of qualitative research, does not necessarily require a certain number of participants in order to be valid (Creswell, 2013). However, the study did not capture the entire “bounded system,” the entire English 112 class. Instead, the study only illustrated a part of the bounded system.

Another possible limitation to this study was my role as both the instructor for the course and the researcher for the study. There are many benefits to this, including immediate practical applications and benefits for myself as the instructor and researcher, and my dual role also blends research with practice. However, there are also some limitations with this as well. For one, I had to wear two hats at once, instructor, which involved teaching the class, following the lesson plan, and making sure that students are learning; and also researcher, which involved collecting data, observing students, and analyzing the research as the study progressed. There could have been some bias when it came to writing about the study, because part of this requires me to critique my own teaching as well, which is one limitation. However, by using field notes and journals throughout, as well as the members of my dissertation committee, I hope that I kept this bias in check and viewed the study from the most objective eye possible.



Another limitation to this study is submission rates of assignments for students. This will be discussed in detail in Chapter Four, but essentially, participants did not submit every single assignment for the unit. While this may not have affected the overall findings of the study, in terms of information learned from the lesson, it was a shortcoming because it is not telling the whole picture for each student in the study. Additionally, not every participant in the study attended every single class. This could affect an individual's learning throughout the unit because each student was not receiving every opportunity to enhance his/her critical thinking skills, through written assignments or through verbal discussions in class.

Another limitation to my research is the element of interference. That is, there is no way of knowing if students were receiving critical thinking instruction in other classes that would impact their improvement of critical thinking skills in my class. This certainly could have happened, as critical thinking is a common skill across college disciplines, and since students take multiple classes in one semester. And, it could have been happening whether students admitted it or not, or whether students realized it or not. But, there is no way to truly tell if outside critical thinking instruction or learning was actually affecting students' critical thinking learning and abilities in my class.

A last possible limitation to the study could be a limitation that exists in nearly all classroom research: academic honesty, given the pervasiveness of technology. I do not think an instructor can ever fully say that a lesson is effective or not because it is nearly impossible to ever really know if students' work is one hundred percent their own. With the Internet, it is nearly impossible to have students create work that can be fully

validated as being their own. Students can do Internet searches from nearly anywhere. Even if an instructor checks their work for plagiarism, there is no confirming that they did not go to the Internet for ideas. Even if an instructor has students complete work in class without phones or computers, students can always go to the restroom to do a quick Google search. This is a unique challenge for nearly every class and for every instructor, and I do not think it is one that can be easily solved or even discussed in detail here. But, it is something to consider and address, as it has been something on my mind nearly the entire process of data collection and analysis during this study. Nonetheless, it is still a limitation to consider because in analyzing whether or not the explicit lesson on critical thinking helped improve students' critical thinking skills, I have to question and consider if students were analyzing on their own, or if they were going to the Internet for help.

There are also a few delimitations for this study, deliberate choices I decided to make for this research study. The course that I used for my study consisted of sixteen weeks. And, the entire sixteen-week course incorporated analysis into instruction. However, for the purposes of this study, I chose to limit the scope/time of the study to a six-week unit for feasibility purposes. The unit could have been condensed to fewer weeks, or expanded to more weeks, but I wanted to keep it around six weeks to allow myself time the rest of the semester to cover other elements of the course (e.g. rhetorical analysis, debate, and research). Another important delimitation for this study is the fact that I did not include grammar into any aspect of this unit (e.g. no grammar instruction, no marking of grammar errors, no discussion of how to improve grammar, and no consideration of grammar when grading assignments throughout the unit). Other research

on critical thinking instruction, particularly research with English classrooms, typically includes grammar as part of the holistic evaluation of students' critical thinking abilities, which will be discussed in detail in Chapter Two. However, I justified my decision to not include grammar in this unit because students become distracted with grammar once a professor begins marking errors on papers. So, rather than focusing on the most important aspect of the unit---analysis---students may have focused more on commas, spelling errors, and spacing, which has been my experience in the past. To me, I did not want to risk the distraction. I wanted students to place their entire focus on analysis and improving their thinking skills, through the medium of writing, without thinking about grammar.

Though there were a few limitations and delimitations within this study, I believe that the research design and methodology kept the feasibility of the study intact, as will be discussed in Chapter Three.

## **CHAPTER TWO**

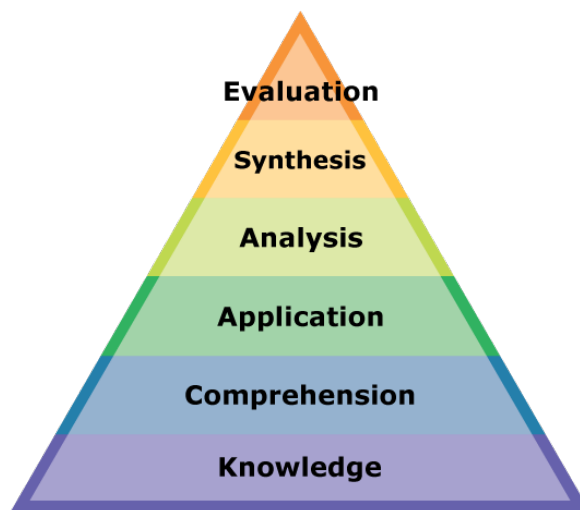
Researchers have conducted ample amounts of research on critical thinking over the years. I have reviewed a significant amount of literature and previous research on critical thinking and have broken down the different topic areas into categories. These categories include definitions of critical thinking, the background/history on critical thinking, critical thinking among different content areas, critical thinking instruction, and critical thinking assessment. Within critical thinking instruction, there is research on three different approaches, as well as the effectiveness of critical thinking instruction among professors. Within the literature on critical thinking assessment, researchers look at qualitative and quantitative methods of assessment, as well as mixed methods of assessment. Before critiquing and analyzing the work that has been done, in relation to my study, it is important to first understand and discuss what has been done.

### **Definitions**

Critical thinking is a term that is included in course syllabi, on administrators' agendas, and in conversations on a national scale. Finding a common definition for the term is a difficult task, but there is overlap on what researchers consider to be critical thinking. Halpern (2001) listed nineteen skills and tasks that encompass critical thinking, including skills such as "reasoning," "recognizing," and "evaluating" (p. 272). Black (2012) relied on the Cambridge Assessment taxonomy of critical thinking and defined it

as higher level thinking skills, such as “analysing,” “judging,” “evaluating,” and “constructing” (p. 125). White et. al. (2011) similarly classified critical thinking as “interpretation, analysis, evaluation, and inference” (p. 102).

Others have defined critical thinking in terms of taxonomies, including Bloom’s taxonomy (1956) (Figure 1).



*Figure 1:* Bloom’s taxonomy. Most researchers identify the top three tiers as critical thinking skills (Coffey, 2013).

Choy and Cheah (2009) found that many believe Bloom’s top three tiers to be critical thinking---“analysis, synthesis, and evaluation” (p. 198). Bissell and Lemons (2006) developed a study to assess students’ critical thinking skills in a biology course using Bloom’s taxonomy, particularly the top four tiers: application, analysis, synthesis, and evaluation. In other critical thinking assessments, similar skills to that of analyzing,

evaluating, and synthesizing were used (Condon & Kelly-Riley, 2004; Dlugos, 2003; Facione & Facione, 2006; McLaughlin & Moore, 2012). Even though critical thinking tasks and forms of assessment may differ among the disciplines, there is agreement that critical thinking includes higher order thinking skills.

Within these different definitions of critical thinking lay several different types of cognitive tasks. One common task is analyzing (Choy & Cheah, 2009; Bissell & Lemons, 2006), which is breaking up a topic into parts and investigating those parts. Other words that are synonymous with analysis are “dissect,” “deconstruct,” “examine,” “investigate,” and “scrutinize” (Merriam-Webster). While not all researchers explicitly cite Bloom’s taxonomy to define critical thinking, these cognitive tasks are all characteristic of Bloom’s fourth tier---“analysis” (Bloom, 1956).

Another common cognitive task that is included with critical thinking definitions is evaluating or judging (Condon & Kelly-Riley, 2004; White et al., 2011). Judging involves providing one’s opinion about a topic, but “through careful weighing of evidence and testing of premises” and “after inquiry and deliberation” (Merriam-Webster). While the two tasks involve determining value or worth, this determination is founded in justification and careful reasoning or after “careful appraisal” (Merriam-Webster). In addition, these skills involve more than a surface-level judgment. Synonyms of these two words illustrate the cognitive demand this skill involves: “argue,” “assess,” “determine,” “deliberate,” and “conclude” (Merriam-Webster). Though not all researchers define the skills of evaluating and judging in terms of Bloom’s taxonomy,

these two skills encompass the top two tiers of his taxonomy---“synthesis” and “evaluation” (Bloom, 1956).

There are some terms within the definitions of critical thinking that do not necessarily fit into Bloom’s taxonomy. One of these is “creating” or “constructing” (Black, 2012, p. 25). Overbaugh and Schultz (2013) updated Bloom’s taxonomy. In their re-creation, they placed “evaluating” with “creating” as the top tier, the skill that was considered to be the highest or most complex cognitive task. Synonyms they used for this skill were “assemble,” “design,” “develop,” “formulate,” and “construct” (Overbaugh & Schultz, 2013). These tasks are similar to those of judging and evaluating; creating an idea or opinion involves synthesizing information, judging the information that has been collected, and forming an opinion based on that evidence. However, “constructing” is a cognitive task that goes beyond judging or evaluating something that is already there; it involves creating something new.

Brookfield (2012) similarly defined critical thinking when he suggested that one of the four main critical thinking tasks is “taking informed action,” which involves making decisions and acting in ways that are based on previous knowledge (pp. 12-13). The other three skills he considered to be critical thinking were “hunting assumptions,” “checking assumptions,” and “seeing things from different viewpoints” (Brookfield, 2012, pp. 11-12). These skills may fit into Bloom’s taxonomy---the “application” and “analysis” tiers---but investigating assumptions and considering others’ viewpoints involves more reflection, self-introspection, and metacognition.

Metacognition is another concept that is relevant to critical thinking. Snyder & Snyder (2008) argued that critical thinking is synonymous with metacognition, which they defined as “thinking about thinking” (p. 90). Osborne, Kriese, Tobey, & Johnson (2009) broke down the definition more by identifying three types of “meta-knowing” (p. 45). They defined these three skills as metastrategic, which involves thinking strategies that students use and reflecting on what it is they know and how that knowledge came to be; metacognitive, which involves thinking about students’ thoughts and what it is they know; and epistemological, which involves comparing students’ knowledge to a broader context, such as what others in society know (Osborne, Kriese, Tobey, & Johnson, 2009). All of these skills are considered to be elements of critical thinking.

Some creators of critical thinking standardized tests define critical thinking differently. The Halpern Critical Thinking Assessment (HCTA) is one of the most popular assessments in the field used to determine students’ critical thinking skills. It tests skills such as “reasoning,” “decision-making,” and “problem-solving” (Halpern, 2010). Likewise, the California Critical Thinking Skills Test (CCTST) and the Collegiate Learning Assessment Project (CLA) assess students’ reasoning skills, among others (Bers, 2004). By including these skills in the assessments, the creators of these critical thinking assessments are classifying these skills as critical thinking tasks. Synonyms for this word—reason---include “deduce,” “infer,” and “derive” (Merriam-Webster).

The fact that there are so many different definitions for the term “critical thinking” can present difficulties for instructors. How do these definitions differ among disciplines? Even within the same discipline, how does each instructor’s definition of



critical thinking differ? How does each instructor's definition fit into these, or an institution's definition? Which critical thinking skills are more important than others (according to Bloom's taxonomy)? Do instructors' definitions of critical thinking align with their instruction and assessment of critical thinking within their classrooms? These questions were explored in previous research, and will be discussed in the literature review. It is important to explore the history of critical thinking in higher education to understand what work has already been completed before determining what research still needs to be conducted.

### **Background/History**

While educational taxonomies in the 1950s and 1960s focused on critical thinking skills (e.g. Bloom, 1956), initiatives to improve critical thinking skills and instruction did not appear until the 1970s. Paul (1997) identified this period as the beginning of the "critical thinking movement," and he classified this movement in three waves. The first wave was 1970-1982, when courses were offered that focused on critical thinking skills, such as logic and reasoning. During the first wave of the critical thinking movement, educators sought to create a separate course that prepared incoming students to think critically and logically. The idea was that if students took the course at the beginning of their coursework, it would prepare them for college-level thinking and work (Paul, 1997). Even today, there is research dedicated to investigating critical thinking instruction as a separate course, and many colleges and universities still offer a separate course on critical thinking (Chan, 2013; Johnson, Tuskenis, Howell, & Jaroszewski, 2011; Fahim & Ghamari, 2011). The problem with this first wave, though, was clarity; there was no

general consensus on how to define and teach logic skills. In addition, there was worry that these skills would not transfer to specific content courses, rather than general education courses. Thus, the second wave of the critical thinking movement was dedicated to incorporating critical thinking into individual courses across disciplines (Paul, 1997).

The second wave was 1980-1993, and consisted of educators attempting to integrate critical thinking into courses across the curriculum, rather than offering it as a separate course (Paul, 1997). Even though the second wave of the critical thinking movement ended in 1993, instructors are still researching aspects of this phase today. The purpose behind this second wave was for students to see how critical thinking was a skill that was present in all subject areas (e.g. philosophy, psychology, humanities, science, and others), as opposed to a skill that is separate from content areas. A common problem with this second wave, though, was that instructors did not know the best ways to teach critical thinking skills within content areas. Or, they were not sure what critical thinking looked like within content areas. This was where the third wave of the critical thinking movement started (Paul, 1997).

The third wave started in 1990 and continues through the present. During this third wave, more research efforts focused on understanding and improving critical thinking instruction and skills (Paul, 1997). This third wave filled in the gaps of the first two waves; specifically, it involved creating a critical thinking theory and determining how to best teach and assess using this theory. Researchers saw a need for a general consensus on critical thinking, so that instructors could better incorporate critical thinking

into their courses (Paul, 1997). Continued efforts to improve critical thinking instruction continue today, as research shows that students' critical thinking skills need improving.

### **Critical Thinking in Content Areas**

The literature on critical thinking is abundant, but there are consistencies in theme and purpose. A significant amount of research on critical thinking focuses on nursing courses (Lang, Beach, Patrician, & Martin, 2013; Lee et al., 2012; Tang & Sung, 2012; Facione & Facione, 1996). This research is unique, in that it is the most popular of the literature that looks at critical thinking skills in a specific skill-based educational curriculum. Within the literature on critical thinking in nursing, there are several focuses. Some researchers are concerned with defining critical thinking in nursing education (Scheffer & Rubenfeld, 2000; Staib, 2003; Gordon, 2000; Brunt, 2005). Another body of the literature investigates nursing students' critical thinking skills, how to best measure those, and how to better foster those skills (Greenwood, 2008; Daly, 2008).

Similarly, much of the literature on critical thinking focuses on science courses, such as biology (Bissell & Lemons, 2006; Quitadamo & Kurtz, 2007; Reed & Kromrey, 2001) and psychology (Solon, 2001; O'Hare & McGuinness, 2009; Bensley, Crowe, Bernhardt, Buckner, & Allman, 2010). Within this body of literature, researchers have similar interests as those in the nursing field. They want to define critical thinking in the science fields and determine the best ways to teach and assess critical thinking skills, with the goal of fostering these skills in students within their courses.

There is also a large amount of research on critical thinking and ESL (English as a Second Language) (Lun, Fischer, & Ward, 2010; Beaumont, 2010; Floyd, 2011). These

researchers also have similar interests as others, but the focus with this research is to determine what unique differences students learning English as a second language possess that would make it more difficult for them to learn critical thinking skills. Or, they want to know if there is a different way to approach critical thinking instruction for this specific population of students.

### **Critical Thinking Instruction**

Besides research that focuses on particular content areas, much of the literature focuses on critical thinking instruction in general, across different disciplines and subject areas. This research shows that critical thinking instruction improves critical thinking skills (Abrami et al., 2008; Halpern, 2001). The approach of teaching critical thinking is relatively new. Instructors have always incorporated critical thinking skills into the curriculum, but rarely taught these skills, let alone expected students to use them.

Another area of the research provides resources and tips on how to approach critical thinking instruction (Bowers, 2006; Duron, Limbach, & Waugh, 2006; Nosich, 2005; Ku, 2009). This includes looking to professional organizations for resources on how to teach critical thinking, using interdisciplinary frameworks for teaching critical thinking, and incorporating pedagogical strategies that foster critical thinking, such as active learning. In much of the literature, though, there is a more specific distinction within how critical thinking instruction is—and should be—taught.

**Methods of Critical Thinking.** Critical thinking instruction is divided into three categories, which are the three approaches to teaching critical thinking: explicit, implicit or imbedded, and teaching critical thinking as a separate course. With the explicit

method, the instructor begins by defining critical thinking, ensuring that students understand what critical thinking is before asking them to complete tasks that require critical thinking skills. In the imbedded model, students are asked to demonstrate critical thinking skills through various assignments without the introductory lesson on critical thinking (Marin & Halpern, 2011). When critical thinking is taught as a separate course, the focus is on skills themselves and is separate from any one specific discipline or content area. Since the first wave of the critical thinking movement abandoned critical thinking as a separate course, there is not much of a focus on teaching critical thinking in that way (Paul, 1997). However, Black (2012) found that “even when taught as a standalone subject, [critical thinking] can promote skills and enhance academic achievements across a wide variety of other domains” (p. 132).

There is also a dearth of research that specifically focuses on the implicit/imbedded method of instruction because the explicit model has proven to be the most effective. However, the research on the explicit method tends to use a control group who receives either no critical thinking instruction or implicit/imbedded critical thinking instruction. The majority of the research within critical thinking instruction is focused on proving the explicit method to be best (Bensley, Crowe, Bernhardt, Buckner, & Allman, 2010; Hayes-Bohanan & Spievak, 2008; Liu, 2006; Reed & Kromrey, 2001; Solon, 2001; Marin & Halpern, 2011).

Bensley, Crowe, Bernhardt, Buckner, and Allman (2010) wanted to know if an explicit lesson on critical thinking in a psychology course would improve students' critical thinking skills. They had one class receive explicit critical thinking instruction,

while the other two received no critical thinking instruction. They used a pre-test and post-test measure, as well as critical thinking tests and assignments within psychology contexts throughout the intervention. They found that those students who received the explicit instruction not only had the greatest gains in critical thinking, from pre-test to post-test, but they also had the highest scores out of all three groups on the post-test measurement (Bensley, Crowe, Bernhardt, Buckner, & Allman, 2010).

Reed and Kromrey (2001) employed the explicit method of critical thinking instruction in a community college history course to determine if that type of instruction improved students' critical thinking skills, compared to a control group. They also used a pre-test and post-test that included the Advanced Placement history exam, a history content exam, a critical thinking standardized test, and a critical thinking inventory. For the intervention lesson, instructors focused on assignments both in class and outside of class that required students to analyze and interpret historical information. Students who received the explicit lesson performed better on the critical thinking post-test measurements (Reed & Kromrey, 2001).

Nearly all of the research that proved the explicit method to be the best model relied on quantitative measures, and many involved one group who received explicit instruction and other group(s) who did not (control groups). Most of the results were also based on pre-test and post-test measurements of comparison.

**Instructors' knowledge of critical thinking.** A portion of the literature on critical thinking instruction focuses on instructors themselves, particularly highlighting their own knowledge---or lack thereof---on critical thinking. Mandernach (2006)

discussed some barriers to instructors teaching critical thinking, one being confusion about what critical thinking is. He discovered that, “only 19% [of faculty surveyed] could define critical thinking,” and that “77% [of faculty surveyed] had little, limited or no conception of how to reconcile content coverage with the fostering of critical thinking” (Mandernach, 2006, p. 41).

Choy and Cheah (2009) investigated instructors’ perceptions of critical thinking and how that affected students’ abilities to learn critical thinking skills in the classroom. Their findings showed that instructors agree that critical thinking skills are an important component of their classes. On the other hand, instructors struggled to articulately define critical thinking, describe how they used critical thinking in their classes, and explain how they knew if students were exhibiting critical thinking skills. The authors realized that instructors thought they were teaching critical thinking skills, or that they were fostering these skills in their students. The problem with this was, though, that they could not explain that this was true---or how it was true---which showed that they themselves did not understand critical thinking. As it turned out, instructors were actually teaching lower level skills than higher order thinking skills (Choy & Cheah, 2009).

These studies show that even though instructors say that critical thinking skills are important, this may not be reflected in their courses. They either struggle to understand critical thinking themselves, or they struggle to articulate exactly what critical thinking looks like. They also struggle with how critical thinking should be taught and assessed in their coursework. These researchers argue that clearing up these disconnects in

instructors' thinking and practice is an important first step in improving critical thinking skills in students.

### **Critical Thinking Assessment**

There is a significant amount of research on assessing critical thinking skills. Some researchers use rubrics to assess critical thinking skills (AAC&U; McLaughlin & Moore, 2012). Others use standardized tests or objective measures to assess critical thinking skills (Butler et al., 2012; Erwin & Sebrell, 2003).

**Rubrics.** AAC&U (2013) published a critical thinking rubric that was developed by faculty across the United States. The rubric included broad categories of skills to be evaluated, such as including a purpose, using sources, and drawing conclusions. These skills were then evaluated using four categories: "capstone," two levels that were called "milestones," and "benchmark." The rubric was meant to be adaptable for any discipline, and it could also be used more than once throughout time as students' perspectives changed (AAC&U, 2013).

McLaughlin and Moore (2012) similarly developed a rubric to assess students' critical thinking skills within the English classroom on writing assignments. Their rubric also had four levels of competency, entitled "superior," "skilled," "adequate," and "inadequate." It also included a variety of skills to be assessed, including "focus," "research," organization, and grammar/mechanics (McLaughlin & Moore, 2012, p. 150). Their rubric was also created collaboratively, albeit with fewer instructors. They received feedback from other English faculty on several occasions to help with its development (McLaughlin & Moore, 2012).



Facione and Facione (1996) investigated critical thinking assessment in the nursing field. They listed several methods of assessing critical thinking skills, including the Holistic Critical Thinking Score Rubric (HCTSR). This rubric also contained four levels of evaluation, 1-4, 1 being the lowest (Facione & Facione, 1996). There were several characteristics and skills listed under each category, relating to tasks such as reasoning, supporting assumptions with evidence, and analyzing. This rubric was in the form of a list, rather than presented in a traditional box with rows and columns. The authors also presented other forms of qualitative assessment, such as a framework. A framework functions much like a detailed assignment sheet, outlining what the purpose of the task is, as well as what should be included. The authors also included a list of learning outcomes for a specific assignment, much like student learning outcomes listed in course syllabi. The learning outcomes included in this rubric, though, were assignment-specific and involved critical thinking skills in line with Bloom's taxonomy, including "explain," "examine," and draw conclusions (Facione & Facione, 1996, p. 135).

Dlugos (2003) wanted to find a way to combine instructors' goals of developing students' affective skills, and critical thinking and writing skills, in classroom assignments. He suggested a few assignments that encourage more personal reflection and creativity, and he also proposed rubrics for these assignments. In his rubric, there were three levels of competency, 1-3, and there were four categories of skills that were evaluated: "project choice and development," "organization and completeness," "critical thinking," and "writing" (Dlugos, 2003, p. 627). This rubric was unique in that it was one

of the only in the field that used “critical thinking” *and* “writing” as separate categories. He encouraged instructors to develop these rubrics further and/or to adapt them to their own classes and assignments (Dlugos, 2003).

**Using Quantitative Analysis.** A large body of critical thinking research relies on quantitative methods of assessment. Marin and Halpern (2012) used the Halpern Critical Thinking Assessment (HCTA) to assess high school students’ critical thinking skills before and after an intervention. The HCTA consists of both multiple-choice questions and essay/short answer responses, and these 25 questions are based on everyday situations. Test-takers are asked to “analyze and critique” the situations (Butler et al., 2012, p. 113). Besides analyzing and critiquing, the test assesses five critical thinking skills, including “verbal reasoning,” “argument analysis,” “thinking as hypothesis testing,” “likelihood and uncertainty,” and “decision making and problem solving” (Halpern, 2010). Halpern stands out among other researchers in her definition and perception of critical thinking skills, as other researchers do not consider all of these skills to be critical thinking.

Others, however, agree with Halpern and believe that the HCTA is valid in assessing critical thinking skills. Butler et al. (2012) conducted three international studies to test the validity of the HCTA in terms of how well it predicts real-world use of critical thinking skills. Butler et al. pointed out that the HCTA was already proven valid as an assessment instrument for critical thinking skills. However, their study deduced that it also predicted real-world critical thinking skills and decisions, making it even more reliable and useful for colleges and universities (Butler et al., 2012).

Erwin and Sebrell (2003) analyzed the Educational Testing Service's (ETS) Tasks in Critical Thinking instrument of assessing critical thinking to determine if it was valid. They administered the test to a group of approximately 350 students who were randomly selected. They then had both the ETS and a group of faculty members score the tests, which included topics from several different disciplines. Overall, they concluded that though more research needs to be conducted on the ETS instrument, it successfully assesses some common critical thinking skills that are also a part of the curriculum (Erwin & Sebrell, 2003).

Burbach, Matkin, and Fritz (2004) used the Watson-Glaser Critical Thinking Appraisal to determine if a college leadership course that employed active learning strategies improved students' critical thinking skills. They determined that this instrument was the best for the study because it was not only one of the most common instruments used to assess critical thinking, but it was also one of the most valid. This test includes 80 questions that test specific critical thinking skills, such as inference, interpretation, and evaluation. The score report shows students' performance on each skill, as well as an overall critical thinking score. For their particular study, they were able to see that students' scores improved on the "deduction" and "interpretation" categories, as well as the overall critical thinking category (Burbach, Matkin, & Fritz, 2004, pp. 482-486).

Khandaghi, Pakmehr, and Amiri (2011) used the Ricketts' Critical Thinking Dispositions Questionnaire (2003) to assess students' critical thinking skills within a humanities department at a university in Iran. This questionnaire consisted of 33 statements, which students then rated on a scale of 1-5. The results of their study showed

that students' critical thinking skills were at the "optimal level of critical thinking in the moderated level, but not in the strict level." The moderated level was defined by students' scores of at least 70% (Khandaghi, Pakmehr, & Amiri, 2011, p. 1866). This study shows that students' critical thinking skills, as assessed by this particular standardized test, could be improved.

Bers (2005) included an exhaustive list of the critical thinking standardized assessments available for community colleges to use, as well as a brief description of each. The California Critical Thinking Dispositions Inventory (CCTDI) is distinctive from most because it measures students' motivation toward thinking critically. The creators of this test argue that students' disposition toward thinking critically is what matters most (Bers, 2005). Some tests, such as the California Critical Thinking Skills Test (CCTST) and the Collegiate Learning Assessment Project (CLA), measure reasoning and other higher order critical thinking skills from Bloom's top three tiers (Bers, 2005). Others are content specific and measure critical thinking skills within disciplines, such as College BASE (Bers, 2005). The other type of assessment for critical thinking skills is self-reporting, which involves asking students how often they engage in critical thinking activities in their college courses. The Community College Survey of Student Engagement (CCSSE) is the most popular of these for community colleges (Bers, 2005).

The CCSSE is often administered to students along with the Survey of Entering Student Engagement (SENSE). Like the SENSE, the CCSSE is meant to find out how often students take part in certain activities at their college. The CCSSE asks students a

variety of questions on engagement, but it also asks students how often they participate in certain academic activities within the classroom, including critical thinking skills. For example, the CCSSE may ask a student to mark how often their coursework at the college asked them to analyze “the basic elements of an idea” or synthesize “ideas, information, or experiences in new ways” (CCSSE, 2005). The student can then respond with “very much,” “quite a bit,” “some,” or “very little” (CCSSE, 2005).

Each of these instruments and methods of measurement has its strengths and weaknesses, as well as different validity and inter-rater reliabilities. Each also has separate purposes and goals for assessing critical thinking skills.

**Mixed methods.** There was also a group of researchers who wanted to capture the complexity of assessing critical thinking skills. These researchers emphasized the need for using multiple measures to assess critical thinking skills (Black, 2012; O’Hare & McGuinness, 2009; White et al., 2011; Ku, 2009; Behar-Horenstein & Niu, 2011).

Ku (2009) reviewed several types of critical thinking assessments, mainly quantitative. He found that timed tests that employ multiple-choice formats do not accurately assess or fully capture students’ critical thinking abilities. He argued for the need of researchers to investigate other types of critical thinking assessment that show students’ thought processes, reasons for making decisions, and overall thinking abilities. He also encouraged instructors to employ multiple methods of assessment when evaluating students’ critical thinking abilities in the classroom (Ku, 2009).

Behar-Horenstein and Niu (2011) reviewed 42 studies from 1994 to 2009 and concluded that multiple measures of assessment for critical thinking skills were best.

Quantitative measures help inform practitioners of critical thinking skills and work as effective tools to assess pre-learning and post-learning skills. However, qualitative measures capture aspects of students' learning, and skills, that quantitative measures do not, namely those that use multiple-choice formats. A combination of the two methods provides more information that is varied, but qualitative methods will also help provide more information for instructors to help them better foster critical thinking skills in their students. Thus, the authors encouraged future researchers and educators to consider this (Behar-Horenstein & Niu, 2011).

Bers (2005) outlined different types of critical thinking assessment, including a list of standardized tests. But, she pointed out that since different disciplines define critical thinking differently, "there is no one accepted approach" (Bers, 2005, p. 16). Bers did write, though, that instructors need to choose a teaching and assessment approach---or combination thereof---that involves complexity, much like real-world problems. She also reminded that even though standardized tests of critical thinking use multiple-choice measures to assess skills, this is not characteristic of real-world problems. However, critical thinking measures should reflect real-world critical thinking problems (Bers, 2005).

Berzins and Sofo (2008) used a self-reflective survey to assess students' critical thinking skills during their first year of college at an Australian university. The survey was administered pre-test and post-test, and it involved three sections, one of those being critical thinking. It asked students to answer questions that analyzed their abilities to reason, analyze, and synthesize information. The instruction provided in between the pre-

test and post-test was a combination of pedagogical approaches: small group work, lecture, and course-specific assignments and assessments. As a result, students' critical thinking skills improved on post-test measurements after receiving the intervention (Berzins & Sofo, 2008).

### **Critique of Literature**

There are a few studies within the literature that stand out, particularly because they offer great insight on how to improve critical thinking skills in students, and they are highlighted below. However, within the different topic areas of critical thinking, opportunities exist for more research---research that attempts to improve students' critical thinking skills in new, varied ways.

**Explicit method of critical thinking instruction.** Marin and Halpern (2011) wanted to see if an explicit method of teaching critical thinking was most effective for teaching high school students in a low-income high school in Southern California. They used the Halpern Critical Thinking Assessment (HCTA) as a pre-test and post-test measure, and they compared a group who received explicit instruction with a group who received critical thinking instruction implicitly. They saw that the group who received critical thinking instruction explicitly performed better on the HCTA. Additionally, while there was not a strong correlation between students' critical thinking skills and GPAs or grades, there was a strong correlation between students' critical thinking skills and standardized test scores (Marin & Halpern, 2011).

Though the long-term effects of this study are unknown, this study still presents promising statistics for instructors, especially at the college level. It shows that if critical

thinking instruction is presented effectively, students' critical thinking skills can improve. This in itself solves many of the issues educators are facing. Second, it shows that critical thinking skill development is possible for high school students---particularly low-income students. This is significant because if other high school instructors employ similar methods, it can improve students' critical thinking skills *before* they enter college, and it can do so with a population who is typically underserved, underrepresented, and marginally successful in higher education. But, there are also possibilities for replication of this study at the college level, with or without low-income students.

**Bloom's taxonomy.** Bloom's taxonomy involves mastery of levels, based on a hierarchy, as one progresses to higher order thinking. Nenti and Zietlow (2008) relied on Bloom's taxonomy to teach critical thinking skills to students in a business course. Essentially, they broke down each step of Bloom's taxonomy and made it easier for students to understand. In addition, they decided ahead of time how those skills would be assessed. By doing this, they were articulating what that particular critical thinking skill of Bloom's taxonomy "looked like" in a business course. They not only provided a definition for each step, but they also included synonyms to better explain the skill. They also identified what course activity would require students to use that skill, as well as what mastery of that skill would look like (Nenti & Zietlow, 2008). Since much of the research shows that instructors can be confused about critical thinking skills (Mandernach, 2006; Paul, Elder, & Bartell, 1997; Choy & Cheah, 2009), and since students are also confused about what critical thinking skills are (Arum & Roksa, 2011; AAC&U, 2005), this explicit critical thinking lesson can be an incredibly helpful activity



for instructors to complete in every discipline. It provides a great starting point for any lesson on critical thinking.

Bissell and Lemons (2006) took a similar approach, but with an introductory biology course at Duke University. They wanted to create a rubric that combined both content-specific material and critical thinking skills. In doing so, they determined that their expectations for the assignment were more explicit for students, which made it clearer, but they also realized that they were articulating what critical thinking looked like in a biology course. Rather than having students attempt to figure it out for themselves, they made it clear from the beginning. This ensured that students understood what critical thinking “looked like” in a biology course, much like Nenti and Zietlow (2008) did in their business course (Bissell & Lemons, 2006). This research provides opportunity for instructors in other disciplines to do the same, since it was proven to be effective. This study is very similar to the study I conducted.

A portion of the research on critical thinking instruction incorporated Bloom’s taxonomy (Bissell & Lemons, 2006; Choy & Cheah, 2009; Nenti & Zietlow, 2008), and there is agreement upon which tiers are considered to be critical thinking. However, a significant amount of the literature on critical thinking only focused on Bloom’s upper tiers, the ones to be considered critical thinking, as opposed to the entire taxonomy. That is, if the studies/research focused on the upper tiers, as they should if the study is investigating critical thinking, how are they ensuring that the bottom tier skills are acquired? Some studies (Bissell & Lemons, 2006) incorporated the entire taxonomy, but the majority did not. Bloom’s taxonomy involves mastery of levels, based on a hierarchy,

as one progresses to higher order thinking. How, specifically, do instructors do this? If critical thinking is being taught and assessed within a content area, how do instructors confirm that students are ready for the upper tiers? If it is an English course, how do they confirm that students understand the reading material first, before asking them to analyze it? More studies on critical thinking need to address these questions.

In addition, many researchers consider Bloom's top three tiers---analysis, synthesis, and evaluation---to be critical thinking skills. Bloom classified the top three tiers as separate levels on his hierarchy, though, of differing value and made up of required skills. The top tier illustrates the highest level of thinking required, and it can only be reached after the bottom tiers are mastered, in sequence. This is significant because it means that students must master one skill---analysis---before moving on to the next skill---synthesis. What researchers are doing, though, are grouping all of these skills together to create a larger, general category of critical thinking skills. There is certainly agreement that these top three tiers are considered critical thinking tasks (Choy & Cheah, 2009; Bissell & Lemons, 2006), but the point that researchers are missing---which is where Bloom's taxonomy comes in---is that they have different weight. That is, according to Bloom, evaluating is the most advanced of the three tasks and one that students should reach only after mastering analysis and synthesis.

There may be some consequence, then, in grouping all three of these tiers together when defining critical thinking en masse. Thus, it is important for researchers in future studies to clearly and explicitly define the critical thinking skills that they are interested in teaching, and assessing, in their students. It is also important to align these critical

thinking skills with Bloom's taxonomy, to ensure that the skills are being developed according to the hierarchy, as opposed to all at once. There is a definite distinction between the myriad critical thinking skills and tasks in the literature, and this distinction needs to be recognized in future studies.

**Mixed methods.** Behar-Horenstein and Niu (2011) conducted one of the most in-depth, cumulative studies on critical thinking to date. They reviewed the literature on critical thinking from 1994, which was the beginning of the third wave of the critical thinking movement, to 2009. As is already evident, there is a strong emphasis on quantitative measures to assess critical thinking skills and the effectiveness of critical thinking instruction. However, Behar-Horenstein and Niu argued that quantitative measures are not always the most effective, and that qualitative measures sometimes capture elements of critical thinking that quantitative methods cannot. There is definitely validity in their conclusion, especially considering the limited amount of qualitative or mixed method research studies on critical thinking. Of course, quantitative studies are valuable and useful, but how common is it for college instructors to use purely quantitative measures to assess students' critical thinking skills in their classrooms? In English, it is a rarity, if not impossibility. Thus, there is room for more mixed measures studies, where the focus of the critical thinking assessment is qualitative, but quantitative measures are used in the study to ensure validity. This would add to the literature and fill the gap that Behar-Horenstein and Niu (2011) identified.

Similarly, Berzins and Sofo (2008) used a critical thinking survey, in combination with course material, to assess first year students' critical thinking skills. Though this

study was predominantly quantitative, it incorporated instructor-created, and course-specific, assessments during the intervention study. Additionally, the intervention itself employed a variety of teaching methods, which not only is more realistic, but is also more effective pedagogically. Using a variety of teaching methods to appeal to students' different learning styles illustrates a best practice. In addition, replication of that portion of this study should be considered for other instructors attempting to provide an intervention to improve students' critical thinking skills (Berzins & Sofo, 2008).

**English courses.** There are a few studies that stand out in terms of assessing critical thinking skills in an English classroom. McLaughlin and Moore (2012) wanted to create a critical thinking rubric that assessed those skills in students' writing. They incorporated Bloom's taxonomy into the rubric as well. They also shared the rubric with a large group of first-year writing instructors to receive feedback. While they incorporated much research on both critical thinking skills and theories, as well as research on how to assess writing, their rubric still assessed writing in terms of categories, most of which assessed the components of the writing itself. That is, there were still categories such as "correctness," which evaluates students' grammar and mechanical skills; "style," which looks at students' sentence structure and voice; and "research," which evaluates students' ability to correctly apply MLA citation and to include credible sources (McLaughlin & Moore, 2012, p. 150). These categories are certainly important when assessing students' writing; in fact, they are necessary. But, are they necessary when the goal is to only assess students' critical thinking skills? There

may be opportunities to expand the concept of what critical thinking “looks like” in an English classroom, particularly with critical thinking assessment.

Very few studies look at explicit critical thinking instruction in an English composition class, as well as multiple measures of assessment to measure those critical thinking skills. For the studies that looked at critical thinking assessment in college writing courses, the researchers tended to use a rubric to evaluate the writing holistically (McLaughlin & Moore, 2012; Stroutholopoulos & Peterson, 2011). This is certainly in line with writing assessment, but there are not many studies that looked specifically at the critical thinking skills, while isolating other writing elements such as grammar, organization, and research. If instructors present a critical thinking rubric to students that includes other writing elements, will it distract them? If students are also being evaluated on grammar, organization, and research, they can easily get away from the true task at hand: thinking critically.

Some researchers attempted to separate the “critical thinking” component and the “writing” component on rubrics in an attempt to distinguish between the two (Dlugos, 2003). Condon and Kelly-Riley (2004) attempted to do just this. They discussed some of the assumptions of critical thinking and writing. They stated that, “having students write does not automatically mean that we ask students to think critically” (Condon & Kelly-Riley, 2004, p. 66). They pointed out that writing instructors assume that they are having students think critically by having them write, though this may not necessarily be true. Condon and Kelly-Riley separated writing skills from critical thinking skills, but also showed that critical thinking skills could still be assessed in students’ writing. They also

provided a rubric to do this, though they emphasized that critical thinking skills were different in each course and within each discipline, so it was important for each instructor to develop his/her own rubric to assess critical thinking skills. Thus, this research provided a great outlet for instructors to do so.

However, to truly capture students' abilities to think critically within the English classroom, it is essential to explore the *process* of their thought development, to follow them through Bloom's taxonomy, and to do so while extracting qualitative data beyond rubrics, both in their writing and through reflections. Research has shown that critical thinking skills develop over time (O'Hare & McGuinness, 2009; White et al., 2011). In addition, writing is a process where the final product develops over time (Ruszkiewicz, 2012). So, there needs to be research that captures this to truly understand how to best teach and assess students' critical thinking skills in writing. This research would also help instructors to understand how those skills are developed, what students are thinking throughout that process, how the instructor is involved, and how those skills can further be developed (Ku, 2009).

Additionally, much of the literature focuses on either critical thinking instruction or critical thinking assessment. Some studies looked at both (Behar-Horenstein & Niu, 2011; Berzins & Sofo, 2008; Facione & Facione, 1996), but very few did so within English. Within those studies that did look at critical thinking instruction and assessment, many of them involved intervention lesson plans. But, very few incorporated one-on-one interactions with the instructor and students, particularly with the revising stage of writing. In fact, very few studies even addressed the writing process at all, in terms of

how/where critical thinking fits into that. It seems that those one-on-one conversations are an important component of critical thinking because it involves reflection. Also, it can help show that critical thinking skills evolve and improve over time---as some studies did show (White et al., 2011; O'Hare & McGuinness, 2009)---after some scaffolding has occurred. Thus, there is room for more research investigating the best ways to teach *and* assess critical thinking within the English classroom.

**Student population.** Lastly, the research on critical thinking and the studies conducted are based on both community colleges and four-year universities. There is no discussion, however, on how these students consist of different populations, how these students have different needs, and how the approaches to critical thinking instruction may need to be varied, based on educational institution. In community colleges, some students in first-year composition courses are coming out of ESL or developmental coursework, and thus, may need more time to build their skills. This provides even more of a necessity to capture those students' critical thinking skills as a process, not a product (e.g. timed, standardized critical thinking test). One method of capturing students' critical thinking skills as a process, not a product, is through one-on-one instruction that incorporates student reflections of their learning (Berzins & Sofo, 2008).

While these particular research studies have provided much insight into teaching and assessing critical thinking, there is still the potential for more research to be conducted, especially within English composition classrooms. There are some gaps within the different fields of critical thinking research that can, and need to, be filled.

### **CHAPTER THREE**

There is great opportunity to better explore, in more depth, how to best teach and assess critical thinking skills to community college first-year students in a composition course. There is great need for more research that captures critical thinking as a process, not simply as a product. Since the explicit method of instruction has proven to be the most effective (Hayes-Bohanan & Spievak, 2008; Reed & Kromrey, 2001; Marin & Halpern, 2011), that is the approach that I used in my research.

The methodology that I used for this study was a case study approach. Creswell (2013) defined three types of case studies: intrinsic, instrumental, and collective. For my study, I used the single instrumental case study because I focused on one “issue or concern,” using a “bounded case to illustrate this issue” (Creswell, 2013, p. 99). The “issue or concern” in my study was critical thinking skills, or rather, how to improve students’ critical thinking skills. The “bounded system” that I investigated was one set of English 112 students at a community college campus (Creswell, 2013, p. 97). A case study approach was appropriate for this research because I studied “a case within a real-life, contemporary context or setting” (Creswell, 2013, p. 97). Part of my case study was also intrinsic in nature. Stake (1995) explained the intrinsic case study as such: “We are interested in it, not because by studying it we learn about other cases or about some general problem, but because we need to learn about that particular case. We have an



intrinsic interest in the case” (p. 3). My study was a hybrid of both intrinsic and instrumental case study because I did wish to “learn about other cases or about some general problem,” here, the general problem being students’ struggles with critical thinking (Stake, 1995, p. 3). On the other hand, since my role as a researcher was combined with my role as an instructor, I had an intrinsic interest in the study because I genuinely wanted to learn about students’ critical thinking skills and learning processes in order to both improve my teaching and to help my students.

Additionally, Yin (2003) described three aspects of case study research. He said that case study research answers “How?” and “Why?” questions, does not require control of behavioral events, and focuses on a contemporary event. My study explored both “how” and “why” questions, as is reflected in my research questions. My study explored how students developed critical thinking skills over a six-week period, and it also strived to answer the question of why it is important for educators to think of---and assess---critical thinking skills over a continuum, rather than just as one final product. Also, not only did I have minimal control over the behavioral events of students (in terms of controlling for variables, as in quantitative work), but also this lack of control in terms of defining variables was critical to capturing the most thorough research I could. The intent of the unit was to improve students’ critical thinking skills, but what that looked like, or how much improvement there was, was to be determined during the study, not before it. And, as Yin (2003) explained, case study research “copes with the technically distinctive situation in which there will be many more variables of interest than data points” (p. 13). As shown in the research and recent national conversations about higher education,

critical thinking skills are relevant, important, and contemporary. Therefore, according to Yin's (2003) parameters for case study research, my study fit within that framework perfectly.

Yin (2003) also described the case study approach not just in terms of a methodology, but also as a research strategy that is an "all-encompassing method--- covering the logic of the design, data collection techniques, and specific approaches to data analysis" (p. 14). Case study also "relies on multiple sources of evidence, with data needing to converge in a triangulating fashion" (p. 14). My study did just that, employing multiple forms of data collection in order to fully understand students' critical thinking processes and abilities. Yin (2003) also added that case study research "benefits from the prior development of theoretical propositions to guide data collection and analysis" (p. 14). My study incorporated several theoretical perspectives, including explicit method of critical thinking instruction, Bloom's taxonomy, and metacognition. All three of these theoretical concepts added to my understanding during data collection and helped explain the data when it came time for analysis.

### **Site Selection**

For this study, the site that I used is a two-year community college campus in a suburban area. The campus is one out of many campuses for this community college. This particular campus awards associate's degrees and certificates, and it also offers continuing education courses. The campus serves 11,000 students per year, and the student population is very diverse, in terms of students' age, ethnicity, nationality, abilities, and interests. Because of its location, the campus also serves a large number of

military members, or family members of military members, as well as English as a Second Language learners.

For both my site selection and participant selection, I employed several types of sampling methods. Of course, one sampling method I used was convenience sampling, since the site I chose is where I am employed. The site was convenient for me because I have easy access to it, and the students were my own students in a course I taught in Fall 2013. However, the sampling method was also purposeful and criterion sampling. I specifically wanted to use my own classroom of students where I am the instructor because part of the purpose for this study was to inform my own practice and improve my own teaching. I also wanted to find a way to combine my role as a researcher and my role as an instructor, since these are the two roles I will serve in for the remainder of my career. It is also the roles that professionals in the field serve daily, since instructors are always, even if informally or subconsciously, researchers, attempting to find better ways of teaching or different ways of assessing. Additionally, I chose a specific course, English 112, for the study because one of the goals of the course is “critical thinking.” There were no other criteria necessary for the students in the course, since this is a case study methodology. The class in itself was the “bounded system” being studied (Creswell, 2013).

### **Participant Selection**

The participants for the study were students in my English 112 (College Composition II) course in Fall 2013. Out of the 22 students enrolled in my course, 18 students agreed to participate in the study. Participants’ ranged in age from

approximately 18 to 28. Among participants, there were 9 females (50%) and 9 males (50%). Of these participants, 16 (89%) were minorities (Asian, African American, and Hispanic), and 2 (11%) were Caucasian. Most students who take English 112 plan to transfer to a four-year institution to complete their bachelor's degree, and this was the case with these participants as well. Participants were both first-year and second-year students. Six of the participants (33%) were also English as a Second Language learners.

Since participants were chosen from my English 112 course, I was very deliberate in my explanation of the study. The unit plan that I used for this study is one that I use in every English 112 class, so all students in the class participated in the unit anyway. However, participants for this study were volunteers only; that is, they volunteered to have their writings and reflections used for the study (anonymously, no name or identification attached), and all students were notified that failure to participate in the study did not affect their grade or performance in the class. Even though students signed consent forms at the beginning of the unit, I did not view them until after semester grades were submitted. In this way, students' decision to participate or not participate had no affect on their course grade. While there were no direct benefits for participants if they choose to participate in the study, they were helping me to understand how to be a better instructor. In this way, they were also helping future students, and indirectly, perhaps helping themselves, if this research is shared with other instructors.

### **Data Collection**

Yin (2003) described six types of evidence that researchers can collect in case study research. Those six types of evidence are listed in Table 1, along with the type of

evidence I used for my study, if any. The purposes of collecting this type of evidence, as well as what follows collection, are discussed afterward.

Table 1: Evidence Used for Study (Yin, 2003).

<b>Yin's (2003) Six Types of Evidence</b>	<b>Evidence Used for My Study</b>
1. Documentation	Students' writings: journals, reflections, and papers.
2. Archival Records	None.
3. Interviews	None. (This was part of the original design for the study, and several participants agreed to be interviewed. However, when I contacted participants after the course ended to interview them, no participant responded.)
4. Direct Observations	This will occur throughout the study.
5. Participant-Observation	I will not be participating as a student, but I will be participating in a series of conversations, 1-on-1 conferences, and written dialogue with the students throughout the study. Thus, my participation will (intentionally) manipulate the results (with the intent of helping students improve their critical thinking skills).
6. Physical Artifacts	None.

For this study, I collected data in a variety of ways, all to fit the purpose of the study. The six-week unit plan consisted of several lessons, so student writing samples (in-class writings, analysis journals, and reflection journals) were collected in order to assess

students' critical thinking abilities throughout the different parts of the unit. In addition to writing samples themselves, I also collected students' reflections of their learning throughout the lesson. These reflections served two purposes: first, they were a form of critical thinking, having students analyze their progress along the way; second, they helped students keep track of their progress and learning along the way, helping them to diagnose their strengths and weaknesses, as well as keep track of what it is they are learning. Even though I attempted to interview participants both in person and via e-mail (after the course ended), no participant responded.

In addition to the above materials for data collection, I also kept field notes, observation notes, and a journal throughout the study. This helped me capture students' learning and progress throughout the unit, after each class period, or after evaluating students' written work, as well as what occurred during the class periods. These field notes helped me identify aspects of critical thinking throughout the unit, as well as feedback on how to adapt the next class session in order to better improve students' critical thinking skills. But, most importantly, the journals also helped me to keep track of my thoughts and observations throughout the study. Stake (1995) said,

There is no particular moment when data gathering begins. It begins before there is commitment to do the study: back-grounding, acquaintance with other cases, first impressions. A considerable portion of all data is impressionistic, picked up informally as the researcher first becomes acquainted with the case. Many of these early impressions will later be refined or replaced, but the pool of data includes the earliest of observations (p. 49).

Stake's (1995) comments reflect the importance of documenting even the most informal thoughts and impressions throughout a study. This is also important for teachers, since our involvement in our own teaching (and thus my involvement in my study) begins far before we enter the classroom to teach. It involves research, preparation of materials for class, planning, thinking about end results, identifying teaching methods and assessment procedures, setting goals for students and for ourselves, and many other things. Additionally, the moments after class are important as well. These are moments when we ask ourselves questions such as, "What worked, and why? Why were the students not understanding the lesson? What could I do differently next time?" Documenting these informal, albeit important, thoughts and moments were essential for my case study, as illustrated by Stake (1995).

As Yin (2003) discussed, there are several benefits to using multiple, though not necessarily all six, types of evidence for case study research. One obvious benefit is that it promotes comprehensive understanding about the case, or bounded system. If I would have simply looked at students' papers, and scored them with a rubric, I would have only been assessing students' critical thinking skills as a final product. But, by also looking at students' journals, or by capturing their thought processes during class discussions, I was gathering more information. This information was helpful to me as an instructor, but it was also helpful to me as a researcher. In addition, using multiple sources of evidence increased the fidelity of my findings and overall quality and credibility of the data and study itself, and it helps provide more thorough information to others in the field.

## **Data Analysis**

I used several strategies to analyze the data collected from my research study: case description, explanation building, and logic models (Yin, 2003); and categorical aggregation and direct interpretation (Stake, 1995). Yin (2003) first identified three general approaches to analyzing data within case study research. The first approach is “relying on theoretical propositions” (Yin, 2003, p. 111). He explained that most case study researchers arrive at data analysis having already been working under certain theoretical frameworks. This could be evident in the literature review, research questions, and data collection methods. Thus, he argued that researchers should stay within this theoretical framework when analyzing the data. There are several theories that guide my study, including Bloom’s taxonomy and previous research on using the explicit method of critical thinking instruction. Thus, I referenced these theoretical propositions when analyzing the data and discussing the results.

Additionally, Yin (2003) identified a second general approach to analyzing case study data: “thinking about rival explanations” (p. 112). This strategy can be likened to a null hypothesis in quantitative research. It is the act of considering alternative explanations for the data, or causes for the data. For example, in my study, students’ critical thinking skills could have been improving based on conditions other than my intervention lesson. Thus, this strategy involved exploring those other conditions to the extent that is possible within the framework of my study. This is a valid approach to analyzing data, especially in ensuring the fidelity of the findings.



While I incorporated the other two general approaches to data analysis, the third general approach is the one in which I focused on the most. The third general approach to data analysis, defined by Yin (2003), is “developing a case description” (p. 114). Using this approach is effective, whether the original goal of the study is to provide a description, or whether a descriptive approach may help explain aspects of the data or study. In my study, I attempted to describe what evidence there was, if any, of critical thinking in my English classroom, per one of my research questions. Additionally, in understanding if my critical thinking intervention lesson plan was effective or not, I applied descriptive methods in explaining the data, since all of the data is qualitative in nature. Thus, this third general approach to analyzing case study data was used in my study.

Aside from the three general approaches to case study analysis, Yin (2003) also identified five more specific strategies of analyzing data within case study research. These five specific strategies can be used along with, or in place of, the three general approaches. These five strategies for analysis are “pattern matching, explanation building, time series analysis, logic models, and cross-case synthesis” (Yin, 2003, p. 109). The two specific approaches I used for data analysis were explanation building and logic models. Explanation building is similar to case description. In case description, the researcher is building a detailed description about the case, or aspects of the case. With explanation building, the researcher is creating an explanation about the case, or specific aspects of the case. Explanation building is a more specific type of pattern matching, in which the researcher identifies “casual links” in the data, and these “casual links” can be

described in narrative form (Yin, 2003, p. 120). In my study, there were some casual links found within the data, which required more explanation (i.e. similarities in students' critical thinking skills, similarities in the ways students wrote about critical thinking or defined critical thinking, and similarities in the data produced from students as a result of the intervention lesson plan). These casual links helped answer my research questions, thus the explanation building approach to analyzing the data helped in doing that.

Another technique for data analysis, similar to pattern making, is logic models (Yin, 2003). Logic models “deliberately stipulate a complex chain of events over time,” and these chains of events “are staged in repeated cause-effect-cause-effect patterns” (Yin, 2003, p. 127). My study investigated students' critical thinking abilities as a process, a skill to be improved upon over time (in this study, a period of six weeks). My involvement in the intervention lesson plan was to help students, through a variety of instructional methods, improve their critical thinking skills. And, I documented this improvement through a variety of data collection techniques. As with much classroom teaching and learning, there is a cause-effect pattern, where the teaching is the cause, and the learning is the effect. However, this learning is not always accomplished in one stage or step. Thus, logic models helped me to analyze the data in stages, since logic models include three stages: “immediate outcome,” “intermediate outcome,” and “ultimate outcome” (Yin, 2003, p. 128). The goal of my intervention lesson plan was to improve students' critical thinking skills (ultimate outcome). However, there were other outcomes that were found within the data that illustrated immediate or intermediate outcomes, both of which benefited students' learning, or at the very least, explained the data more

thoroughly. After I collected and analyzed the data using logic models, the model itself illustrated part of the findings in order to document the process of critical thinking among students.

The last two approaches to data analysis I used were “categorical aggregation” and “direct interpretation” (Stake, 1995, p. 74). Categorical aggregation is collecting enough data about an observed behavior or instance so that “something can be said about them as a class” (Stake, 1995, p. 74). This approach to data analysis adds to the fidelity of my findings and is important for larger conclusions that I made about my data. Direct interpretation involves observing a behavior or condition and making an assumption about that behavior or condition. However, Stake (1995) suggested that researchers use both of these approaches to data analysis informally and throughout all stages of the research. His emphasis with data analysis was that it is ongoing, and it is important to document all stages of analysis, both informal and formal. Thus, even though the direct interpretation of an event may not have been documented formally in data collection (e.g. my initial impression of a student), it is an important part of making sense of a case (e.g. if my initial impression of a student was that he was easily frustrated, this could help explain why it takes him longer to grasp critical thinking concepts). Additionally, while categorical aggregation may not necessarily lead to a valid conclusion, it does make the researcher more attuned to a series of events or behaviors within the case (e.g. multiple instances of a student expressing frustration). Both of these approaches helped me to analyze the data within my study throughout the six weeks, leading to other important conclusions that were validated and explained in my results and discussion.

## **Fidelity of Findings**

To ensure the fidelity of the findings in my study, I took several measures. First, I used triangulation, which is the “use of multiple and different sources, methods, investigators, and theories to provide corroborating evidence” (Creswell, 2013, p. 251). For my study, I used 18 students from the course, and these students—through the documents they created and their participation in class---served as different sources. I also used many different methods for collecting data within the unit plan, including document analysis, field notes, and observations. By using multiple methods of data collection, and by keeping a journal of my observations throughout the study, I was able to keep my findings grounded in the data. And, by using Stake’s (1995) and Yin’s (2003) methods for data collection and data analysis, within the realm of case study research, I ensured that I followed the protocol for the genre of research I conducted, thus making my research a reliable case study.

One other advantage of my study that helped ensure fidelity of the findings is that I had the opportunity to use member checking. Since my participants were my own students, I had regular contact with them in person on a weekly basis. This allowed me to draw initial conclusions based on the data they were providing (through written documents, class discussion, informal conversations) and then share those conclusions with them to ensure that they were valid. Much of this study was not only based on students’ critical thinking skills and the improvement of those skills, but also on students’ perception, recognition, and own understanding of their learning (Creswell, 2013).

## Theoretical Framework

Below is a description of the framework I used to teach and assess critical thinking skills throughout the unit. First is an excerpt from the course's course content summary, pulled from the college's catalog. A course content summary is an overview of the course itself, which includes a description of the course, goals for the course, and major topics that are to be covered in the course. These course content summaries are consistent throughout the college, and each instructor is required to teach the skills listed within each course's content summary.

### *GOAL TWO: CRITICAL THINKING AND WRITING*

*ENG 112 will develop students' ability to analyze and investigate ideas and to present them in well-structured prose appropriate to the purpose and audience.*

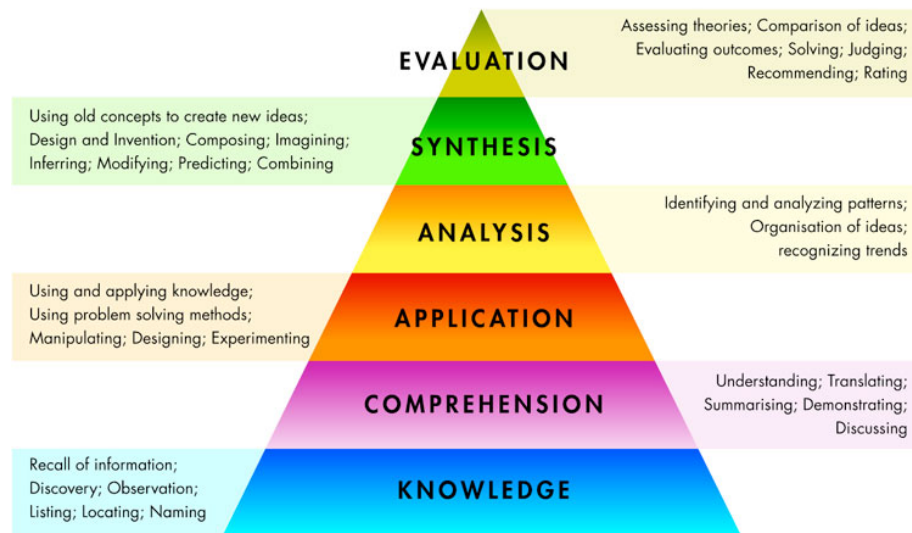
*Students will be able to:*

- develop strategies for critical thinking, reading, and writing processes*
- examine and analyze their experiences, literature (poetry, drama and/or fiction), non-fiction prose, and other cultural texts (film, popular culture, new media and/or other visuals) as sources of material for writing.*
- competently read, summarize, analyze, evaluate, and write about college-level texts –their own and others' –of varying lengths*
- examine subjects from multiple perspectives and formulate and express their own perspectives.*

Source: NVCC, 2009.

Looking at this list of tasks required for the course, it is evident that there are a few critical thinking skills listed within, including “analyze,” “investigate,” “examine,” “evaluate,” “formulate,” “develop,” “write,” and “express.” Going back to the model of Bloom's taxonomy, these critical thinking skills encompass the top three tiers of the taxonomy (Figure 2).

## B L O O M S   T A X O N O M Y



*Figure 2: Cornwell's (2013) description of Bloom's taxonomy skills.*

It is important to match the theory with practice in research. That is, one of the theories that this research is centered upon is Bloom's taxonomy. But, instructors first have to look at the course content summaries to see what the course requires of them, per the college's requirements. However, in fitting these together, it is clear how those required skills fit within Bloom's taxonomy, and which skills instructors are required to teach and students are required to learn. It is clear from matching up the course content summary to Bloom's taxonomy that one of the goals is critical thinking instruction, the top three tiers of Bloom. But, which skills are emphasized the most? The below images show a revised taxonomy applying Bloom's principles to research conducted in the 90's.

The table below lists skills that are on the same levels of the hierarchy (defined with different terms). The skills that are required of students in the English 112 course are highlighted within that. In addition, the skills that are listed in the course content summary that did not appear in this reference were added in a third column, in terms of where they would fall in the hierarchy.



*Figure 3:* Revised version of Bloom's taxonomy (Old Dominion University, 2013).

Table 2: List of critical thinking skills for revised version of Bloom's taxonomy (Old Dominion University, 2013).

	Course Content	
<b>Analyzing:</b> can the student distinguish between the different parts?	Analyze, investigate	appraise, compare, contrast, criticize, differentiate, discriminate, distinguish, <b>examine</b> , experiment, question, test.
<b>Evaluating:</b> can the student justify a stand or decision?		appraise, argue, defend, judge, select, support, value, <b>evaluate</b>
<b>Creating:</b> can the student create new product or point of view?	express	assemble, construct, create, design, <b>develop</b> , <b>formulate</b> , <b>write</b> .

What is interesting about the above is that English 112 is asking students to think critically, but is asking them to master the highest levels of higher order thinking, according to Bloom's taxonomy and the revised taxonomy (Old Dominion University, 2013). Following Bloom's taxonomy, in the sense that the lower levels must be mastered before moving to the upper levels, I primarily focused first on the analysis skills for my course. For the majority of my six-week unit, since it also coincides with the beginning of the course itself, I focused on the analysis level of Bloom's taxonomy and using the term, definition, and skills within analysis to guide my lessons within this unit. Once it was clear that students mastered the analysis level, I incorporated the higher order thinking skills in the tiers above that. Since my study occurred at the beginning of the 16-week course, it was important to introduce students to critical thinking and start to develop their critical thinking skills. If students were not yet able to master the higher tiers, that was sufficient because after the unit, students still had ten weeks left in the course to



accomplish that (thus mastering the course content summary skills). It is important to remember that this unit is a snapshot of the 16-week course, so all of the course content summary skills were not necessarily present in this first six-week unit.

Because I used the above framework to teach my students critical thinking, that is also the framework I used to assess my students' critical thinking skills. For that reason, I mainly focused on the "analysis" tier throughout the unit, that is what I looked for in students' learning throughout the unit. I looked for them to demonstrate analysis skills through writings and class discussions. In other words, I looked to see if students exercised any of the following skills when analyzing: investigating, comparing, contrasting, examining, questioning, differentiating, and distinguishing. Additionally, because the unit began by my defining analysis and providing some keywords and guiding questions that helped students with analyzing, I looked for those skills in their discussion and writings as well. Those are listed in the table below.

Table 3: Analysis Framework Used for Teaching and Assessing Analysis.

	<b>Analysis</b>
<b>Definition</b>	Breaking down a topic into its part, looking further into a topic and adding an interpretation
<b>Skills</b>	Comparing/contrasting, dissecting, examining, interpreting, deconstructing
<b>Keywords</b>	Why? How? So what? What if?
<b>Example</b>	The author gives Katniss a lot of feminine qualities, though not as many as masculine qualities. She may be introducing alternate gender roles to show us that gender didn't matter in that world.

In short, I looked for students to engage in thinking (through writing and discussions) that went beyond surface level opinions, observations, and thoughts. I looked for students to engage in activities such as comparing, contrasting, examining, interpreting, and questioning—all of which require the student to go into more depth. Throughout the unit, during class discussion, and in written feedback on students' papers, I posed the questions, "Why?" and "How?" I questioned students by asking, "Why do

you think Katniss did that?” or “How does the author create a theme of control?” There were not necessarily specific keywords that could be associated with these skills, taken from students’ writing, and there was no rubric created or used to assess these skills. However, the above table was used as a guiding framework throughout the unit to reinforce analysis to the students, as well as assess their analysis skills.

Since I asked students to use summary skills in each journal throughout the unit, in addition to analysis skills, I had to identify the differences in these skills at the beginning of the unit. Table 4 illustrates the differences between the two skills, and it also works as an illustration of the foundation I was working from throughout the unit.

Table 4: A comparison of summary and analysis definitions and skills.

	<b>Summary</b>	<b>Analysis</b>
<b>Definition</b>	Re-stating what the reading was about in one’s own words, re-capturing the main points	Breaking down a topic into its part, looking further into a topic and adding an interpretation
<b>Skills</b>	Paraphrase, abstract, outline, re-cap, sum up	Comparing/contrasting, dissecting, examining, interpreting, deconstruct
<b>Keywords</b>	What? Who? When? Where?	Why? How? So what? What if?
<b>Example</b>	In chapter one, the author introduces us to Katniss, who is the protagonist. Two tributes are chosen for the Hunger Games.	The author gives Katniss a lot of feminine qualities, though not as many as masculine qualities. She may be introducing alternate gender roles to show us

		that gender did not matter in that world.
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## Unit Plan

For my study, I created and followed a six-week unit plan on critical thinking. I focused primarily on the analysis skills within critical thinking. The text that I used for the unit plan was *The Hunger Games* by Suzanne Collins. I chose this text because the target audience for the book is teenagers; therefore, I knew the text would be easy for students to comprehend, allowing them to quickly master the bottom tiers of Bloom's taxonomy (remembering, understanding), allowing students to move into the upper tiers of Bloom's taxonomy and spend the majority of the unit honing critical thinking skills. Below is a detailed description of what occurred throughout the six-week unit. The class met twice/week, so each week was split into two days.

Week 1: Pre-unit writing and definition of analysis.

- *Tuesday: Pre-writing sample.* For the first day of the unit, students were given a two-page non-fiction writing (Dave Barry's "We've Got the Dirt on Guys' Brains") and were asked to write a short (2-3 sentence) summary and a  $\frac{3}{4}$  page-1 page analysis. Students were not given a definition of analysis, nor were they given a definition of summary. The students performed this writing in class and were given the full class time to write.

- *Thursday: Define analysis (and what is not considered analysis), provide examples, practice with other topics.* For the second day, we started by defining analysis.

Students were asked to bring in definitions they found at home. We made a list of definitions, tasks, and skills that were considered analysis, and then we talked about the difference between summary and analysis. We then talked about some real world examples of analysis and how students use analysis skills everyday.

#### Week 2: *The Hunger Games*, Part I.

- *Tuesday: The Hunger Games, 1<sup>st</sup> half of Part I.* For this class period, students were asked to read the first half of the 1<sup>st</sup> part of the novel (there are 3 parts total). For homework, in preparation for class, in addition to reading, they were asked to write a summary of what they read, and to write an analysis, too. Students were asked to think about our discussion of analysis thus far, and to try to think about the “how” and “why,” leaving the “what” for the summary part. In class, we had a reading quiz to ensure students were reading and understanding what they read, followed by discussion that focused on analyzing the first couple of chapters. For homework, they were asked to do the same thing (summary, analysis) for the second half of the 1<sup>st</sup> part of the novel, and in addition, to write a one-page reflection on class discussion. They could reflect upon how their perception of the chapter changed after class discussion, or they could take something we discussed in class and expand on that in their reflection (further exercising their analysis skills).
- *Thursday: Repeat with second half of 1<sup>st</sup> part of novel.* We repeated the same tasks listed above, with the second half of the 1<sup>st</sup> part of the novel.

Week 3: *The Hunger Games*, Part II.

- *Tuesday: Read first half of 2nd part of novel, repeat other items.* We repeated the same above tasks, with the exception of the reading quiz. I found that students were reading the novel, so I did not want to take up class time with a reading quiz.
- *Thursday: Read second half of 2nd part of the novel, repeat other items, with the exception of the reading quiz.*

Week 4: *The Hunger Games*, Part III.

- *Tuesday: Read first half of 3rd part of the novel, repeat other items.*
- *Thursday: Read second half of 3rd part of novel, repeat other items.*

Week 5: Finish *The Hunger Games* discussion.

- *Tuesday: Whole novel discussion.* For this class, we discussed themes from the entire novel, including gender roles and class systems. For homework, students wrote a reflection of class discussion, expanding upon what we discussed in class, working on analysis skills and further reflecting upon what they were learning.
- *Thursday: In-class writing.* In preparation for the literary analysis paper (final product for the unit), students wrote an in-class essay, choosing one of three prompts. For the first time, students were asked to apply higher order thinking skills above analysis to the novel (mainly creation and evaluation).

Week 6: Literary Analysis Paper and Post-Unit Writing.

- *Tuesday: Conferences.* Students conferenced with me one-on-one to discuss their topics for their literary analysis papers. They then had the remainder of class to draft in class.
- *Thursday: Post-unit writing sample.* Students were asked to read the same excerpt used for the pre-unit writing (Dave Barry's "We've Got the Dirt on Guys' Brains") and write both a short summary (1-2 sentences) and an analysis (at least one page) about it.

Final Products: Literary analysis paper and end of unit reflection. As a result of the unit, students were asked to produce two pieces of writing: a literary analysis paper, which they would focus on one idea or theme from the novel and write an in-depth analysis of it; and an end of unit reflection, where they were asked to reflect upon their analysis skills before the unit and after the unit, considering their pre- and post- writings, as well as aspects of the unit that helped them.

By designing a unit plan that focused on the explicit method of critical thinking instruction, I hoped to help students improve their critical thinking skills. I also relied on Yin's (2003) and Stake's (1995) case study methodology research that would help me as I collected, analyzed, and wrote about the data from my study. And, by incorporating Bloom's (1956) research, I hoped to be able to have my students quickly understand, remember, and apply the novel so that we could focus on analyzing the novel. The findings of my study will be discussed in Chapter Four.

## **CHAPTER FOUR**

The purpose of this chapter is to present the case, a six-week unit on analysis where I used the explicit method of critical thinking instruction. I want to describe in detail what happened, through the lens of the instructor and the researcher, in hopes of sharing what was successful. Using Stake's (1995) categorical aggregation, I collected sufficient data to present the case in detail, and I share the findings in Chapter Five. I am also "relying on theoretical propositions," as Yin (2003) suggested doing, blending theory with practice (p. 111).

In this chapter, I describe the various components of the six-week unit as they happened, from the beginning of the unit to end of the unit. I began the unit by having students write a pre-unit writing sample, which was a written summary and analysis of Dave Barry's article "We've Got the Dirt on Guy's Brains." Thus, I begin the chapter by explaining students' pre-unit writings, as well as their analysis skills at the beginning of the unit. I then explore what happened throughout the six weeks of the unit itself, discussing important aspects of the unit that helped students improve their analysis skills. Lastly, I discuss students' post-unit writings on Dave Barry's same article, as well as their post-unit analysis skills.



### **Students' pre-unit analysis skills**

In this section, I will first discuss students' pre-unit analysis skills, as were demonstrated in their pre-unit writing samples. I will then discuss students' reflections about their pre-unit skills. These reflections illustrate the struggle that students experienced with analysis before the unit, and during their pre-unit writings, and they help to explain why students struggled with analysis. Overall, students' analysis skills at the beginning of the unit were either weak or non-existent.

**Students' pre-unit writings.** Before the unit, most students did not have a firm understanding of analysis. This was seen in their pre-unit writings. Much of what students wrote in their pre-unit writings was summary, even though they were asked to write a summary and analysis. Students re-stated the article in their own words for the analysis section, so really, they were demonstrating paraphrasing skills more than anything. In the "summary" part, they provided one to two sentences, in their own words, of the main points within the article. But, when asked to write an analysis, students extended the summary and included more details from the article itself. In this way, students were demonstrating the "what," not the "how" or "why." They would write phrases like "the author stated" or "he mentions" or "he claims." By writing "he claims," students were attempting to analyze, by identifying the author's point and then discussing whether or not it is a valid claim. Here, students could look at the "why." However, most students did not explore the "why." They simply summarized more points.

One student, Student 18, wrote,

In the article “We’ve got the Dirt on Guy Brain [sic]” the author talks about why men and women act the way they do. His whole reasoning behind these actions are proven scientifically. The author has several points on the differences of men and women, for example he explains why men are physically unqualified to do house work.

In his essay, Student 18 was summarizing some of the author’s points from the article, without analyzing any of those points. He continued to do this throughout his essay. Student 8 first provided a one-sentence summary of the article, and then she wrote a paraphrase of some of the author’s points, like Student 18. She wrote,

The main topic talked about in this article is the differences between men and woman [sic]. One difference mentioned is the so called male genetic Dirt Blindness [sic]. What this is, is that men won’t see something dirty like a woman would. This is what causes them to be physically unqualified to do housework as confirmed in a theory.

Another student, Student 4, also wrote a brief summary for her analysis:

In the article We’ve Got the Dirt on Guy brains [sic], Dave Barry talk [sic] about the differences between man [sic] and women’s [sic]. Man [sic] are more lay [sic] back [sic] they do not see thing [sic] the way women see things. Want [sic] a womens [sic] looks at something we see the full thing [sic] we even look at the details. Men look at it and do not care for to [sic] look a [sic] the details [sic] they are to [sic] lazy to see the full picture [sic].

Another student, Student 11, was paraphrasing the author's points. She was providing details about one of the author's points, so she was not necessarily summarizing the main point of the article. Instead, she was choosing one point of the story and paraphrasing it:

One good example he gives is about cleaning the bathroom. Dave tells how a men [sic] can look at the same commode as a women [sic] and thinks [sic] that it [sic] is nothing wrong. How a woman could look at it and see it filled with dirt and bacteria [sic]. He believes like that [sic] is because they are responding to the chemicals in their brains. That's why men behave the way they do.

In this excerpt, Student 11 was choosing a specific detail from the article and explaining it in more detail. This could be evidence that the student perceived analysis to be going into detail, as that is what part of analysis entails. However, the student was going into more detail on the facts of the article, not necessarily more detail that added his own thoughts or interpretation to the article's points. Therefore, the student here was still using summarizing skills.

Another student, Student 3, also provided a summary first, and then proceeded to paraphrase parts of the article for her "analysis" section. She wrote,

The article "We've [sic] Got the Dirt on Guy Brains" by Dave Barry talks about Male Genetic Dirt Blindness (MGDB) which is the reason why men are unqualified to do house work. Men have a tragic genict [sic] flaw that does not let them see dirt like women do. A book which is call [sic] "What Could He Be

Thinking? How a Man's Mind Really Works!" [sic] talked about this theory. It says that a man's brain has less sensory detail.

Even though these students believe they were analyzing, they were summarizing and paraphrasing. They were using skills from Bloom's lower tiers: understanding and comprehending. It seemed, based on the excerpts above, that students believed that if they provided more details or information in their own words about the article, they were analyzing. However, at this point, students did not understand that analyzing involves adding onto the points from the article, or taking the points from the article and breaking them down, dissecting the ideas to investigate how the author is making his points. Analyzing, in some form, involves adding one's ideas. Here, students were not adding their ideas.

For the most part, in their pre-unit writings, most students were defining analysis the same way as summary. However, there were a few exceptions. One exception was Student 15. He wrote, "This was like a sexist article," which is a starting point for analysis, since this involves breaking down the article's points and classifying the information as sexist---all critical thinking skills. However, he then went to another point, rather than adding more depth to that point. Nonetheless, there was one other instance of analysis. He wrote, "There was scientific proof that Barry was right according to Reuters, which is an international news and financial information service providing reports/stories to the media." Here, Student 15 was starting to analyze, and perhaps even evaluate. He was looking deeper into where Barry's information was coming from, to perhaps evaluate the credibility of what he was saying. This demonstrates analysis skills, in addition to

higher order critical thinking skills on Bloom's taxonomy. But, it should be noted that this particular student had taken this same course with me in the past, dropping the course halfway through the semester. So, he had previous instruction and practice with analysis in this same class with this same unit.

Another student, Student 7, had one sentence that was attempting to analyze, or perhaps critique, the author's credibility: "His information could be wrong cause he didn't read it [referring to a book he cited, but admitted to not reading]." Although this seemed to demonstrate analysis, or critique, skills, in her breaking down how Barry framed his argument, she was missing an important element of the article: tone. The author himself is a satirist, so his writing is famous for being humorous and satirical. Instead, she took his words to be straightforward.

Other students seemed to consider the analysis section to mean more of a response or reply to the article, rather than objectively analyzing. One student, Student 16, seemed to only demonstrate response skills using her opinion. Her "analysis" section is nearly all a rant. However, she may also be mimicking Barry's satiric tone. She wrote,

I don't see why any female would find Barry's findings offensive, as he pointed out. I, as a female, completely agree with everything in this paper. Female brains are obviously superior. The article made it clear that the male brain capacity is far less advanced than the female. Why can't a man properly clean a toilet? Because he is stupid. No offense of course; it's science. A male simply cannot handle anything more than a well thought out debate over whether the referee should have thrown a flag in a football game. Obviously Barry is trying to tell his

audience that he biologically cannot remove his rear end from the couch and scrub a dish. He is clearly passionate on the subject and I am actually begining [sic] to feel empathy for the male breed. All of that empathy is surely just my female brain secreting chemicals that are causing me to think differently. Barry highlights what he calls MGDB, and frankly I am outraged that scientists didn't discover this sooner.

She was attempting to analyze and break down Barry's point by evaluating how he was making his point, but really, she was focusing on her personal reaction to what Barry was saying, rather than objectively analyzing how or why he was making his point. Her reaction was very emotional, and really, she was oversimplifying Barry's point in an extreme way, and again, like Student 7, was missing the fact that Barry was using humor and satire to make his point. Or, perhaps, she too was using a sarcastic tone to make her point, mimicking the author's style and tone. I do not know that this exhibits analysis skills, but it does show an understanding of the tone the author is using.

Another student, Student 9, also had a somewhat emotional reaction to the article. She wrote that the author's article:

is a hilarious idea to read, but in this day and age, I'm not so sure how his wife can put up with his ideals (if he is hiding his humor with truth, that is), but to claim in this time we live in that men cannot clean because of a genetic difference, he has been living under a rock.

Student 9's parenthetical expression was a good sign of analysis, by breaking down how Barry was making his point, in addition to the validity behind it, but that was

it. The remainder was her opinion and reaction to his main point, not an analysis of what was written in the article.

Another student, Student 10, interestingly enough attempted to take the fact that the author was using humor and satire, in addition to stereotypes and oversimplifications, and pointed out exceptions. In this way, Student 10 was breaking down the “how” and “why,” in looking at “how” the author is making his point, in addition to “why” he was saying what he was saying (and “why” he may be wrong). He was breaking down the point in the article, dissecting it, and even classifying it, by showing that there were exceptions that the author was not stating. This was a good start to analysis.

There was one student who paired summary with an evaluation (critique) so that his analysis read like a book review. Student 12 wrote, “He masterfully crams humor into every paragraph that both genders can appreciate equally.” Here, Student 12 was able to identify the author’s tone and his choice in using humor to make his point, which is starting to use analysis skills, but he does not go into depth or discussion beyond this observation.

There were several findings that resulted from these initial pre-unit writings. Most students did not have a clear understanding of analysis before the unit began, as is shown in the pre-unit writings. Most believed summary and analysis were the same, others thought analysis meant opinion, reaction, and response. Some demonstrated an understanding of analysis, albeit basic and underdeveloped. And those who did demonstrate these skills needed more depth and expansion. It was clear from these pre-unit writings that students needed instruction on analysis before being asked to analyze

again. And, students' reflections about their skills before the unit describe the struggle apparent in their pre-unit writings and help to explain why their pre-unit analysis skills were weak or undeveloped.

Of course, it is helpful for instructors to perform diagnostics of students' skills before teaching a unit, as I did above with students' pre-unit writings. These pre-unit writings helped me see where students' analysis skills were at the beginning of the unit, so that I could gauge how much instruction they needed. However, it may also be important to discover reasons that explain students' skills before starting a new unit. For me, in understanding students' previous experiences and backgrounds with analysis, it helped me understand more about the students---their learning styles, their negative past experiences with learning analysis and how that is affecting their confidence, and reasons they had trouble with analysis in the past. Students' reflections describing their pre-unit analysis skills are discussed next.

**Students' reflections of pre-unit analysis skills.** At the end of the unit, students were asked to reflect upon their learning throughout the semester. One of the questions in the prompt asked students to think about their analysis skills before the unit. In response to this, many students wrote about their experiences (or lack thereof) with analysis in other courses. Students attributed lack of previous experience with analysis and knowledge of analysis to their weak analysis skills coming into the course. They describe their struggles with analysis and the reason for the struggles in their reflections below.

One student, Student 2, did not complete the pre-unit writing, but she discussed her experience with analysis before this class. She wrote,



With my last English 112 class I had to withdrawal [sic] due to not comprehending my teacher's description of analysis. Last semester I did not understand a word that the professor would say about analyzing, even though I did many papers the definition of analyzing just did not stick to [sic] my head at all....In my opinion I was lost to this cruel word analyze.

Here, Student 2 is showing that she was lost from the beginning in her previous course because she had no clear definition or understanding of analysis before being asked to analyze. This also illustrates the lack of explicit method of critical thinking instruction used in her previous course. How could this student be expected to use analysis skills, if she still did not understand the definition of the skill itself? Her use of the words "lost" and "cruel" depict a sense of helplessness, that since she was lost, she would not be able to find her way back to understanding, and these feelings gave way to her assigning analysis a negative connotation.

Student 2 also talked about her knowledge of analysis, in relation to summary versus analysis. She wrote,

When comparing what I did in my last English 112 class and even in the beginning of this semester in this class, I remember mostly summarizing because I had no clue to what I was doing. So before I thought as [sic] analysis as in another word for summarizing.

Another student, Student 6, wrote,

At first, I have to be honest I didn't know what it was to analyze a piece of writing, or any writing really. It was an endeavor I had to endure for just the first

class where we “analyzed” that Drew [sic] Barry article *We Got the dirt on Guy Brains* [sic]. I didn’t know anything so I only wrote half a page and had the summary take up most of the paper. Even though the words literary analysis were self-explanatory I had a [sic] difficulty understanding what was meant when the teacher said write an analysis.

Another student, Student 15, also claimed to have no idea of what analysis was before the unit. He explained his previous knowledge and experience: “Before I would just read the article or story and I would just write about what I have read... I would pretty much just rewrite what I read and not apply it to anything.” He explained his previous knowledge:

I would describe my analysis skills before the Hunger Games [sic] to be non-existent, like it was so bad that I pretty [sic] did not know what I was doing half the time... When I read things I really would not think much about it.

Perhaps other students, in their pre-unit writings, were equally as confused as Students 2, 6, and 15, and they also used summarizing as a default skill for analyzing. If students do not understand how to do what is being asked of them, what choice do they have? They can either rely on a skill they do understand, or they can simply not write anything at all. For some students, like Student 18, they believed they were analyzing when they were summarizing, but for other students, like Student 2, she was completely lost, so she relied on a skill she knew and understood---summarizing.

One student, Student 12, also wrote, “I have always found analyzing literary works to be difficult.” He went on to write, “Before the hunger games [sic] unit I would

have found it very difficult to analyze writing because of a lack of experience and confidence from previous classes.” In using the term “difficult,” Student 12 is similarly describing a struggle. And, like Student 2, he also identifies a lack of confidence and experience. Another student, Student 4, wrote a similar comment:

My pre-writing have [sic] a basic summary, and then for the analysis part I write [sic] an in-depth summary. When I first did analyzing in this class, I did not have a cleared [sic] definition of what analyzing was I really believed that analyzing was like a detailed summary. In addition, I do not remember never [sic] doing an analyzing [sic] writing in my other classes and if I did, they did not give me the right definition of it.

There is a pattern with the word “definition” in these reflections, where students wrote that they had no clear definition of analysis before coming into the class. This is where the explicit method of critical thinking instruction comes in because instructors start by defining analysis to students. As students admitted, they never had a clear definition, let alone understanding or ability. Since students lacked the basic definition, let alone understanding or ability, they struggled with analysis before the unit. Analyzing involves much more than being able to define analysis, but that is the foundation from which students need to begin. As students are suggesting above, they never had that foundation.

Student 4 used an analogy of a toolbox to explain her analysis skills beforehand. She wrote,

My analysis skills before the Hunger Games [sic] where [sic] pretty much not there. For example, it was like an empty toolbox or many [sic] I had the tool [sic] but do [sic] not know how to use them properly.

What stands out about Student 4's excerpt is that she showed a sign of confidence, in stating that she may have had the ability, or the "tools" as she described, to analyze. However, she explained that it is not just about having the tools, but knowing how to use them.

Another student, Student 17, wrote, "When I did my pre-writing at the beginning of the semester, I could barely manage half a page of vague summary, let alone a fairly in-depth analysis." He went on to explain his previous knowledge of analysis. He wrote, "In terms of my actual skills when it came to analysis before Hunger Games [sic], I had little to none. I had previous experience but not enough that I was confident or comfortable." Student 8 wrote a similar thing. She wrote,

At the start of the semester I had no clue what an analysis really was. I had an idea of what it might be but I still didn't know how I would play it out in my journals for English 112.

She also wrote, "When I see my pre-writing analysis it looks a lot like a summary." Here, Student 17 is describing a similar situation to Student 4. They both may have had the tools, but they did not know how to use them.

Again, another student believed summary and analysis were synonymous at the beginning. Student 18 wrote,

In my pre-writing I noticed that my summary and analysis weren't very different. My analysis was just a more in depth summary of the article. I didn't use any type of analysis all I did really was I took what the author wrote and just wrote in my own words.

He claimed the reason for this was because of his limited previous knowledge and experience with analysis. He wrote,

My analysis skills before the Hunger Games [sic] were very weak [sic] and every [sic] underdeveloped. My analysis merely consisted of an in-depth summary of whatever I was reading. I really didn't analyze at all. It was very hard for me to analyze I was only looking surface-level.

His struggle is captured in his use of the words "very hard." This is similar to other students writing that analysis was "difficult" or "cruel."

One student, Student 9, admitted to writing emotionally in her pre-unit writing, as I observed above. She wrote, "When I first wrote my paper, I wrote it with anger and even then I skimmed most of the article and picked out things I wanted to write about and analyze." She went on to write,

My analysis skills before the hunger games [sic] were very poor. I was struggling with analysis because I was not sure how to analyze. Last time I had to analyze in great detail was 11<sup>th</sup> grade, and after that it all just went to the toilet.

Here, Student 9 is suggesting that analysis skills have to be practiced and reinforced in order to keep them strong. She admitted to having to analyze in the 11<sup>th</sup> grade, but because she had not analyzed since then, "it all just went to the toilet," as she said.

Also, Student 18 wrote,

I used to know how to analyze when I took AP literature [sic] during my senior year of High [sic] school. However, because I didn't practice this concept for like almost two years I forgot how to analyze passages and paragraphs.

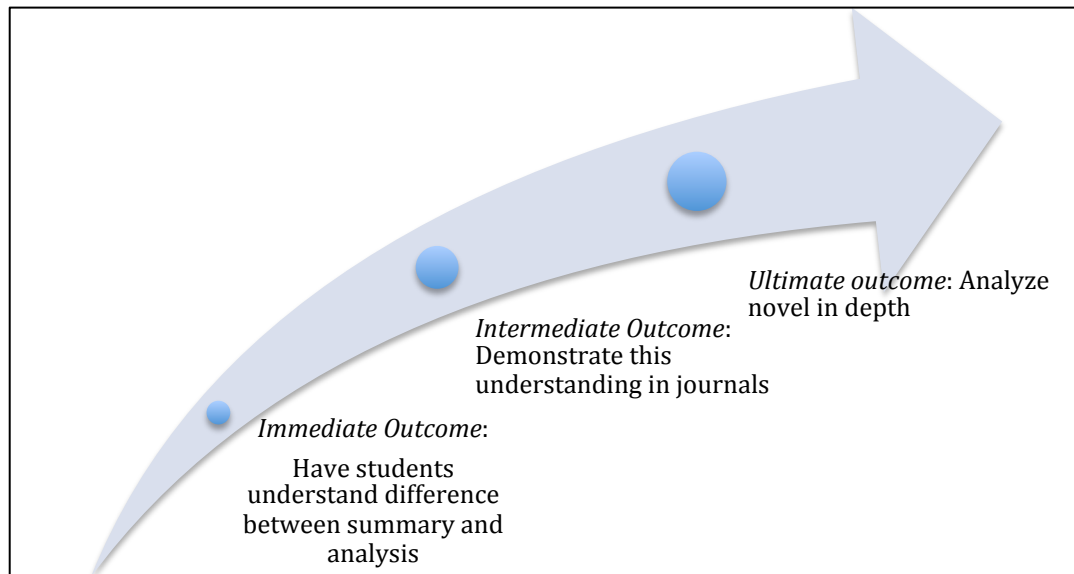
Much like Student 9, Student 18 was also suggesting that analysis required practice and regular reinforcement in order to continue understanding it.

It is clear from students' pre-unit writings, and students' reflections talking about their pre-unit analysis skills, that students needed more instruction on analysis, and that students needed to work on improving their analysis skills to reach college-level skills and expectations (per the course content summary). Students' weak, or nonexistent, pre-unit analysis skills were illustrated in their pre-unit writings. Additionally, in students' reflections, they talked about their struggles with analysis before the unit because of lack of knowledge or previous experience. This set the foundation for using the explicit method of critical thinking instruction. Students needed to start with the basics of understanding the definition of analysis, and analysis skills themselves, before being asked to analyze.

### **During the Unit**

The foundation for my study was the explicit method of critical thinking instruction, which involved teaching students what analysis was before asking them to analyze *The Hunger Games*. Of course, my immediate goal was to have students understand analysis, particularly the difference between summary and analysis, since so

many students were confusing the two skills in their pre-unit writings. However, I also identified some long-term goals for the unit as well (Figure 4).



*Figure 4: My Goal for the Unit. Adapted from Yin (2003).*

**First lesson of the unit.** On the second day of class, we started with the explicit method of critical thinking instruction. I wrote a definition of summary on the board, and then a definition of analysis. We first talked about the difference between the two skills: summary is when you simply re-state what the chapter was about, whereas analysis is when you break down the chapter, pick out certain themes or aspects, and add discussion and interpretation. We also talked about real-life examples of analysis. We talked about how females often analyze every behavior of males at the beginning of relationships. For instance, if a female receives a text that reads, “How’s it going?” they will spend 15

minutes interpreting what that could possibly mean. This, I emphasized, was analysis. Additionally, when people analyze plays in a football game, down to every player's position, what could have happened, what went well, and what should have been done differently, that is analysis. I also pointed out that common processes for summary address the keywords "What? Who? Where? When?" And, common processes for analysis address the questions "Why? How? So what? What if?" Our discussion of the terms was relatively brief, probably only 15 minutes, so I provided them with a resource (a website from the University of North Carolina) that explained the difference in detail, so they could review that when they went home.

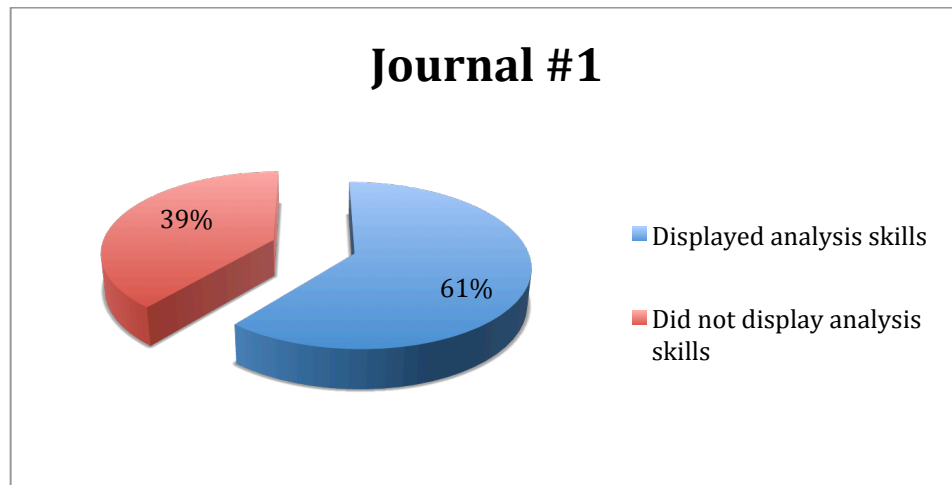
This initial lesson helped students. It was clear by the next class, when we were reviewing the two definitions that they remembered the difference. They also remembered the "Why?" and "How?" questions associated with analysis. And, the effect of this initial lesson carried over into class discussion and their first journals. For their first homework assignment, students were asked to read the first five chapters of *The Hunger Games* and write both a summary and analysis of the chapters. The point of having students complete this before class discussion was to give them an opportunity to try to analyze on their own; if I were to have them write the journals after class discussion, they could simply regurgitate what we discussed during class. This may not show that they were good analyzers; it may simply show that they were good at taking notes. And, the reason for separating summary and analysis skills was to help students distinguish between the two, reinforcing the fact that the two skills are separate.

Before discussing and analyzing *The Hunger Games* in class, I gave students



reading quizzes. The purpose for this reading quiz was to make sure that students were reading, and that they were remembering and understanding what they were reading. These reading quizzes consisted of three questions that could easily be answered if they completed the reading. For example, the first reading quiz, I asked students, “What are the Hunger Games?” and “Who was chosen for this year’s Hunger Games?” Looking at Bloom’s taxonomy (Figure 4), I was conquering the bottom two tiers: knowledge and comprehension. This freed up more time for application, or having students use the information in a new way (through discussion) and then get into analysis.

**First journal assignment for the unit.** The combination of choosing a novel that was easy for students to comprehend, and defining analysis before having students analyze the novel, proved to be effective in helping students analyze within their first journal. Figure 5 illustrates students’ performance on their first analysis paper after the first lesson using the explicit method of instruction. In students’ first journals, where they were asked to write an analysis of the chapters, 11 out of 18 students displayed---to some degree---analysis skills. That is 61% of the class displayed analysis skills in their first journal, immediately following our lesson on, and discussion of, analysis using the explicit method of instruction.



*Figure 5: Percentage of participants who displayed analysis skills in Journal #1.*

Additionally, these analysis skills varied with each journal. In Journal #1, Student 5 broke down the setting, the mood, and themes. She wrote,

At the beginning of the book the tone is expressed as serious, a little dramatic and concern [sic]. Katniss [sic] the narrator of the story and main character, describes her country as Panem, a nation who rose from an apocalyptic destruction from a county [sic] ones [sic] called North America. Here, it's clear that the writer [sic] intention is to provide the audience a futuristic perspective of how would [sic] our society might [sic] look.

She went on to identify the theme of control/power within the book and wrote, "It's also important to notice the government's oppression towards the districts, where only the capital [sic] can enforce the law." Additionally, she used comparison/contrast skills when she wrote, "She [Katniss] describes her town as the district that produces coal and energy sources which can be related to the middle part of the east cost [sic] of the U.S." After

this, Student 5 went on to compare the Hunger Games themselves to gladiators in ancient Rome. She wrote,

Is [sic] very interesting to compare also the idea of the Hunger Games with gladiators from the ancient Roman Empire. Were [sic] both are an armed combat who entertain the audiences in very violent confrontations between each other's [sic]. They both have the same concept of "Arena" [sic] as the place where they would fight. It's also important to mention that back in Rome, gladiators were mostly slaves [sic], living by very harsh conditions and socially marginalized just like the people from district 12 [sic], maybe not slaves but mostly obligated to play in the games. Gladiator fights like in the Hunger Games [sic], provided big business [sic] using as well sponsors who offered opportunities to win and good entertainment for their clients. At the end [sic], both [sic] main focus is to stay alive, survive and win.

Here, Student 5 was comparing these two worlds in depth, to everything from the setting for both, to the societies in which they existed. She took that one idea and provided many details, discussing how they were similar.

Another student, Student 14, also discussed the theme of control. He wrote, "The capital [sic] controls all the people by taking their needs and threatening their children. The people only follow these rules in fear. They do not want to lose anything else because they don't have much left to lose." Here, Student 14 was analyzing how, and why, the Capitol's control works—through fear. He was also starting to explain how/why that system of control would work---because of the people's conditions who the Capitol

was controlling. Even though these lines were brief, there was a lot of substance to them in terms of analyzing the first few chapters of the book.

Student 16 wrote about how the book began by describing Katniss, but analyzed how the author was writing by pointing out, “You, as the reader, are viewing this section of Panem through her eyes.” Here, she was referencing the fact that the book was written in first person point-of-view. Later, she analyzed different elements of the book in order to predict Katniss and Peeta’s chances of surviving the games. She wrote,

His [Haymitch’s] drunken behavior is detrimental to their survival because it is him who will gain them sponsors and make it easier for them to survive the games. The only fighting chance they seem to have is Katniss’ hunting skills and the fact that their stylist made them the spectacle at the capitol [sic].

Student 15 also broke down the author’s specific language she used to introduce The setting and mood for the story. He wrote, “Hunger Games [sic] by Suzanne Collins starts out the story by using Katniss Everdeen, who is the main character of this story in first person view to show us what she is waking up to.” Here, he was getting at the “why,” why the author would choose to start the book this way. He then quoted a sentence from the book and described its effect: “‘When I wake up, the other side of the bed is cold.’ Just there I can sense that the scene was a dull and cold moment because that day was the day most feared throughout the district.” He went on to do this with two other quotes from the book, explaining what they showed. Here, Student 15 was focusing in on specific details within the book and explaining them. Then, in his second paragraph,

he compared details from the book to today's society in communist countries. In this way, he was applying the compare/contrast skills inherent with analysis.

Another student, Student 11, included some summary within her analysis, but she had a few sentences that illustrated analysis skills. She wrote, "Rich and poor is a theme that brought up [sic] in the book." She made this conclusion after talking about details the author included about the districts, compared to the Capitol. She went on to discuss other themes: "We also learn that Katniss only being six-teen [sic] is the primary caretaker for her family. She has to keep her family fed by hunting and killing animals it's clear that Katniss is used to seeing things suffer." That last sentence illustrated Student 11's ability to synthesize and create an overall statement/conclusion. She went on to write, "Also in the beginning chapters the book shows a theme of suffering as entertainment. By having young children fight each other in a contest to death gives the book a dark and cruel theme." Typically, students have a surface-level reaction to these details of the book, dismissing it as depressing. However, Student 11 was looking in depth at these details and picking out a theme that was illustrated through this dark detail of the *The Hunger Games*.

Student 9 chose to analyze Katniss's character. She began by describing her background and history, and then she gave examples of how Katniss was strong. After providing descriptions of Katniss, and how these examples show she was a strong character, Student 9 wrote,

Would I label Katniss as a feminist, it's hard to say right now, but she does show a lot of mental strength as well as physical strength in The Hunger Games [sic]

and I know further down in the reading her skills and mental abilities will be tested.

Student 12 wrote one of the strongest analyses in his first journal. He incorporated comparison/contrast skills: “The disparity between the capital [sic] and district lifestyles is made explicitly clear on the train to the capital [sic], which had more food in one meal than Katniss [sic] would eat in almost a week.” He continued on to analyze, or break down, characters. He wrote, “Cinna is also the only capital [sic] citizen that Katniss doesn’t feel is completely ridiculous and gives a different us [sic] a hope that the capital [sic] isn’t exactly what we think it is.” He even analyzed the social and economic structure within the book: “The world of Panem seems to have three classes: the districts, the capital [sic] citizens and the capital [sic] government.” He also wrote, “The power of the hunger games [sic] shows in Katniss’ internal monologue about Peeta who is arguably the only reason Katniss and her family are alive to that day.” Here, Student 12’s ability to identify some underlying themes of power and control, inherent or subtle in the characters’ behavior, showed strong analysis skills in his reading beyond what was happening in the book and identifying larger themes and issues that may not have been fully explored or clear at that point.

Student 3 incorporated literary analysis into her first journal by commenting on the tone and mood of the beginning of the story, writing about why the author would do so. She wrote,

The binging [sic] of the book The Hunger Games [sic] is kind of sad, when Katniss started to talk about her little sister, mother, and even more when her

father died. I think that one reason why the author made it sad is to gain our attention. It happened to me; I think it's sad to read about what this girl went through and that's what grabs my attention and make [sic] me feel in love with her character.

Even though Student 3 went on to discuss other parts of the book's beginning, instead of expanding on this analysis, this excerpt showed that she was starting to analyze the mood and tone of the story. Additionally, she was writing about how the author's intentions may have played a role in character development. If the reader connects to the protagonist of a story, readers are more likely to continue on or to connect to the story. In Student 3's observation of this, she was starting to analyze the book and the author's strategies.

Student 6 also attempted to look at how the author was conveying the mood and tone of the story in the beginning. He wrote, "The author takes use of the characters the day of the reading to introduce the tension that is building in the community of District 12...showing how the people are sleeping in and their shutters are shut tightly." He then went on to compare the people of the book to people, or regions, in current society. He wrote,

The author describes the Districts as being the minority of North America, now the world in the book, isn't very far from reality, apart from the murder and the carnage, the Districts in a way represent ghettos. Ghetto by definition means a part of a city that is a slum area, occupied by a group of minorities. The minorities are the people in the Districts, and though it's much larger areas, in my

perspective that's the feel it gives off. Now, the Capitol gives off the feel of New York City, where the fashion sense is different and people would wear more designer clothing or very popular or expensive brand [sic]. This is depicted through the way Katniss describes the Capitol to be, filled with bright greens, deep pinks, kind of like the overwhelming amount of people that walk through the streets of Times Square and the plethora of bright screens that display more than colorful commercials to capture the attention of those walking by.

Another student, Student 18, spent the majority of his journal summarizing, instead of analyzing, but he did show a sign of analysis when he identified a theme in the novel, after breaking down the different class levels within District 12. He wrote,

She [Katniss] lives in the poorest district in the country, District 12, however they [sic] are still many rich people who live in District 12. These people are known as the merchant class, they are the people who own the shops in the nicer part of the district. Nevertheless she lives in the poorest part of district [sic] 12 called "The Seam" where starvation is common for many people...The theme of Rich Vs Poor [sic] is shown here. How the government is so rich but the poor have it the hardest. There is a big gap between the rich and the poor that is ever going [sic] theme in the novel.

Even though Student 13's first journal did not contain very strong examples of analysis, he did attempt to exercise some analysis skills. He compared the reaping to a draft and a lottery drawing, he hypothesized how Katniss felt about Gale, and he



commented on the way Katniss was treated at the Capitol, discussing why it was surprising.

For the 39% of students who did not analyze in their first journals, what did they do? Students 1, 4, and 8 wrote an extended, detailed summary. They included plot details, as well as details about the setting, characters, and the Hunger Games. But, they never went beyond the “what.” I provided written feedback to try to help these students understand why their journals did not include analysis, as well as how to take what they had and analyze it. I underlined a few sentences where students were summarizing and posed a question. For example, if the student wrote, “Katniss volunteered for Prim,” I wrote, “Why do you think she did this? What does this say about her character?” I also wrote a note at the end of each student’s journal, explaining their grade. For the students who did not analyze, I encouraged them to choose one character, one theme, one scene, or one moment that stood out to them and look at the “Why?” and “How?” questions. I encouraged them to start with their first reactions to the book, then move into posing questions, and attempting to answer their questions. There were seven students who did not demonstrate analysis skills in their first journals. Out of these seven, three students improved by Journal #3 and demonstrated analysis skills. For two of the seven students, they did not demonstrate analysis skills until Journal #5, and for one student, he did not demonstrate analysis skills until Journal #7.

The written journals were documentation of most students’ quick understanding of analysis, and one student even referred to these early days as helping her, in her post-unit reflection. Even though Student 8 did not exhibit analysis skills in the first journal,

she did improve after more instruction. She wrote, “What really made me understand analysis finally were the exercises my professor had us do in class. On the first couple of days of class when we went through exactly what the difference was between analysis and summary.” Similarly, Student 6 wrote in his post-unit reflection,

When reading the Hunger Games [sic] and we had to write an analysis for the first five chapters, I had decided to write what I thought would be a good analysis, which was, but when I had begun to write it I [sic] as if it were a summary, I didn’t really question anything or try to dig into the story a bit more to understand it, I just wanted to get the reading over with and the writing over with as well, before the Hunger Games [sic] I hadn’t read anything else in depth like in this class, so to analyze a book was very different. Anyway, I had decided to start it like a summary and as I began writing and remembering what the teacher had told me to do, like question everything and try to make sense of things and give similarities to the world out of the novel, and then that’s when I started comprehending what it means to analyze.

Student 6’s response above not only illustrated the effectiveness of the early lessons, but it also showed his ability to articulate his learning process. Here, the student is demonstrating metacognitive skills, by describing what it is he learned, as well as how he believe he learned it. This excerpt might explain this student’s success in analyzing, in that he was able to understand analysis, but he was also able to demonstrate awareness of his learning analysis.

**First class discussion for the unit.** Even though these first journals, and students' anecdotes, were evidence that the explicit method of instruction was effective, students' analysis skills were even more developed during the first class discussion on the novel--- including students who did not exhibit analysis skills in their written journals. In this discussion, I split students up into groups of three. I found (from another class) that providing students with specific questions from the beginning could inhibit their discussion. They feel as if they are searching for the right answer to my question. So, instead, I told students to start with their first reactions to the chapters, and we would go from there. Of course, most students started with surface-level opinions, as I observed from making my way from group to group. They would say things like, "It was different from the movie" or "It was boring." So, I asked them to challenge each other with "why" and "how" questions. I made my way from group to group to facilitate discussion. It was in my asking them these "why" and "how" questions that they truly did start to analyze. And, there were some great discussions that used analysis.

In one of the groups, students were struggling. So, I asked them, "What do you remember about how the book started?" One student said, "I didn't understand why the author included the cat. That was pointless to me." I challenged him and asked, "Why do you think the author would include the cat? What do you remember about the cat?" He mentioned that the cat was messy and seemed poor, too. I asked, "So, in a way, the cat is another symbol of poverty and hopelessness within their world and house?" He said, "Yeah, I guess I get it." But, what is interesting is that another student in the group, Student 12, spoke up and said he disagreed with me. He said that the cat more likely

symbolized hope because it was the only thing that made Prim, the little girl, happy. I commended the student for not only challenging my interpretation of the cat, but also for bringing up such a valid point. We then talked about how pets are symbols of hope for a lot of people in today's society. I pointed this out to the entire class when we discussed the chapters as a class and reminded them that there is no right/wrong answer for analysis. I pointed out that we both had different interpretations of the cat, and that is okay. Both were still analysis.

In another group, I had a conversation with Student 6. He started by saying that Haymitch being drunk and falling off the stage was childish. But, I challenged him. I asked him, "Why do people drink? Why does Haymitch drink?" This prompted them to talk about Haymitch's past and how that could have affected his psychological state, thus leading to him drinking. The students also talked about how the alcohol symbolized his wealth and social status, too, since alcohol was probably hard to get, though not for him, since he won the Hunger Games in the past. These initial ideas led to bigger ideas, such as the society within Panem, and the author's attempt to illustrate the complexity of that society. It also led to discussions about the irony of the term "winner." What is he really winning? What is he losing? During the large class discussion, another student said that Haymitch had lost himself. He had lost everything. Through these initial challenges and questions, I was able to help students get to analysis.

The best discussion, by far, was with Student 1. Even though my discussion was with Student 1, the rest of his group members listened in as well, so they too were exposed to the dialogue. In his group, we talked about control. First, we started with what

the signs of control were. The students came up with examples, such as the peacemakers, tesserae, the Hunger Games themselves, the fence, and lastly, the trading. Even within this discussion of control, we compared the fence to animals and prisons. This was getting into analysis, using compare/contrast skills. This in itself was breaking down the theme of control. But, I think we went even further than that (synthesizing, drawing conclusions, identifying themes, and creating an overall theory about control) by my asking, “So what does this say about control in *The Hunger Games*?” Student 1 said that you cannot control everyone. Student 4 then said that you can only control people to a certain extent. People will eventually want a democracy and not dictatorship. This gauging and pacing of the questions was key to them getting to this end point, though, I believe. They do not always know how to get there on their own. And, this was in line with Bloom. We started with some basic comprehension, application skills, and eventually led into analysis, synthesis, and evaluation. Perhaps they did not realize what they were doing, and perhaps in a way even I did not realize what I was doing, but in looking back on it, using that Socratic method and the pacing of questions in line with Bloom’s taxonomy, is what got students there together.

**Reinforcing analysis throughout the unit.** Even though class discussions were successful in having students analyze, I realized after the first couple of journals that some students were still struggling to understand the difference between summary and analysis. These are the students who had no clear understanding of analysis coming into the class due to lack of previous experience and knowledge. Up to this point in the semester, they had not demonstrated analysis skills. Therefore, I decided that reinforcing

the definition of analysis, as well as the difference between summary and analysis, was necessary. This was again going back to the basic definition, using the explicit method of critical thinking instruction. I believed that if students were still misunderstanding the difference between the two, it was because they misunderstood the definitions of the skills. But, perhaps seeing examples of the two skills, in addition to definitions, would be helpful as well. I believe the students needed to see what the two skills looked like, in the context of our novel, in addition to reinforcing the definitions.

I thought that the best way to get them to understand this difference was to model the difference through my own written examples. So, I wrote four different sets of sentences about the book. Some of these examples used summary only, some used analysis only, and some were a mix. I put them on the document camera and asked them to identify summary and analysis. The students seemed to struggle at first, but in going through each sentence together, one at a time, I reinforced what summary was (fact, can be found in the reading, is right or wrong), and what analysis was (idea, cannot necessarily be found in the reading verbatim, can be argued against). What really stood out to them was this idea of right and wrong. That is, you cannot say that this sentence is wrong: “Katniss practiced training, and she shot an apple in the pig’s mouth.” To them, that was silly to say it was wrong because they read the chapters and knew that had happened. However, when I put a sentence like this on the board---“Katniss’s anger, though probably dangerous at the time, actually may have worked in her favor because it showed that she was a good shooter, that she was strong, and that she was not going to

give up---all things that are essential to survive the Hunger Games.”---they saw that this was analysis because you could technically disagree and interpret it to be another way.

One student even discussed this activity in her end of unit reflection. Student 2 wrote,

The main thing we did in class that helped me understand the difference between analyzing and summarizing, is the in class activity where our professor posted a couple of examples of analyzing and summarizing, and we had to determine what they were as a class.

In her Journal #8, she reflected upon this activity, too. She wrote,

In class on Thursday it was very useful for our professor to put up some examples of how to distinguish summary from an analyzing written [sic]. Summary we have to reflect on the plot of the story and explain what is happening in the chapters or book. Analyzing consists of asking questions and going deep into what happens in the story the word why and how and so on. At the same time when you are writing an analyzing [sic] paper you could also include summary so one could know what you are trying to analyze. This exercise helped me understand a bit more of writing an analyzing paper throughout the end of the semester.

This excerpt not only showed that she wrote about the activity being successful, but in her writing, it proved to be successful because she was able to define analysis. She even included those keywords that I associated with analysis---“how” and “why.” Even though no other student directly referenced this specific activity in his/her end of unit reflection,

several students generally referenced class discussions, repetition of the difference between summary and analysis, and other aspects related to the explicit method of delivery as helping them to learn, and understand, analysis.

In addition to students' journals improving, the in-class discussions continued to be fruitful as the unit progressed. After two weeks into the unit, I moved from group to group and found that nearly everyone in every group was able to analyze. Most asked questions of "Why" and "How," or answered others' questions and comments with those words in mind. But, some were more analytical, in depth, than others. In one group, one student, Student 6, was asking about the Avox, and he said, "I didn't understand why they were running." We boiled the question down to the fact that they were probably running from the Capitol, based on the details/descriptions that the book provided. The evidence that the book provided suggests that they came from the Capitol based on how they were dressed. However, this student challenged that. He asked, "But, how do we know? How do we know they're running from the Capitol?" He continued with, "Isn't it far away?" I was slightly caught off-guard because I had never even thought about that. He went on to say, "The Capitol is somewhere like modern-day Rocky Mountains, and where they were found was like West Virginia. And, why would they run from the Capitol? Isn't everything great there?" Even though he had only read this book, up to this point, (as he admitted to me), his finding was actually foreshadowing what we find out in books two and three.

And the larger class discussion went into even more detail with possible hypotheses that we created about the Avoxes. One student suggested that maybe they



were previous tributes, and they had somehow escaped another district or the Games themselves. Another suggested that maybe they were from another district, or a different district altogether that we do not yet know about that is a part of the Capitol that only the Capitol knows about. Here, students were creating hypotheses based on details they knew and analyzed from the story. This was higher order thinking beyond analysis. And we built upon this at the end of class, too.

At the end of class, I introduced two new concepts that were separate from the novel, but that related in theme: Foucault's Panopticon and Plato's cave. They struggled with the latter, since we were running out of time in class. But, we walked through the Panopticon analogy slowly. My goal was go get them to understand what the Panopticon was, then apply that idea to *The Hunger Games* and analyze the similarities and differences by comparing/contrasting. After drawing a picture of the Panopticon, I explained how it was used for surveillance and how/why it worked---by the prisoners believing that a guard was in the watch tower, not necessarily because there was one in there (because usually, there was not one in there). To get them to understand this idea, though, I asked questions along the way rather than lecturing to pique their interest. I asked, "What do you think they did to save money, but to make sure that the prisoners were being kept under control?" And the class said, "Not put a guard in." I said, "Yup." Then, I asked them to relate it to *The Hunger Games*. I asked where we see this if anywhere. We started talking about this paranoia of the people in the districts being watched or heard. They also identified things such as the Peacemakers, the electric/wire fence, the Hunger Games themselves. But then I asked, "Is there any evidence anywhere

that the people actually *are* being watched or listened to?” Yes, there were the Peacemakers, but they let things slide. Yes, there was the electric fence, but that was not always on, as evidenced by Katniss and Peeta slipping through it. We broke it down to find that there was not any evidence or proof to show that the Capitol actually was listening or watching, thus showing the power of psychological control. In other words, the Hunger Games/the Capitol took the guard out of the tower, and so far, it has worked because the people in the districts still believe that he is in there and/or do not even think to question it. I told them to pay attention to details because how does this system of control break down--- either the people find out there is no guard, or they stop caring that the guard is there.

Subsequently, students remembered this Panopticon idea; a few decided to expand upon the comparison in their journals. Student 4 wrote,

Furthermore, I learned about the Michael Foucault panopticon [sic]. This method was invented to be used in prison. It [sic] purpose was for prisoners to be control [sic] at all times. There was a tower place right in the center of the prison where they could see all the prison cells. The window of the tower was made for the person in the tower to see out, but the prisoner could not see in. They never knew if someone was actually in the tower watching them. This is psychologically. Just like thin [sic] the book “The Hunger Games” [sic] tributes were so control [sic] by the Capitol they always thought someone was watching them.

The fact that first- and second-year students were able to comprehend a complex theory such as Foucault’s was, in itself, impressive. However, students took that theory

and compared it, and applied it, to what they were reading, demonstrating strong analysis skills.

Another student, Student 5, took the comparison into more depth. She wrote,

[In discussing the society within the book] Here, like in Foucault and Bentham's model, society functions as a prison, where the people needs [sic] to believe that anybody can be punished by the government or the central power by [sic] anytime. At a certain point where people paranoid [sic] would make them "tower or police" themselves. For example in the book there's not a clear evidence [sic] of the government being as involve [sic] as everybody thinks. What makes them act inside correct [sic] according to the capital standard [sic] is the fear getting published [sic]. As a conclusion Collins and Foucault recognized that modern society is in the stage of a paranoid mechanism, originated by control power [sic], which at the end people bring to themselves since they are part of the system.

Student 5's analysis here was near graduate-level, in terms of her ideas. She, too, was applying Foucault's (and Bentham's) theory to the book and picking out specific examples that illustrated those similarities. She then looked at the bigger picture of what those similarities meant, relating it to the originators of the ideas: the authors of the theories and book.

Another student, Student 2, picked out a specific aspect of our discussion on the Panopticon and expanded upon that in her journal. She discussed the idea that prisoners behaved within the Panopticon because they believed there were guards watching, even if

there were not guards watching. She discussed how there were examples of this in *The Hunger Games*, too. She wrote,

In the Hunger Games [sic] District Twelve many [sic] do not dare go into the woods due to the fence that surrounds it that carry [sic] bolts through it, but as we read along we figured out that the fence may only electrocute in certain hour [sic] when the Capitol allows electricity. Like the idea of Panopticon the community of District Twelve do [sic] not go through the fence due to the electricity that they assume is within the fence, when in fact most hours of the day they [sic] fence is normal. Like the guard not being in the towers, the Capitol has controlled to [sic] District to behave and stay. Simple, because the District do [sic] not want to find out what could happen with a Capitol that has so much power as in controlling twelve districts to do and act as they please.

Again, here, Student 2 was applying Foucault's theory to *The Hunger Games* to try to find examples to compare and apply. Here, Student 2 was using the skills from Bloom's "Application" level, which is below analysis, but she was also using skills from his "Analysis" level by comparing and contrasting. This type of critical thinking was complex, though, because it first required that students understood the theory itself, that they understood the novel (separately in and of itself), and that they overlapped the two in order to understand how they compared. What was remarkable about Student 2's particularly strong analysis in this journal was that she was a student who started off not understanding analysis right away; in fact, she had a rather negative experience with analysis in her previous class. However, she was able to achieve this level of depth in her

analysis within the first couple of weeks (This was Journal #6.). This further proved that the aspects of this unit helped her to improve her analysis skills quickly.

In addition to discussing Foucault's Panopticon idea in class, I also introduced students to Plato's "Allegory of the Cave." I drew a diagram that explained the different aspects of the cave and briefly discussed the allegory. I encouraged students to further explore this idea in their journals, in how it is similar to *The Hunger Games*. A few students chose to do that. Student 12 wrote,

With Plato's allegory of the cave [sic] it shows how hard it can be to break free of something when you've known no different. The difficulty for a rebellion to succeed against a superior military with poorly educated and poorly fed people can be almost impossible especially with all the districts cut off from one another. That coupled with the difficulty of creating a new government from a poverty stricken population with limited education and a more powerful and hostile neighbor. All these together give the capital [sic] a strong hold on the districts.

In this excerpt, Student 12 was showing the similarities between Plato's cave and people within *The Hunger Games*. His level of analysis was strong, in that he was trying to understand the complexity behind why people never started a rebellion. But, here, he was comparing it to the main message from Plato's "Allegory of the Cave." Just like with Foucault, Plato's "Allegory of the Cave" is sometimes difficult for students to understand right away, let alone be able to apply to something separate that they are reading.

Another student, Student 15, also wrote about Plato's cave. He wrote,

Katniss and her family has [sic] lived in District 12 all their lives and they only

know what the capitol [sic] shows them and from what they have heard or seen.

And the same goes for anyone else living in the different Districts, everything is the same; they have only lived in one District and only know what they've seen or heard from the Capitol. With this being said the Districts are like the prisoners and the Capitol are the puppeteers showing them what they want. Was District 13 really once a place where people lived? Or is the Capitol just showing them fake pictures and video of a place that has never been there. [sic]

Not only was Student 15 examining how Plato's theory related to details from the chapters, but he was also questioning aspects of the book within the line of Plato's cave and theory.

I saw the evidence first-hand during class and in my field notes that class discussions had a huge impact on students' analysis skills. And, it seemed that students agreed that these in-class discussions, both small group and large/whole class, helped them improve on analysis skills, as was evident in their post-unit reflections. Student 17 wrote,

One of the major contributors to my analytical improvement was the discussion of the chapters in class after turning in the journals. It gave a lot of ideas and points of view that I wouldn't have thought of incorporating in my reading and writing otherwise.

Similarly, Student 5 wrote, "I think the discussions during class helped me a lot with my papers. They made me realized [sic] different points of view from my classmates. I feel more comfortable writing an analysis paper now than before." Here, students were

attributing their improved analysis skills to hearing other students' different perspectives. In hearing, and contemplating, a perspective that is different than theirs, or one that they had not thought of themselves, students are thinking critically. It is not necessarily the content of the ideas that is important; it is the fact that students are observing other students analyzing within class, and students are then able to mimic those skills for their homework. It seems that students realized this as well. Student 13 wrote,

I have noticed that as we discussed what analysis really was and started to go over them more in class, and had group discussions with the people in the class, I started to mostly try and grab one or two real big events that happened in the book and expand on those instead of having all of these little analysis pieces and thoughts in the journals.

By my reinforcing what analysis is in class, as well as having students exercise analysis skills, students were receiving practice with analyzing. Student 18 also wrote,

What helped me was our group analysis when as a class we analyzed the book and my peers also shared their thoughts and ideas. This helped a lot because it gave me multiple perspectives of how other people perceived the book. This allowed me to expand further on the ideas of my peers and also expand on my own ideas as well.

And Student 12 wrote, "The in class discussions really helped me understand what to look for and showed me the other aspects of the book that I missed in my own reading."

Again, it is not necessarily about what students are discussing, but how they are discussing it. This is much like the discussion of the cat students had on the first day of

discussion. Even though most students thought nothing of the cat, it took one student analyzing the cat in depth and discussing its significance for others to realize that they should be inspecting details of the book more closely to recognize significance and symbolism.

In addition to practicing analysis skills with discussion, other students found that they were able to generate ideas for homework as well. This may have helped students avoid writer's block when it came time to write their journals at home. Student 2 wrote,

My classmates sharing what they thought, this class was helpful with all their great ideas when it came to writing papers, I loved when we would share due to one may think they have great ideas themselves, but when we all got to talking it opened your mind a but [sic] deeper.

Student 6 wrote,

If there was anything at all over this semester that I learned in English 112, it would be the one thing my professor would revolve around for each of our journals; [sic] analysis. I can now confidently say I will go into any class or anywhere at all knowing what the difference between analysis and summary [sic]. What made me it [sic] really stick with me this time was the exercises that my professor would have us do so we could really understand what we were learning. I always looked forward to see [sic] what new type of activity or class discussion she had for us, because it not only helped a lot, but it was enjoyable at the same time. It wasn't like other professors that just talk about it once and that'll be last



time you'll hear it again. She really got it to stay stuck in my head and understand it without any other complications.

Here, Student 6 also pointed out one of the main findings from the study: the importance of repetition when teaching and assessing analysis. As the student noted here, analysis took time to develop, so it is important for instructors to remember that when creating a course or unit. Additionally, the student made comments that reflected her concept of learning: having ideas stick, clearly understanding the idea/concept, and the value of repetition. She also grouped two concepts together in describing her learning---“helpful” and “enjoyable.” If the idea of a lesson being enjoyable is worthy enough to mention here when talking about her learning, that could be an aspect that is important for her as a student. Even though she does not directly make the connection between a lesson being enjoyable and her learning something, in that they have to be mutually exclusive, it seemed to be an element that was desirable or appreciated.

**Contemplation of Analysis in the Reflective Journals.** These comments reflect students' thoughts about the unit at the end of the unit. But, students were also required to write reflections of in-class discussions throughout the unit (Journals 2, 4, 6, 8, and 10). Students took different approaches to these reflections; some used the journals to expand upon points from class, further practicing their analysis skills. Others used the journals to reflect on their learning, thinking about their knowledge about the chapters before class discussion, and how that knowledge may have been affected or altered after we had class discussion. These reflections illustrated the effectiveness of class discussions on students' learning.

In Journal #2, the first reflection of in-class discussion, Student 7 wrote,

One of my group members brought up the cat, when I first read about the cat I felt it had no importance to the story. He brought up the fact that the cat was actually comfort or hope for the little girl. The cat was so beat up but yet it comforts the girl during hard times. We also pointed out another hint that told us the family was poor because Katniss wanted to drown the cat because it was ‘just another mouth to feed.’

What was significant about Student 7’s journal was the fact that in talking with a classmate, she was able to see a different perspective and view an aspect of the story that she may not have otherwise. Remarkably, her journal started off by talking about “I” (her view) compared to “he” (her classmate’s). But, as she continued to write about what the group discussed after that, she used “we.” This showed that though they came into the group with different views, they were able to put their analysis skills to good use by working together to break down what different aspects of the chapters meant. The act of analysis was a solitary act coming into the group discussion, but it ended as a collaborative one.

A similar thing happened with Student 2. She wrote,

In today’s class we had some incredible discussion about our opinion in small groups. One of my member [sic] mentioned how he disliked Haymitch [sic] character was portrayed as a sloppy drunk and not too much as a good person. We agreed that it is not his fault that he became an alcoholic; we [sic] had been through a rough patch. Couple years back he won the hunger gain [sic], but in real

life what did he really win? A bad conscience he killed for his own life, and now he has a duty to be a mentor and teach other young kids survival needs. Even though many praise him for winning food for his district the sacrifice he paid was not worth it and to be able to copy [sic] with himself he turned to alcohol.

It was interesting here that a group member came into the group with an opinion---that he disliked Haymitch---but as a group, they were able to analyze Haymitch's character, breaking down why he may have turned out that way, which involved analyzing his past, the Hunger Games themselves, and the society in which they lived.

Student 5, in one of her later journals (Journal #10), wrote about how class discussion made her see a new idea from the chapters, which then prompted her to expand on that idea and analyze in her journal. She wrote,

Last class discussion brought my attention to a very interesting aspect of the book.

Suzanne Collins use [sic] the bread as a very important source of nutrition in

District 12 and 11. Bread that can be used as a religious symbol. According to

Christians, bread is a symbol of life, it is a nourishment that can sustain life.

She then expanded upon this symbol of bread, where else bread was seen throughout the book, and the possible meaning or intent the author had for that. Even though Student 5's analysis of the book included religion, Student 12 observed that the book itself lacked religion. He wrote, "What I never took note of while reading was the lack of any religion being mentioned throughout the book." He was writing about how his ideas of the chapter changed after class discussion, so this showed that class discussion planted a new seed in his mind, and he also went on to use the journal as a place to expand upon that

idea. In an earlier journal (Journal #8), he also wrote, “The similarities between slavery of the American south and district eleven [sic] didn’t occur to me until they were brought up in class.” Also, Student 5 wrote in her Journal #8, “Last class discussion on the Hunger Games [sic] was very interesting because I couldn’t see after reading, the Capitol [sic] own paranoia of control.” She went on to write about the different examples of control, analyzing the effect of those examples and the overall theme of control throughout the book. These examples showed the importance of class discussion on developing students’ analysis skills and introducing new ideas.

Another student, Student 14, also talked about how his ideas changed after class discussion, which also served as an example of the effect class discussion had on students’ learning. In his Journal #8, he wrote, “I went into class thinking differently about the previous chapters. I was thinking when Peeta was picking the berries, he blatantly didn’t think they were poisonous. But now I see the possibility that maybe he planned it.” He went on to write, “I learned a lot more in class than just reading by myself,” and later he wrote, “I definitely left class today with another perception of the book.” He went on to write about a few other ideas from class that he had not thought about, and he immediately analyzed them, thinking about why something happened or how a certain theme played out in the book. All of this was evidence that the class discussion gave him an alternative perspective to the chapters, created a sort of cognitive dissonance in him, which then prompted him (like many others) to use writing, specifically this journal, as an outlet to further analyze and explore those ideas in depth.

In a similar way, Student 4 wrote about the different ideas and viewpoints that were discussed in her small group. She wrote,

When I left class I really thought about what I [sic] classmate had said, about Peeta. Now I believe that maybe [sic] is true and Peeta was done [sic] it all for love. Why else would someone get almost kill [sic] for saving someone. It have [sic] to be because he really loves her. After talk [sic] to my group, I believe it [sic] true Peeta was a coward he stand up for her many times.

What Student 4 did here was take her ideas, integrate them with her classmate's ideas, and put them together to determine how she felt about an idea. In her writing, "When I left class I really thought about..." it showed that the discussion was encouraging her to think about things on a deeper level, beyond just in-class discussion.

Other students also wrote about how class discussion impacted their own ideas of the chapters. One student, Student 10, began by writing about his group discussion, and ended by writing about his own ideas. He wrote,

We also talked about the hidden control in the book. When on the roof they didn't want to talk because they were afraid that they were being listened to. When the fact of the prison tower in the center of the prison but there isn't really a guard in the tower came up and that made me think of other possible hidden control. Then I speculated that there was really no such thing as sector 13 and it was just used as a false way of striking fear into the sectors [sic] eyes.

What the student did, without realizing it, was foreshadow what happened in the next couple of books. He was analyzing by taking one idea, applying it to the book, and identifying other theme or clues that illustrate that idea.

Similarly, Student 12 started by writing about class discussion and then segued into his own reaction and thoughts as a follow-up. He wrote,

During the class discussion we talked a lot about themes and what to look out for while reading the hunger games [sic]. The question of whether or not we would put any blame on Effie Trinket was brought up and everyone said no but we couldn't exactly day [sic] why. I think it's hard to blame one person for the system that they grew up in and are completely unequipped to fight against or change. This and Haymitch's alcoholism are both part of the widespread desensitivity in hunger games [sic].

Here, Student 12 used his journal as an opportunity to further think about some of the ideas we discussed in class and to expand upon his own thoughts and reactions to them. By doing so, he was practicing his analysis skills by going into even more depth to explain why---in this case, why do we not put blame on Effie Trinket for behaving the way she does.

Another student, Student 4, admitted in her Journal #2 that the class discussions helped her. She wrote,

Having the class discussion really helped me out. I was so confused with how to do an analysis, but when I started talking to the people in my group and hearing the way they did it helped me understand the way it was supposed to be done.

Furthermore, having the class discussion made me think of so many topics I can choose to talk about.

Additionally, Student 8 wrote,

During our class discussion on the Hunger Games [sic] we really got into certain aspects about the book that I did not quite get while I was reading the book myself. We went more into depth with the book than they really give you. For instance the reasoning for all the strict rules they have for them...it's all there to control them.

She went on to write about some of the ideas we discussed in class that were new to her, or that went into more detail than she had originally considered. In this way, she, along with many other students, may have been using the reflection journal to repeat what was discussed in class. However, this could have been an important process for her learning. If she was choosing certain ideas from class discussion that stood out to her, it had to be of some importance. Perhaps here, the act of discussing as a class collaboratively, and having students reflect on it individually, was proving to be more meaningful than simply lecturing to a group of students without giving them an outlet to participate or interact with the ideas and course material.

Another student, Student 18, wrote in one of his later journals (Journal #10) how the class discussion impacted his thinking about the chapters. He wrote,

In class yesterday we reviewed over many new ideas and topics in the previous four chapters that we read. My thoughts on the chapters completely changed after

I finished class yesterday. My peers discussed some great topics and good themes that I would've never guessed.

He then went on to write about those specific ideas, expanding upon them as he wrote.

Similarly, Student 6 wrote about how the class discussion helped him truly understand analysis, and this showed through his defining analysis in his reflection and providing an example from what he read. He wrote,

In class we had spoken about the things that made the story a story through analysis. Through this I had begun to understand what analysis meant, it's an interpretation of a story read that goes in-depth to find out what everything being read really means. Things such as how childish the reaping came off, because of Haymitch being drunk and falling off the stage, giving a sense of awkwardness like no one wanted to be there really.

Student 6 then went on to discuss in detail what his group talked about in terms of why Haymitch drinks. In his writing about the class discussion, he was showing that he understood analysis, and that he practiced analyzing through class discussion.

Student 15 wrote about how class discussion made him realize ideas from the chapter that he would not have realized himself. He wrote,

In class we discussed many topics that I would have never realized on my own about The Hunger Games [sic]. A paragraph may just be a bunch of words but if you looked in between every line and evaluate every sentence then there is a whole other meaning behind it.

He went on to give an example:



For example, we discussed that Haymitch was a past champion who was addicted to alcohol and a drunken champ who does not care about Katniss and Peeta.

Anyone who has read the book probably thought that at first that Haymitch was an insensitive person who did not care about these kids and what could happen to them during the game. Haymitch was once a champion where everyone loved him at that time; he won food for himself and gained fame, so why did Haymitch end up as a drunk? Yes Haymitch won the games and yes he won to fight for his life, but by surviving the games and by going through all that Haymitch experienced, he also lost his sense of morality. Haymitch is a drunk probably because that is his way of coping with himself and all that he's been through.

In his reflection, Student 15 went on to write about other topics we discussed in class and wrote statements like, "Something I probably would have never thought of..." Here, his use of these phrases showed that he did indeed learn something new from the discussion and that he was thinking about that.

These journals that served as reflections, though ambiguous in terms of directions or instructions on what to write in them, were an incredibly important component to the lesson. Through the excerpts shown above, it was clear that students took on a more active role in their learning by being forced to think about what it was they learned. Not only were they asked to think back upon class activities, thus spending more time with the material and ideas, but they were also asked to ponder how their ideas coming into the class may have changed or evolved as a result of class activities and their subsequent considerations. Essentially, they were being asked to reflect on what it was they learned; I

was forcing them to see and realize that they were, indeed, learning. The two important acts within this activity and assignment were reflecting on learning, and the act of learning itself. Had I not asked students to reflect or spend more time on class material through dialogue, perhaps their learning would not have been as deep, or their self-awareness not as apparent.

When examining students' rapid progress when participating in the explicit method of critical thinking instruction, it begs the question of why go on? That is, why have students write 14 journals, instead of just one or two? If the majority of students understand analysis after the lesson, is it not okay to simply have them produce one product (a paper), as most classes usually do? There are several reasons that justify having students continue with the unit, but the main three are:

1. Students make even more progress from journal to journal, further honing their analysis skills.
2. Students admitted, in their end of unit reflections, that repetition of journals is what helped them to fully understand analysis.
3. Students learn at different paces, so some students need more time to understand analysis.

Both #1 and #2 above were reflected in students' journals from week to week, but also in students' reflections, where they describe aspects of the unit that helped them learn analysis. Several of them discussed the journals as helping them to learn analysis. Student 5 wrote,

In every chapter we were asked to write an analysis and summery, [sic] this part in particular help [sic] me engaging [sic] in the writing process, because I normally read a lot but I'm a little insecure about my writing skills in English. Surprisingly I did very well on all of them so I felt very motivated to read and write the journals for the chapters. In the end, I became a huge fan of the Hunger Game's [sic] books and movies, encouraging me to improve my writing and literary skills for the future.

What helped Student 5 here was the grade he received on his journals, which reinforced that he was mastering analysis. For him, not only did he need the journals to practice his skills, but he needed to see that grade to confirm that he was getting it.

Similarly, Student 5 wrote,

Actually going through the process of participating in the writing assignments, compiling and analyzing the context during the first nine weeks with the journals for the book The Hunger Games, [sic] not only help [sic] me to improve my writing and analytical skills for this particular class, but also for my Political Science, Economic [sic] and French class which I also took this fall of 2013.

Here, Student 5 emphasized an important element to learning analysis: the transfer of the skill. She is showing that her learning analysis had an impact beyond our classroom, and learning analysis helped her in her other classes. In writing this, she recognized another important lesson---that analysis is a skill required in many classes and across disciplines. Perhaps in seeing that analysis skills are important beyond our classroom, she too could have recognized the significance and importance of what we were learning as well.

Student 2 also wrote about the impact of the assignments:

While reading the Hunger Games [sic] we had to write analyzing [sic] papers while reading the chapters so that we could explore more to why or how we thought a certain theme was happening during the book. This was very helpful for me, because prior to this semester I had attended an English 112, but did not understand that [sic] analyzing meant and the purpose to why it is used. Now if you ask me to write an analyzing [sic] paper I know exactly what to look for [sic] what questions to ask, and to pick out a certain theme and dig more into it why or how is happening, those are the two main question to ask if I was to ask to explain to someone what to do when writing and analyzing a paper.

Also, the reflection paper [sic] that were due to reflect on what we learned or thought of that certain days [sic] assignment or class helped me a lot when it came to writing big papers, like the analyze [sic] paper.

Student 2's excerpt showed that the assignments helped her learn analysis, but even more importantly, she wrote that she learned the purpose of why a student analyzes. Here, she was wondering, "Why would the teacher have us do this?" And, in answering the question, she discovered the significance of analysis. Even more, the reflection assignment provided an outlet for her to think back on her learning, as she noted here. The journals assignments, then, not only reinforced analysis skills, but they reinforced the importance and value of those skills.

Student 15 also recognized the long-term value of learning analysis. He wrote,

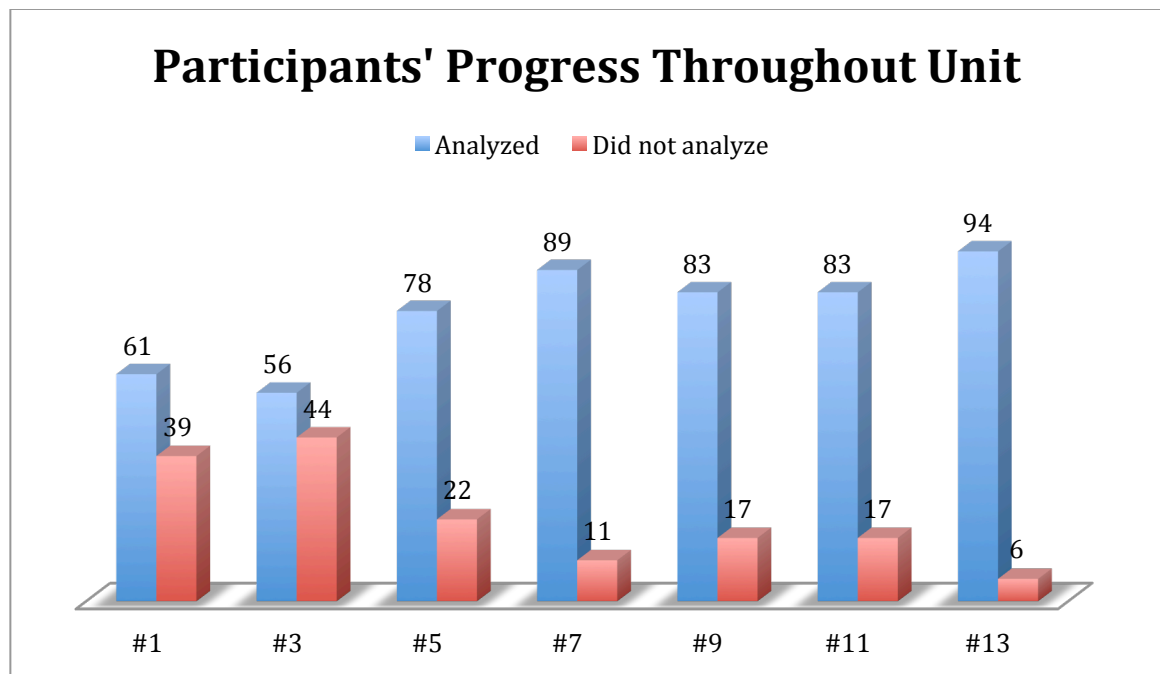
I believe that the every night homework really did help out a lot. Reading and analyzing something every night really helped me improve my writing and comprehension skills. Making analysis about something so simple made a big difference for me in my preparation for my literacy paper because I knew what I was doing and I knew what I was looking for. Analyzing can also be very helpful to me in the long run because not only does it apply to writing papers but it could help me when one day I hope to run my own business and helps me understand the business aspect.

Again, Student 15, like the others, attributed the repetition and nature of the homework assignments to his learning analysis. However, he saw the lasting value of learning analysis, beyond college years. In his recognizing that analysis skills were used in the workforce, he was assigning worth to those skills by realizing that they are something that could help him in his future. Moments like these take students beyond the “now” of the assignment---that they are completing the assignment for a grade. Instead, it allows them to see the “So what?” of the assignment, which helps them look at the future and how that assignment will help them later, beyond the scope of our classroom and the “now.”

Another notable observation about these excerpts is that students discussed the acts of reading and writing together to help them learn analysis. The writing and class discussions helped them understand the reading and the themes, ideas, and points of analysis throughout. And the reading, as well as class discussions, helped them generate

ideas about what to write. Students were grouping these tasks together as being equally important to their learning analysis.

Many students were able to use the journals to hone their analysis skills, and many students quickly exhibited analysis skills. However, what about the 39% of the class who did not exhibit analysis skills quickly? These students needed more time, as well as more guidance, in order to understand and exhibit analysis skills. Figure 6 illustrates the percentage of students who exhibited analysis skills in their analysis journals throughout the unit.



*Figure 6:* Participants' progress with analysis throughout the unit.

The chart above shows the percentage of participants (who submitted the assignment) who demonstrated analysis skills in the assignment. Only the odd numbered journals were included, since these assignments specifically asked students to write an analysis of the chapters read. The even-numbered journals asked students to reflect, which also requires analysis and critical thinking skills, but the format for those journals varied for each student. The criteria I used for identifying whether or not a student analyzed were the skills listed in Table 3. In short, I was looking for students to go beyond surface-level observations and opinions, and summary. I wanted students to investigate, explore, question, and answer, or ask, the “How?” and “Why?” questions. What the data shows in Figure 7 is that that even though not all students were able to demonstrate analysis right away in their first journal, nearly all of them eventually did.

Student 4 was one of those students in the 39% who did not exhibit analysis skills in her first journal. Student 4 wrote a detailed summary in her first journal for the analysis section. However, in her second journal where she wrote an analysis of the chapters, she started to investigate more of the “why” and did demonstrate analysis skills. She broke down one scene, and Katniss’s and Gale’s decisions to not help people in danger. She wrote about why they probably decided to not help them:

I truly believe that Katniss and Gale were afraid of what the bad people could have done to them and their families if they would have helped the young girl and boy. I bet it must have been hard to find them self [sic] in that position.

She went on to write about the reasons, though, as to why they should have helped. She wrote,

They were both hunters and knew the woods really well; they also had weapons to kill the animals. Gale and Katniss had these two great advantages that could have helped or maybe safe [sic] the young girl's and boy's life from the people following them.

Here, she was dissecting the characters of Gale and Katniss and explaining why those attributes would have applied to the situation they were in, putting them in a position to help. In a way, Student 4, here, was evaluating their decision, using supporting details she pulled out from the text to support her position. She then went on to compare this specific scene to today's society. She wrote,

I can definitely relate this part of the story to today [sic] society. We hear all around the world and we can even watch videos in YouTube about people witnessing a crime and just watching or videotaping the situation. Just like Katniss and Gale that must had [sic] been scared for their life's [sic] and also would could have happened to their families if they would have tried to help the young girl and boy also happens today in our society. Many people in our society can see someone hurting or killing a person and would not say or do anything because they are afraid of what could happen to them if they try to help.

It is clear from this excerpt that she was understanding analysis. The fact that her previous journal was all summary (even though she put it under the analysis section) and this was not shows that she understood at some point the difference. In her post-unit reflection, Student 4 wrote about her experience with her first journal, and it was quite



traumatic. However, she went on to discuss the repetition of journals and how that helped her continue to hone her skills. She wrote,

My first journal was horrible and I got a 10 out of 20. I also cried so much and wanted to drop the class because I thought I was not going to ever understand what analyzing was to the fullest. [Another student in the class] tried helping me out and tried to change my mind about dropping the class. Never the less [sic], when I start writing journals almost every day I was undemanding and putting my analyzing skills in practice.

Student 4's excerpt here shows the theme of struggle with learning analysis. For her, when she did not "get it" right away, it became devastating and emotional for her. The grade of 10/20 confirmed for her that she was not getting it, and this almost led to her moment of defeat, of giving in to the struggle. But, with the help of a classmate, and with the repetition of the journals, she had opportunities to try again and continue working on those skills. And, even though she did not mention it here, she did start to improve, and the grades on her journals increased. So, it was not just that she continued analyzing in her journals, but that the grades reinforced that she was getting better at it, too.

In addition to the journal assignments, Student 4's understanding of analysis also came out in a class discussion after the first journals were submitted. I put a chart on the board that explained the different skills of analysis, compared to lower-level thinking skills (Figure 7).

Lower Order Thinking Skills	Higher Order Thinking Skills
<p>1. Knowledge –</p> <p>What is ...?  How is ...?  Where is ...?  When did _____ happen?  How did _____ happen?  How would you explain ...?</p>	<p>4. Analysis –</p> <p>What are the parts or features of ...?  How is _____ related to ...?  Why do you think ...?  What is the theme ...?  What motive is there ...?  What conclusions can you draw ...?</p>
<p>2. Comprehension –</p> <p>How would you classify the type of ...?  How would you compare ...? Contrast ...?  How would you rephrase the meaning ...?  What facts or ideas show ...?  What is the main idea of ...?  Which statements support ...?</p>	<p>5. Evaluation –</p> <p>Why do you agree with the actions? the out-comes?  What is your opinion of ...?  How would you prove ...? Disprove ...?  How can you assess the value or importance of ...?  What would you recommend ...?  How would you rate or evaluate the ...?</p>
<p>3. Application –</p> <p>How would you use ...?  What examples can you find to ...?  How would you solve _____ using what you have learned ...?  How would you organize _____ to show ...?  How would you show your understanding of ...?  What approach would you use to ...?  How would you apply what you learned to develop ...?</p>	<p>6. Synthesis –</p> <p>What changes would you make to solve ...?  How would you improve ...?  What would happen if ...?  How can you elaborate on the reason ...?  What alternative can you propose ...?  How can you invent ...?  How would you adapt _____ to create a different ...?</p>

*Figure 7: A list of questions that help students understand higher order thinking skills (Stowe, 2011).*

I explained to students that they should use this chart to help them when they wrote their analysis papers. I told them to focus on the right-hand side (higher-order thinking skills) and stay away from the left-hand side (except when summarizing). We

went over some of these skills in the analysis section, talking about how it involved the “How?” and “Why?” questions we talked about before. But, I also encouraged them to use the other two boxes, and those skills, under the “Higher order thinking skills” side--- evaluation and synthesis. But, I emphasized the importance of not just including their opinion or evaluation of something, but expanding on that and explaining why in detail.

After I finished going over this in class, Student 4 raised her hand and asked, “So, we should be picking one theme and focusing on that for our papers?” This was a great question because really, this was a sign of her beginning to understand analysis. Here, she was realizing that an analysis can focus on specific points, not the entire book. Instead, students could choose one scene, one character, or one page, and dive into more detail on that. What Student 4 was doing in her journals up until this point was trying to discuss everything in the chapters. As a result, she would have a page filled with different points, but her points lacked depth and analysis. So I said, “Yes, this is a great approach.” After class, she said, “I think I get it now. When I was writing my paper, I did write about lots of different things. But, after you explained that you should focus on one thing, I think I now know how to analyze/write the papers.” This was a good “ah ha” moment for her to understand analysis. Sometimes, it takes time, several different explanations, or students’ doing it incorrectly first, to see the difference. Even though she was exhibiting some analysis skills in her journals, she still had room for improvement, in terms of choosing one idea and expanding in detail on that, as opposed to covering several topics with less depth. I explained this to her and told her to write about that in her reflection (Journal #2) to capture that learning moment.

Student 8 is another student who took longer to understand analysis fully. Her first journal was also all summary, and most of her second one was as well. There was one sentence in her second journal that showed an attempt to analyze the “why.” She talked about Katniss angrily blowing up at people right before the games while in the Capitol. Student 8 wrote,

I really think this is happening to her due to that [sic] this whole game is just for the entertainment of the Capitol. Those that have grown up in the Capitol are used to this because it’s all they have ever really known and don’t know exactly any better.

The same thing happened in her third analysis journal. She was attempting to break down scenes and examine meaning behind them, but she seemed to give up quickly and wrote something like, “I can’t figure out why....” It was not until the fourth analysis paper that she started to develop her skills more. She concentrated on and interpreted one detail in the chapter: the Gamemakers making a rule change. She examined the “why” behind this decision:

Why all of a sudden in the middle of the Hunger Games there is [sic] a rule change? After the Capitol seeing [sic] the way Katniss reacted towards Rue’s death they feel accountable for this. This is what she was trying to do. The flower bed [sic] she made for Rue so that all could see, especially the Capitol. This is what I think the reason was to the game change [sic]. Katniss had got to them really good this time. The Capitol believes that Peeta is in love with Katniss so if it came down to the two of them or one had been killed off, the Capitol would feel

responsible for that as well.

Student 8 reflected on this development of her analysis skills in her end of unit reflection.

She admitted that she did not understand analysis coming into the class, and she also talked about how the class exercises helped her understand the difference. But, she discussed how it did not necessarily improve everything at that point. She wrote,

I still had a difficult time on what I had to write for my analysis... Still after having all the practice I had difficult times coming up with my own ideas on what I thought about the book but towards the end of my journals for The Hunger Games [sic] I can definitely see I understand it a lot better.

She seemed to understand this continuum of learning, and that honing analysis skills, was a process. She even went on to discuss how she would continue to improve her skills through revising her papers. She wrote,

I now know when going back to revise my journals what exactly I need to change and what to put more in of [sic]. My first couple of journals did have my ideas in them but I need to go more into depth with it all and then lead up to why I think this way and maybe why it happened in the book. I need to compare and contrast my thoughts with what the writer has because there is usually more to a situation than what you just read on paper.

Her comments demonstrated several points. First, they demonstrated her own recognition of her skills, showing her self-awareness. Second, they showed, through her explanation of analysis, and her reflection of her own skills, that she had a very full, deep understanding of what analysis was. While other students were able to analyze

effectively, they may not have been as able to articulate why, or how, they were analyzing---matching up the definition to the skills. Even though it took Student 8 a little longer to understand this, it was well worth it because she not only understood analysis, but she understood the depth of what it meant to analyze text, as well as her own learning process.

Even though Student 4 and Student 8 struggled in the beginning, they eventually reached the point where they understood analysis and were able to analyze in depth. Student 1, however, did not seem to have the same success---at least with his written journals. In every single analysis paper Student 1 wrote, he continued to summarize. Not once did he demonstrate analysis skills in his written journals. I even had a few conversations with him, both in person and via e-mail, trying to explain that he was summarizing, not analyzing. We talked about how his summary was good, but his “analysis” was the same thing as his summary, just with more details. It did not seem to have any effect, though. Even when he submitted revisions, his “revised analysis” was still just summary. It was almost as if he had not changed a single thing.

**Repetition of journals.** For the most part, however, it seemed that the journals promoted students to practice, evaluate, and improve their analysis skills. The journals required students to practice summary and analysis skills, as well as reflection skills, in thinking about what they were learning through class discussions. In their post-unit reflections, students explored how the homework helped them improve their analysis skills, especially the repetition of it. Student 4 wrote,

Writing journals and class reflections really helped me out the [sic] understand how to do analyzing [sic] writing. There [sic] a saying, that the practices [sic] makes the expert, and by writing journals for every class help [sic] me put to practice my analyzing tool.

Similarly, Student 17 talked about how the journals helped him improve his analysis skills. He wrote,

After all the practice with the numerous other journals, I was able be able [sic] to state understand [sic] the process of much better [sic]... After the practice that came about from the journals, however I believe I have improved to the point where I may not be perfect when it comes to analysis, but I find it much more manageable and easier to comprehend.

Student 9 also commented on the journals helping, with an emphasis on the repetition. She wrote,

I think just reading up on what the difference was between analysis and summary and then applying in [sic] all of our journals as much as we did forced me to know the difference. The repetition of doing summary and analysis helped me sort between which was which.

Student 15 agreed:

I believe that homework really did help me the most because every week we had a journal to do that would compare and contrast what we just read in The Hunger Games [sic]. Even though I thought it was a lot to handle but in the end it really did help me because I did it so much that I got used to it and it became natural to

me. Making analysis about something so simple made a big difference for me in my preparation for my literacy [sic] paper because I knew what I was doing and I knew what I was looking for. So I would say the homework really helped me out the most.

Student 12 wrote a similar observation, “The journals were a massive help to me when I went to write my final paper... The practice from the journals does a lot more than one paper at the end with minimal lead up to it.” Here, Student 12 was not just commenting on the repetition and practice that came from doing the journals, but also the benefit of using several products to assess skills, rather than one product. Plus, with the journals, students had the opportunity to explore several different themes and ideas throughout the semester, at different points in the book, as opposed to one final paper where they had to choose just one thing to write about. Reading a 300+ page novel, and choosing one aspect of that novel to analyze, can be a daunting task for first-year students.

**Moving beyond analysis into Bloom’s higher-order thinking skills.** Most students demonstrated analysis skills effectively in this unit. But, some went beyond analysis skills, into synthesis and evaluation. And some even applied creation skills. This was most evident in one of the last journals, where I had students write in-class essays. Students were given three prompts and asked to choose one to write about. One of the prompts simply asked students if there was a class system within *The Hunger Games*, and if there were, to describe it. This prompt involved more basic skills of identifying, applying, and some analyzing. Two of the prompts involved questions that required



students to analyze, as well as synthesize and create (Bloom's top tiers). These prompts were:

- Create a district that could overthrow the Capitol. Explain your answer in detail.
- Create, and explain, the perfect tribute. Explain your answer in detail.<sup>1</sup>

These two questions require students to take what they know about the districts or tributes from the book, examine that district or tribute, determine which characteristics are effective and which are not, examine the Capitol and other features from the book, and then use those (and possibly other ideas of their own) to create a new district or tribute.

One student, Student 10, created an entirely new district, but in doing so, also created an addition to the end of the book. His district was formed before the book began, but his district involved current districts, and future events that had yet to occur. His essay demonstrated his ability to apply what he knew about the Capitol, two districts, and the Hunger Games, and created a situation in which this new district could provide information to those other districts to help them overthrow the Capitol.

Student 8 similarly analyzed the conditions within the book and thought about why the districts could not overthrow the Capitol. And she applied those aspects to her

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<sup>1</sup> More students chose the second prompt. Students who chose the first prompt were more successful in their analysis because they were required to think about current districts, as well as the Capitol (two tasks), whereas the students who chose the second prompt merely picked characteristics of tributes currently in the text. Both tasks required analytical and synthesis skills, but the first prompt produced stronger essays.

answer. She wrote that the perfect district to overthrow the Capitol would have to be sneaky, united, and strategic. Most of her essay came from the conditions within the book that illustrated the Capitol's constant surveillance and control. So, she first had to analyze the current book before creating a new scenario. Another student, Student 4, did a similar thing. She first noticed that the reason the districts currently had not overthrown the Capitol was fear. So, she noted that the district to overthrow the Capitol would need to have no fear, would need to believe in itself, and would need to remain united.

Student 1, who struggled to demonstrate his analysis skills in his journals throughout (though did not struggle with discussion) created an incredibly detailed scenario where a different district was more controlled than any other, but one day they decided to overthrow the Capitol, unite the other districts, and create a new society. But, he did not fail to notice the difficulty in this, as he wrote that it eventually would lead to a world war, where the Capitol fought against the new district for power once again. Not only was his essay incredibly creative, it also demonstrated his understanding of the complex powers at play within the novel, all relating to control. He did not oversimplify the situation by stating that the new district would take over and that would be it.

Students who wrote about the perfect tribute also were required to apply analysis skills, synthesis skills, and creation skills. They first had to analyze/examine the current tributes and what the successful tributes had that others did not. They were also required to think about past victors. What most ended up doing was not just writing about the victors, but also writing about the "best of" qualities from all the tributes combined, after analyzing not just the tributes, but also the Hunger Games, the Capitol, and the

environment itself. Many of students included these characteristics: mentally and physically strong, emotionless, fast, intelligent, brave, and motivated. But most, when listing these characteristics, highlight characteristics between stark polarities. That is, it was not as if characters had these characteristics, they would survive. They pointed out examples from the book that worked as exceptions to the qualities of victors. Each student, then, ended up ranking the skills in the end, or explaining what factors needed to be in place in order for each tribute to win. This showed their understanding of the complexities within the novel.

Regardless of the prompt students chose, what was significant about their essays was that the prompts required students to use higher order thinking skills beyond analysis. And, students excelled with this. They first had to analyze either the current tributes in the book or the current districts in the book, determining what it was about those tributes or districts that made them successful, and why. They then had to select those characteristics and create (the highest order thinking skill) a new tribute or district. The prompt that asked students to create a district that could overthrow the Capitol asked students to analyze two components at once: the current districts and what characteristics are effective within those, as well as the type of rule the Capitol has over the districts. They were required to look at how the Capitol controls the districts, and what is successful or unsuccessful about the current districts, before creating a new district. Not only are students using higher order thinking skills with these prompts, but they are also being asked to use them with multiple components or layers.

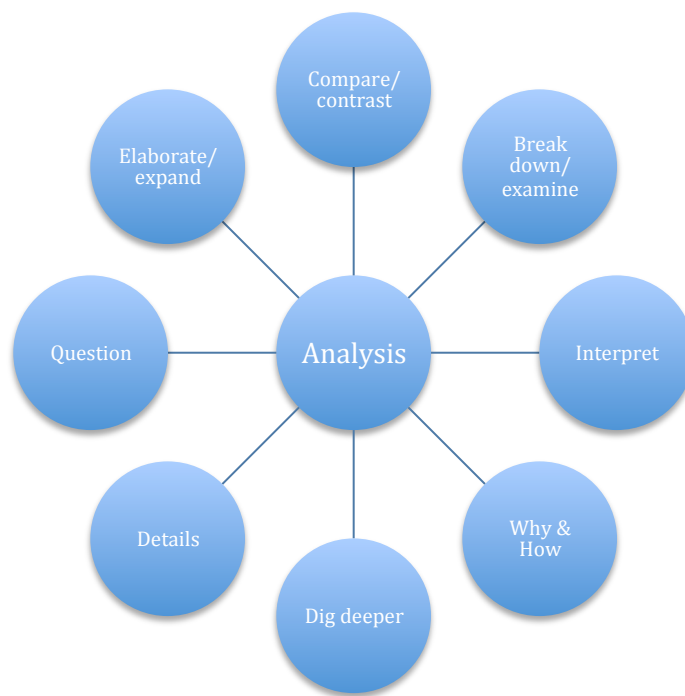
This major finding shows that even if the instructor's goal is to teach analysis, it is possible to push students to higher order thinking skills beyond analysis. That is, once they master analysis, continuing to demonstrate more complex skills in line with Bloom's taxonomy. I believe there were several reasons that students were successful with this essay. First, they had practice with analyzing, and they had mastered the analysis skills before being asked to use these higher order thinking skills. Had I asked them to write an essay like this earlier on, they may have struggled because they may not have known how to first analyze the situation before providing an answer. It may have produced essays with less depth and surface level opinions, much like the pre-unit writings. Another reason students excelled with this essay, I believe, is that they needed a new challenge. At this point in the semester, I could tell students were getting bored and fatigued with analyzing the book. A few even admitted to that. So, when given the opportunity to use a different thinking skill, or when asked to write about the book in a different way---a way that requires them to use creativity, in addition to other higher order thinking skills----it was a refreshing change for them. Instructors can take note of this, and when students in the class have mastered analysis skills, instructors can then introduce the next higher order thinking skills in order to prevent students' fatigue and to move on to the next task to challenge them. This was something I did not do right away---rather, I introduced it at the end of the unit---but it could have given students more of an opportunity to use higher order thinking skills beyond analysis earlier.

## **Post-unit Analysis Skills**

It was clear from students' pre-unit writings and reflections that they had weak or nonexistent analysis skills before the unit began. It was demonstrated through the various aspects of the unit (journals, class discussion) that students improved on their analysis skills throughout the six weeks. When looking at students' post-unit writings, as well as their reflections of their post-unit skills, it is apparent that they had a clear definition of what analysis was, and their analysis skills had improved.

By the time the unit finished, students had a clearer understanding of analysis, and they were able to distinguish the difference between summary and analysis. Whereas before the unit when students thought both skills were synonymous, after the unit, they realized they were different---and, that they had different value. That is, instructors typically value analysis skills more than summary skills, especially at the college level. This was discussed in Chapter One. Summary plays a much more minor part in college writing, and analysis plays a major part.

While students' post-unit analysis skills improved, students' definitions of analysis (as was seen in the data) differed. However, Figure 8 illustrates the most common skills, keywords, and definitions that students associated with analysis.



*Figure 8: Students' post-unit definitions of analysis.*

**Post-unit writings.** Just as I asked students to write a summary and analysis response to Dave Barry's "We've Got the Dirt on Guy Brains" before the unit, I asked them to do the same after the unit. In their post-unit writings, most students demonstrated an improvement of analysis skills, compared to their pre-unit writings. While in the pre-unit writings students simply summarized or provided an opinion, in their post-unit writings, most students pulled out a specific idea, expanded upon it, added interpretation, or analyzed how the writer built his ideas. However, there were still a few students who did not necessarily demonstrate strong analysis skills in their post-unit writings.

Student 8 contrasted her personal experiences to the points from the article. She wrote, "I completely disagree with this statement [about a man being unqualified to do housework]...My family of men is actually the cleanest people I've ever met." What Student 8 did well, that goes beyond contrasting her experience, is that she made a conclusion about what she had written, contrasting her experience to the article. She wrote, "Both male [sic] and females can be extremely messy or neat freaks but I think it all depends where you grew up and whether or not you were forced to clean when you were younger." By making this last point, she was attempting to not overgeneralize and was pointing out factors that were associated with the conclusion the author made, noting exceptions. She was attempting to show that it was not a simple dualistic issue.

Another student, Student 3, discussed her personal experiences related to the article, but she talked about personal experiences that confirmed the author's point. Again, she was using compare/contrast skills---here, compare more than contrast. Another student, Student 4, was doing the same. She wrote, "I do agree with Dave Barry because my boyfriend is a great example of all the difference [sic] Barry talks about in this article." Student 5 did a similar thing. She wrote, "For example at the movies, I always cry when there's a kiss, a happy or sad moment, on the other hand my boyfriend next to me doesn't show any exertions of emotions."

One student, Student 6, analyzed one of the author's sources in the short article. Even though the student did not understand the tone of the article, the student analyzed the author's words and resources. In this, he was taking one small part of the article and

breaking it down, asking the “why” questions for “how” the author was making his point.

He wrote,

Okay, so the author writes about how there is proof men and women think differently based on a book, he doesn't say who the author is, let alone give an indication that the author is female. If the book was written by a female then I'm pretty sure there could be a possibility that there's a male perspective written rant on What Could She Be Thinking? Also, he probably should not have mentioned this part solely based off the fact that he even says he personally didn't read the book. If you didn't read it, don't talk about it, because that can become a credibility issue and the topic trying to spread to the audience is quickly tossed out the window due to its unreliability. Also speaking along the lines of unreliability, how am I supposed to believe that men usually don't think as much as women do and that's why they go “hmmm,” a lot during conversation?

Another student, Student 7, analyzed the author's reference to a book in his article that he used as evidence. She wrote,

Dave Barry has this theory that guys have a genetic flaw the reason why they cannot do house [sic] efficiently. I think his theory is wrong because he is using facts from a book he did not read himself. He used an article by another write [sic] to basic [sic] his facts from. He does not take the time to read it himself, which makes his irate readers partially true about guys being lazy pigs. I say partially because all men may not be lazy pigs but this write [sic] is.



Although it seemed that Student 7 was simply inputting her opinion here, she was actually pointing out a flaw in his theory. This exhibited higher order thinking skills, near the top of Bloom's taxonomy (evaluation). She went on to write,

By using someone else [sic] article he could be using flaws [sic] information that the author could have made up. He talks about the different parts of the brain, that emotion are [sic] located. Reuters did not describe it but Dave used "presumably," meaning he assumed but he did no feather [sic] research to find out if it was fact or fiction.

Again, Student 7 was analyzing and breaking down Barry's theory, and its validity, through his choice of research. She was evaluating the credibility of the research, thus evaluating the foundation for his theory. She went on to write,

Dave states that women take in more "oxytocin" but he doesn't state where he is getting this information from, he could be simply making it up. Dave then states that guys are really just thinking "hmmm", which he is stereotyping guys, stating that they don't really think about anything. At the end Dave then recommends people to [sic] read a book he did not read himself. The book could be a fictional novel but I doubt that Dave Barry researched to find out.

Again, Student 7 was using analysis skills here such as questioning, interpreting, and inferencing.

Other students broke down how the author was making his argument, and a few picked up on some logical fallacies. One student, Student 13, pointed out that the author made valid points, but there were exceptions when it came to men and women. He

discussed the fact that hoarders can both be male and female, which proved an exception to the article in that women are cleaner than men. He also pointed out that while women are more emotional than men, some men “feel like they need to be able to vent due to the stress in their lives as well.” He wrote,

The main point is that even though they state that men and women view things in two totally different manners, a lot of the time they do, but there are those special cases where men and women actually agree or even have the same thought process on something as one another.

What Student 13 was doing here was beyond analysis; he was comparing and contrasting, as well as breaking down the author’s point. But he also ended up creating something, a higher order thinking skill, by creating a new idea: that even though men and women have differences, they can still be similar in some ways. Overbaugh and Schultz (2013) defined creation as the highest level thinking skill, similar to Bloom’s “evaluation” stage. While some may not consider creating to be a critical thinking skill, according to Overbaugh and Schultz, it is a critical thinking skill, and it is considered to be more significant of a skill than analysis. Thus, in line with their research, Student 13 was using the highest level thinking skill.

Another student, Student 15, also picked up on the author’s oversimplification and stereotyping. He wrote,

This [that women have the urge to share their feelings] could be said for a good majority of women out there but not every woman is alike in every way. I don’t really share my feelings that often because most of the time there really isn’t

much to share and when there is something that I'm feeling, I feel like it's not that big of a deal to tell someone else.

Here, Student 15 was breaking down the author's main point and evaluating the validity of it.

Another student analyzed the purpose, rhetoric, and tone the author used. Student 17 wrote, "The author's use of hyperbole when describing both men and women is meant to portray an overall huge 'gap' between how both genders think and react, while in reality the differences depend entirely on the individuals." He then analyzed the author's decision to use humor to make his point. He wrote,

The main focus of the humor used to portray the stated information was in the form of gender stereotypes. Men are displayed as being incapable of the delicacies of housework and understanding the complexities of emotions, both things that women excel at. Instead, they are portrayed as fairly ignorant of the things around them that don't fall into the masculine stereotypes like sports.

Through these stereotypes, though, the differences between the observation skills and emotional capacity of both men and women are highlighted and shown in both an intellectual and humorous way, delivering the information to the reader in a much more memorable and interesting paper than what would come from a typical informative journal article.

Student 17's ability to not only identify the tone of the piece, but also why the author would choose this method to deliver his point showed analysis skills. He was attempting to break down the article itself, the author's points, and how he was making those points.

In this way, Student 17 was focusing on the “how” and the “why” that are essential to analysis.

Even though most students practiced and applied the analysis skills they learned throughout the unit, most of them missed the context, in that the piece was written in a satirical tone. Perhaps this was because they were unfamiliar with the author himself, or they had little to no practice in identifying tone in the past. In addition, students had been analyzing fiction throughout the entire unit, so they had no practice with analyzing nonfiction, let alone a satirical piece. But, what a lot of them wrote was an emotional response to the article—this time, with more details and an attempt to analyze, but still lacking depth. When students provide emotional responses in their written work, it is usually a surface-level opinion or judgment, without the required analyzing, investigating, or examining skills. They are jumping to a conclusion, rather than reaching one with supported evidence and explanations along the way.

Student 16, wrote, “Basically, Barry is saying what women have been saying for years; women just tend to do it in a louder, more aggressive way. It isn’t a man’s fault he’s a lower level of human being; it’s science.” The rest of Student 16’s analysis reads much like this, written (ironically) in a similar satiric tone.

However, not all students missed the context. One student, Student 12, picked up on this perfectly. He wrote,

Dave Barry uses quick facts from the book “what could he be thinking?” [sic] as a way to give hyperboles a factual basis in the real world. The hyperboles are shown from the perspective of both genders in equal magnitude. While he

attaches his hyperbole to facts he makes it clear that he hasn't read the book and is basing what was said in it off of an article written by Reuters and allowing himself another joke in the process. There is not a single sentence in the article that is not part of a joke or leading up to one and the end of one paragraph flows easily onto the next. All of these hyperbole [sic] and jokes about male and female differences are used to support his claims that men do not feel the same drives as women because their brains work differently. They do not see the world around them and interact differently and so are not as capable in some areas. He jokes about daily occurrences that almost everyone could relate to and does so without offending anyone.

Here, Student 12 was analyzing the "why" Barry was using the tone he did and how he was making his point. And he was one of the only ones to accurately identify the satirical tone and purpose as humor. He was able to break down the examples that Barry used throughout and synthesize those, creating an overall evaluation that Barry was using these to convey humor out of an everyday situation---something that Barry is known for. This student was one of the only students to be able to identify the tone and purpose of the article. This shows that some students have a stronger understanding of writing styles than others.

Most students attempted to use analysis skills, and in a way, most students did improve upon their analysis section in their post-unit writings, compared to the pre-unit writing, mostly because their pre-unit writings' analysis sections were simply summary. However, after a unit on analysis, and after demonstrating that they are able to analyze,

synthesize, and evaluate, it was surprising that students' post-unit analysis sections included more opinion and reactions than analysis. It seems that they were attempting to apply some analysis skills, such as compare/contrast, examine, and break down.

However, what they ended up doing more than anything was critique, without providing an in-depth look at the context of the article. So, while the post-unit writing does reflect an improvement in students' analysis skills when comparing it to the pre-unit writing, the post-unit writing does not accurately reflect students' entire analysis skill sets that were captured during the unit. However, in students' end of unit reflections, they did admit to improving their analysis skills.

**Students' reflections about post-unit skills.** In students' pre-unit writings, it was clear that most lacked analysis skills, or an understanding of analysis. And, in their reflections, students accurately admitted this, acknowledging that they had insufficient experience and knowledge with analysis. But, what was interesting in students' reflections about their post-unit writings is that they felt very confident in their analysis skills with that writing, despite what the above analysis of those post-unit writings showed. However, most of the students were generally referencing their analysis skills after the unit as a whole, not necessarily just their analysis skills from the one post-unit writing. When considering this, their admission of improving their analysis skills was much more accurate and reflective of the progress they made, when looking at that progress over a continuum and several products throughout the course, rather than the one post-unit writing product. Additionally, in these reflections, students discussed how their analysis skills developed. By students providing definitions and examples of

analysis in these reflections, they were showing that their analysis skills improved, instead of simply saying that they improved.

In their post-unit reflections, a few students talked generally about their post-unit analysis skills. Student 12, who admitted to having a previous lack of knowledge about analysis, wrote, “Now I would be able to know what to look for and what I should try to write about in my papers... This unit helped my confidence in analyzing writing more than other English classes have.” Student 2 also admitted to improving after the unit. She wrote that she “finally comprehend[s] what it [analysis] does in a paper and a person.” Student 8 wrote something similar:

Throughout the entire semester my professor has taught us many ways on how to understand it [analysis] when you read and write. Up to this point now when I see my pre-writing analysis it looks a lot like a summary and when looking at my post-writing I can see an improvement with my understandings of analysis.

Even though these students did not articulate how they have come to define analysis after the unit, simply being able to recognize a difference in their analysis skills shows metacognitive skills. For students to be able to identify their pre-unit analysis skills as weak and their post-unit analysis skills as strong, it shows that they have a clearer understanding of what analysis is and looks like.

Student 4, who used the analogy of a toolbox to explain her pre-unit knowledge of analysis (and it being empty) wrote of her skills after the unit: “Now I believe that I have the right tools and I also have learn [sic] the correct ways to use them, I no longer have an empty toolbox.” Student 9, who wrote her first pre-unit writing in anger, as she admits,

wrote that that “really was not much analyzing at all, but more my input on what I think.” Her recognizing this alone showed significant improvement and growth on her part throughout the unit, from the beginning to the end, in understanding what was and was not analysis. She went on to write,

When I had read through my first paper I wrote and then my paper we wrote a couple weeks ago, I didn’t even have to finish the summary to know that I had greatly improved on my paper. With my analysis in the new paper, you can really see that it is defined on what a summary is, and what an analysis is. In my first paper, my summary was in my analysis and vice versa.

She admitted that she now “feel[s] very confident to analyze a paper or reading.”

And she admitted,

Granted, I have to control my emotions when reading a paper that gets my blood boiling like the Guy Brain internet article or when we had to discuss gender roles in class, but I feel I have a much better grasp.

While the above students talked generally about their post-unit analysis skills, other students talked specifically about their post-unit analysis skills. In doing so, students provided a definition, or synonyms, of analysis skills within their reflections. This shows how students came to define, and understand, analysis by the end of the unit.

Some students referenced analysis as digging deeper, or that analysis involved asking questions such as “Why?” or “How?” Student 2 wrote,

It [analyzing] makes you think more and digging deeper into a certain thesis that you may be writing about. Analyzing a certain subject makes me think long and



hard to why or how it is portrayed as it is in a reading of some sort, as the book ‘The Hunger Games’. [sic]

Even in her saying she thinks “long and hard” about a topic, Student 2 showed that analysis requires deeper thinking, time, and energy. And while she used to think summary and analysis were synonymous, she wrote, “Now I know they are completely different from one another.” She concluded by writing,

So far during this course I have learned a lot about how to analyze, what questions to ask myself to help me out while writing my papers. I am pleased at my results to as [sic] how far I have come in my writing skills when it comes to analyzing a certain topic.

Like Student 4, Student 2 gained tools to help her analyze—here, those tools are questions that she learned to help her analyze. This is also showing that Student 2 has learned to be self-sufficient when it comes to analyzing. In using the tools she learned, she is able to analyze on her own.

Student 17 demonstrated his understanding of analysis through this statement:

I believe the major difference between my pre-writing and my post-writing is the lesser focus on summarizing and stating facts and more on trying to communicate what I believed the meaning of a certain scene or article and why the author delivered it the way that they did.

Here, he was repeating the “how” and “why” keywords that were introduced with analysis, but also using the word “meaning” to show significance of analysis. Student 18 also used the term “meaning” to describe analysis. He wrote,

Being able to analyze anything is extremely importantly [sic] it allows you to see beyond the surface and find out the deeper meaning behind it. Without analyzing you only [sic] be able to understand the surface level content instead of discovering what's beneath the surface.

Student 7 also used the term “meaning” in writing about analysis and how she came to understand it:

One thing I realized is that you cannot just enjoy reading an interesting book, you have to pay attention to the underline [sic] reasoning or meaning to a passage. I learned analyzing and summarize are two different concepts. Analyzing is exemplifying [sic] what is going on in the article or story rather than summarizing, which is just stating what happened.

In addition to “meaning,” these two students also use the verbs “discovering” and “explaining” when describing analysis. And, Student 7 emphasizes the importance of “attention” with analysis, a skill that goes beyond “enjoy[ing]” a book. This is an important distinction between reading a book for pleasure and reading a book for analysis (especially in a college classroom); in a college classroom, we are not simply reading a book to enjoy it, but we are reading it to explore, explain, and discover, while “pay[ing] attention to the underline [sic] reasoning or meaning to a passage,” as Student 7 said.

Other students, through their reflections, defined analysis as comparing and contrasting, or providing more details on a topic. Student 15 wrote, “Compared to my post-writing I can tell that I have more details in it with it being compared to something else. I would compare and contrast it to something that was relevant in today's society.”

Here, Student 15 was showing in his end of unit reflection that he understood analysis by incorporating the compare/contrast skill. He went on to write,

I would say that my post analysis skill is probably very good at this point. When I read things now I would try and compare it to something in today's society. I did not know that something as simple phrase could actually mean more in our world.

And, Student 15 used comparing as a skill to define analysis. He wrote,

The most important thing I learned this semester was probably analyzing small phrases or sentences. When I read things I really would not think much about it but now I would try and compare it to something in today's society. I did not know that something as simple phrase [sic] could actually mean more in our world.

Student 4 also used the word "compare" to describe analyzing. She wrote,

I learned that analyzing is about be [sic] on the words the author wrote. Is [sic] about thinking what the author meant while writing it, what inspired the author to write. I also learned to analyze and compare what I was reading to today's society, which for me it was very helpful in making the story more realistic. I started to enjoy analyzing "The Hunger Games" [sic] book and how something's [sic] are so similar from the book to today's society such as the district and our government have many differences, but also many similar [sic].

These students were defining analysis as comparing or contrasting, but what they

were also showing is that in analyzing the book, they found aspects of it to be similar to our own society. To them, analyzing became easier because it was relatable and relevant. Similarly, Student 7 wrote,

Once I learned how to analysis [sic], I realized that Katniss was more than just an emotionless character but there were reason why the [sic] made Katniss this way. You cannot help but comparing [sic] common day with the storyline of the hunger games [sic]. I realized that an outlandish storyline like the hunger game [sic] is very similar to our government and history. For example, District eleven [sic] was an agriculture district but their race was African American, it was a reference to slavery. Or the capital [sic] punishing the districts for the past is like after the world war, everyone blamed and punished Germany for the war. Another example is Katniss volunteers for her sister as tribute. This reminds me of soldiers volunteering to go to war to protect their love [sic] ones and America. Both are unsure if the [sic] will survive but they [sic] rather suffice [sic] their lives for another. So the book started to become much more relatable when you start analyzing instead of summarizing the book.

Here, she was not only listing comparing as an analysis skill, but she went on to demonstrate it as well. And, her comparison of the book to society included historical comparisons, as well as global ones.

Student 6 also included an illustration of analysis with his definition. He defined analysis using the word “detail” and the phrase “going into detail.” He wrote,

One of the many things I have learned is that everything can be analyzed, it's the way we try to go in detail with something to understand it. Such things like the Hunger Games [sic], or the article "We Got the Dirt on Guy Brains." It's digging into a piece of information and making it seem more than what it really is. Like for example in the Hunger Games [sic] there is a scene described by Katniss where her [sic] and Gale are in the meadow and they see a girl running through meadow because of her getup... so I concluded through the use of literary analyzing that the girl was from the Capitol and the Capitol controls more than just Districts.

In his definition of analysis, Student 6 also highlighted an important element—the purpose for analyzing. To him, analyzing was going into depth or details, but the reason for that is "to understand it." By understanding what analysis is and why someone analyzes, Student 6 was showing a deeper understanding of analysis.

Student 6 continued on to describe analysis as questioning or elaborating on a topic. He wrote,

If I had to say whether or not my skills have improved post-Hunger Games [sic], I'd have to say yes. I actually have a better understanding on how to analyze a piece of writing, understand what it means to further question something that could be elaborated on.

Other students defined analysis as expanding, examining, or interpreting. Student 18 wrote,

In my post-writing there is a huge difference. My summary was far shorter and it

explained what the article was about but not giving away too much. My analysis on the other hand was a lot better. It wasn't a detailed summary it was actually more of an analysis. I actually analyzed what the author was saying. I took the ideas from the article using a little bit of summary and expanded upon them. I summarized less and analyzed more.

He went on to add,

After the Hunger Games [sic] unit my analysis skills improved so much. The Hunger Games [sic] really help [sic] me develop my skills in analysis. I learned how to analyze better instead of summarize. I can now pull out themes and ideas from pieces of literature and expand upon these ideas and themes.

Student 13 also used the word "expand." He wrote,

For the post-writing, I feel as if I did do a lot better that [sic] before on the pre-writing because I picked the parts that were more strongly brought up in the article, and put my own thoughts and expanded on them.

Student 5 used the words "examination," "deeper," and "interpretation" to describe the analysis skills she used. She wrote, "The way I delivered my ideas in journal 13 [the post-unit writing], is deeper in discussion and interpretation, and also I give less summery [sic] information and more detailed examination." She added, "My analytical skills after the hunger games [sic] have improve [sic] dramatically. I can visualize, and solve complex concepts and make clear argumentations base [sic] on the book and other scholar-sources [sic]."

What was missing in students' pre-unit writings' analyses were their own ideas,

interpretations, and elaborations. This is why students' pre-unit writings were summary, not analysis. So, students were able to see the difference and understand this by the end of the unit, which shows how much their learning developed over the six weeks.

### **Findings Regarding Analysis**

Before discussing students' post-unit skills and reflections, it is important to note a few overall findings from the unit. These were findings from during the unit that contributed to, or affected, students' post-unit skills. There were individual differences, in terms of when students first demonstrated analysis skills. Even though most students did not demonstrate analysis in their pre-unit writings, 61% of participants demonstrated analysis skills in the first journal, following the explicit lesson plan on analysis. A few students, however, took longer to demonstrate analysis skills in their journals. And, while most students demonstrated analysis skills in both class discussion and in written journals, a few only demonstrated them in one format.

One other finding that should be noted is submission rates for the homework. The submission rates also help to explain the discrepancy in percentage of students who analyzed for each journal. And, these submission rates also illustrate that not every student in the class participated in every aspect of the unit to the fullest. The same can be said with attendance rates. Not every single student attended every single class, thus not every single participant received every aspect of the course (including class discussion and in-class lessons/activities). Thus, as mentioned before, these data do not capture the learning of all students in the class. Additionally, the data do not capture the learning of every single participant in the case study because not every participant submitted every

single assignment (Figure 9). As Figure 9 illustrates, there was fluctuation in students' submission rates for the journals. There is no clear explanation for the 61% submission rate for Journal #3, compared to the 100% submission rate for Journal #13. One possible explanation could be that students felt more confident in their analysis skills by the end of the unit, so more students were inclined to submit the last journal, compared to ones at the beginning of the unit. Or, perhaps students felt that they had more time to complete Journal #13, compared to Journal #3, since students had finished reading *The Hunger Games* by this point.

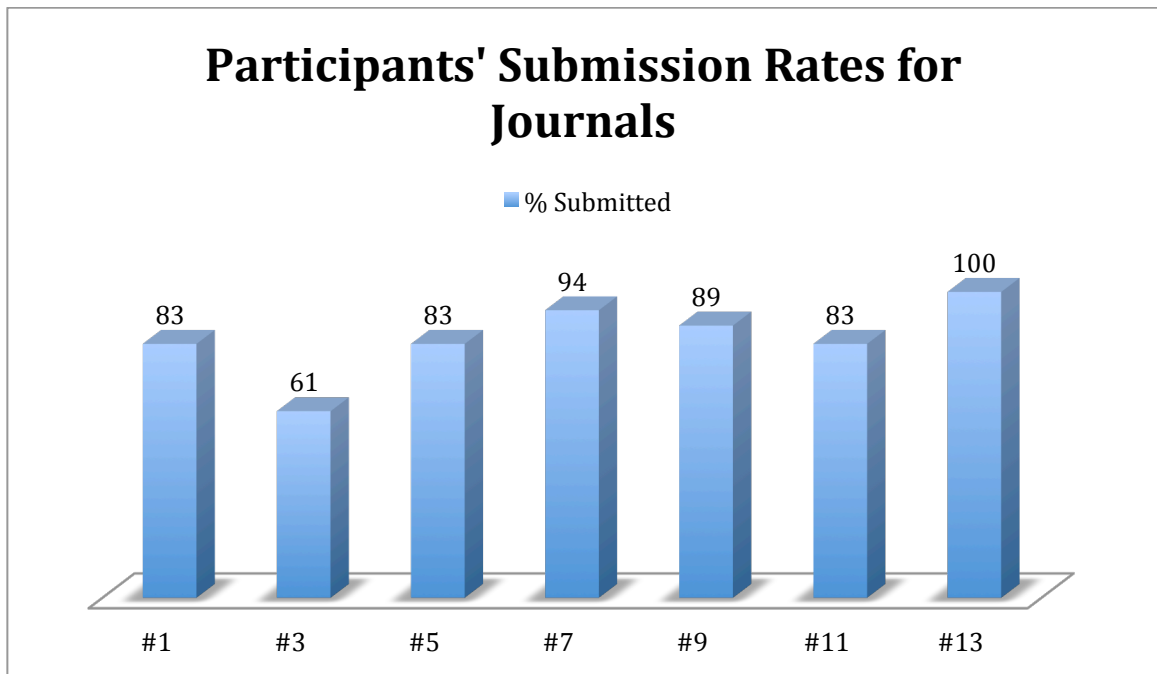
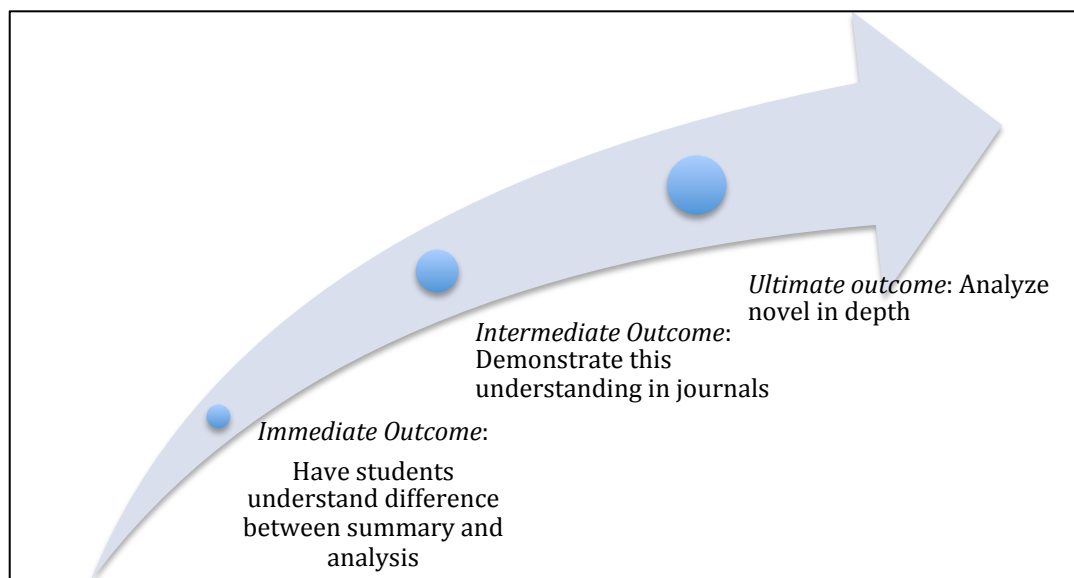


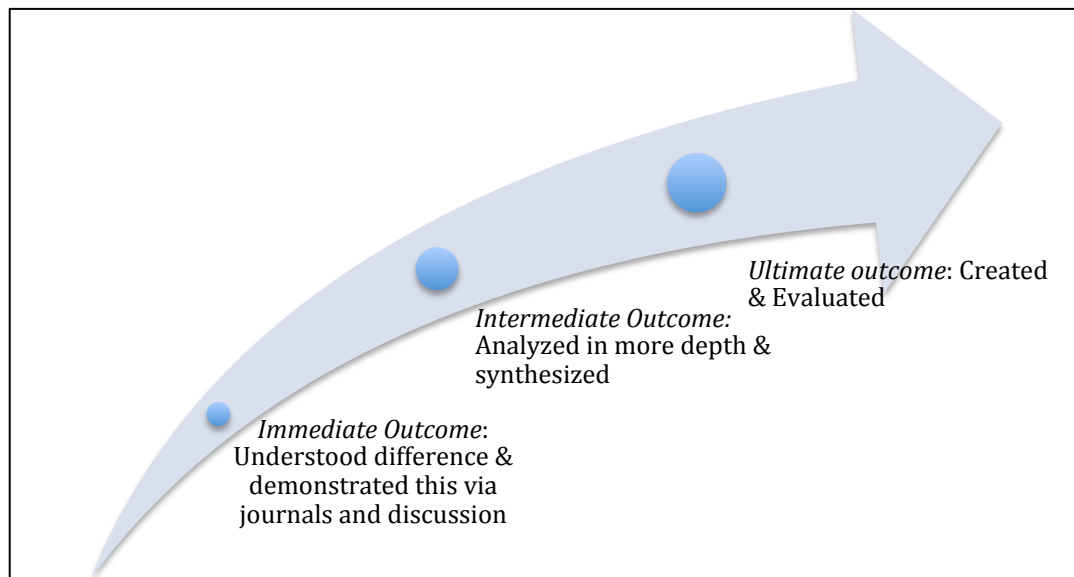
Figure 9: Participants' submission rates for journals.



What was found throughout the unit was an improvement, over time, in students' analysis skills. Figure 10 illustrates what actually resulted from the unit plan, compared to my original goals in Figure 4. Even though my original goal was to have students be able to understand, and demonstrate, analysis skills, students were able to move on to higher order thinking skills, too, as is shown in Figure 10.



*Figure 4: My Goal for the Unit. Adapted from Yin (2003).*



*Figure 10: Students' progression through the unit (Yin, 2003).*

**Summary versus Analysis.** Much of this unit centered upon the difference between summary and analysis, as well as the inclusion of both skills within the unit. By separating summary and analysis, my goal was to conquer Bloom's lower levels of his cognitive domain skills first before moving into analysis, per his theory. In addition, if students often confuse summary and analysis skills (which was found in the pre-writing samples), separating the two may help them to see the difference between the two skills. While this was not successful in students' pre-unit writings, since we had not yet discussed the difference, it was successful throughout the unit. Students were asked to separate the summary and analysis in each journal they wrote, and we reinforced these two separate skills in class discussion. By the time students wrote their post-unit writings, it was clear that they understood the difference between the two tasks.

Students demonstrated an understanding of these concepts throughout the unit, as is reflected in the findings. What was also found was that students particularly latched on to the “how” and “why” questions. This was part of the explicit lesson on critical thinking, in defining what analysis was. In addition, students remembered that with analysis, there is no right or wrong answer, unlike summary. This shows that several definitions and explanations help students, but sometimes it is the simplified definitions, or questions/keywords, that students remember most. It may also show that it is important for instructors to put complex ideas and terms into everyday language in order for students to better understand.

**Students’ Reactions to Reading Material.** Before the unit began, I had to choose what the students would be reading. Of course, my justification for choosing *The Hunger Games* was founded in research, namely Bloom’s taxonomy. To me, if the purpose of the six-week unit plan was to develop students’ analysis skills, I had to choose a reading that would be easy for students to understand. And, while this was a college-level class, I knew I had to choose something below, or at, their reading abilities. Thus, I chose *The Hunger Games*, which is a teen fiction book.

While I understood the reason for my decision to use the text, I was not sure the students would understand the reason as well. I was partly afraid that they would reject the novel, since it has gained such popular attention. I have had students in the past tell me they groaned when they saw we were reading *The Hunger Games* because of the recent hype. But, not only did the students take to the novel favorably, there were many

other positive outcomes that they talked about in their end of unit reflections that validated my decision to use this novel for the unit. Student 18 said,

The assignment where I learned the most from was definitely analyzing the Hunger Games [sic] without a doubt. I learned so much from that assignment [sic] it was also the assignment that I enjoyed the most as well to [sic] because it was such a great book to read. It was hard to stop reading the book [sic] it always made me want to keep reading and find out was [sic] next. Also because I always love to read good book [sic] especially one in English class.

Here, Student 18 was suggesting that interest in a book helped him read it. But, it also seemed that the writing style of the book, the ease of reading it, and the inherent suspense also helped the student read it and complete his assignments.

Student 5 admitted that at first, she was confused about the book selection for the course. However, she then wrote about it positively, like Student 18. She wrote,

When I first read the syllabus and saw that the text required for the class was the “Hunger Games” [sic] by Suzanne Collins I was a little confuse [sic], because since I been [sic] studying in the United States all my English teachers have used classical novels such as “The Odyssey” [sic] by Homer, Hamlet [sic] by Shakespeare or Don Quixote [sic] by Miguel de Cervantes Saavedra. I’m very thankful to Ms. Alwine because this book for me, as a student who [sic] English is her second language, was easy to comprehend and read. I fall [sic] more in love with it because is not only a great science fiction novel but also a comparison to our own society, economy and politics, an aspect that I personally look [sic] in

books. It took me about five pages to be hooked to the story, I didn't want to put the Hunger Games [sic] down.

Here, Student 5 had a similar reaction to the book that Student 18 did. But, Student 5 also highlighted some other important elements to using this book. First, it helped her as an ESL student. This course included a significant number of ESL students, and the college itself serves a large ESL population. Knowing that the book itself is accessible and comprehensible for ESL students can help instructors, whether the assignment's goal is reading comprehension or analysis. Second, Student 5 also found the book to be relevant and relatable, as she mentions that it is comparable to our own society. And lastly, like Student 18, she commented on her interest in the book and how she could not stop reading it. All of these elements are important to consider when choosing a text, especially when instructors' goals involve comprehension, interest, and higher-order thinking skills.

Student 3 mentioned how the book helped her analyze. She wrote,

We started to read the book "The Hunger Games" [sic] and that was the time when I started to learn how to do an analysis. Your strategy on Hunger Games [sic] it's really good. I think it made it easy to understand and learn. I really loved it, I read the whole book even though I do not like to read.

Again, Student 3 is touching on interest, accessibility, and understanding. But, she also connected this book to her ability to analyze, which was my reason for choosing the book in the first place. The most significant experience that validated the decision to use this novel, however, was a conversation I had with a student after class. In my conversation

with Student 6, he said that he struggled with reading, so he had to get the audiobook and watch the film, too. But, he assured me that he was reading the book. He admitted that he had never read a full book in his entire life. I was shocked to hear this, but at the same time, amazed by the fact that this novel had such an incredible power to transform this one student's literacy and perhaps future life of literacy. It was amazing that he was reading, after never having read before. But, perhaps what was even more significant is that by the end of the course, he could say he had read a whole book---for the first time in his life. He said it was an awesome feeling, and I agreed.

I knew that the novel would serve its purpose by being accessible to students and aiding in our lessons on analysis; however, I had no idea that it would have such a significant impact on students' literacy skills and interests.

**The Role of Feedback in the Findings.** There were a few instances where feedback proved to be a useful element to this unit, though not that much compared to the other aspects of the unit. Of course, if a student received 15/20 on his/her journal the first time around, they would read my feedback, make corrections/improvements, and turn in a revised draft. But, it was not necessarily clear if the written feedback actually helped students improve their analysis skills. The only places this was evident was in students' end of unit reflections and in their revisions. In her end of unit reflection, Student 9 wrote, "Your feedback helped me improve a lot as well." This, however, was the only sentence out of all of them that mentioned feedback being helpful. Part of students' perception of feedback could be verbal feedback given during discussions, in addition to written feedback on papers.

I was surprised that more students did not mention feedback as a helpful aspect of the unit. Typically, students usually say on the first day of class that they appreciate professors who provide them with feedback, so that they know how they are doing in class. However, there could be several reasons that more students did not mention written feedback as being a helpful aspect of the unit. First, they could have felt that the written feedback was not helpful. Or, perhaps they felt that written feedback was something that professors should be doing, and thus was a given. Perhaps they were used to receiving written feedback on papers, so it did not necessarily stand out to them as being particularly helpful or extraordinary. Or, other aspects of the unit simply helped more. Many students did mention that class discussions helped them learn about analysis, so students also could have been including oral feedback, provided in discussions and via the Socratic method, as part of the collaborative learning comments, not necessarily as “feedback” per se. Lastly, a reason that could explain students’ not citing feedback as being helpful could be due to the fact that a large portion of the class demonstrated analysis skills successfully almost immediately. It was the students who struggled with learning analysis that mentioned feedback as being helpful. After all, if a student feels they do not need to improve upon a skill, they may not feel they need feedback, so why would they mention it as helping them?

What was shown and found throughout this chapter is that even though students lacked analysis skills coming into the class, students’ analysis skills improved after the six-week unit using the explicit method of critical thinking instruction. This improvement was exhibited in students’ post-unit writings, as well as in their post-unit reflections.

Whereas students defined analysis as summary before the unit, they defined analysis as examining, interpreting, questioning, and elaborating after the unit. The explicit method of critical thinking instruction was the foundation for the success throughout the unit, but the unit plan itself (including journals, discussions, and reflections) also bolstered students' learning of analysis. In all, the unit plan was a success.



## CHAPTER FIVE

In this chapter, I summarize the most significant findings from the study. I also discuss the importance of these findings, connect these findings to previous research, and discuss the implications for higher education, as well as opportunities for future research.

### **Summary of Findings**

After collecting and analyzing the data for this study, and reporting on the findings from that data in Chapter Four, I have summarized the seven most important findings:

1. Students' critical thinking abilities improved after an intervention unit on critical thinking, using the explicit method of instruction.
2. The majority of students quickly learned and used critical thinking skills.  
However some students took a little longer.
3. Regardless of when students first understood and used critical thinking skills, students continued to develop their critical thinking skills over a continuum. In other words, critical thinking requires practice and reinforcement.
4. There were several elements of the unit that contributed to students' learning, including whole-class discussions, small group discussions, journals, reflections, feedback, and the choice of novel for the unit.

5. Reading material choice was found to be one of the most important elements of the unit.
6. Organization of the unit plan played an important role in the success of the unit.
7. Collaborative learning played a critical role in students' learning.
8. Students have a strong ability to describe their own learning processes. In describing their learning processes with analysis, many students described it as a struggle.

**Finding #1: Students' critical thinking abilities improved after an intervention unit on critical thinking, using the explicit method of instruction.** It was clear, after looking at students' pre- and post-unit writing samples that their critical thinking skills improved. Before the unit, students were demonstrating mostly summary skills when asked to demonstrate analysis skills. After the unit, students effectively, for the most part, applied and used analysis skills. However, other forms of evidence more strongly proved students' critical thinking abilities, including journals, in-class discussions (in both small and large groups), and end of unit reflections. Students stated that their analysis skills improved, which in itself was not evidence enough that their skills actually did improve. However, their writings and class discussion further demonstrated that as well. And, in discussing how their analysis skills improved, they were showing that their skills improved as well by providing definitions and examples of analysis.

It was also clear that using the explicit method of critical thinking instruction was an effective, and important, element to this study as well. Students admitted to not

knowing what analysis was before the unit began, and this was demonstrated in their pre-unit writings where they summarized when asked to analyze. However, after just one lesson using the explicit method of critical thinking---explaining exactly what analysis was and was not---students improved their analysis skills (61% of participants). The impact after this first lesson was significant, but reinforcing the definitions of analysis throughout the unit was shown to be helpful as well. It seemed that students needed to fully understand what analysis in itself was, before using analysis skills with the course content. When students described their struggles with understanding analysis before this course, they attributed this to not having a clear definition or understanding of analysis. Even though instructors asked them to analyze, instructors never explained what analysis was. Students were then missing the foundation, the bottom tier of Bloom: understanding analysis.

It also seemed that the explicit method of critical thinking instruction was the foundation for success in this unit. Students admitted that they had never been told what analysis was before, even though they were asked to analyze in other classes. The students---and other instructors---were missing this important first step of defining analysis, ensuring that students understood this complex skill before being asked to use the skill itself. And, even though this initial lesson explaining analysis helped the majority of the class, it was important to continue to reinforce the explicit method throughout the unit. That is, some students needed more than one lesson on what analysis is and looks like. I therefore provided a few mini-lessons throughout the unit to reinforce what analysis was and what it looked like, within the framework of our unit. Students---

particularly the students who were not understanding analysis right away or using analysis skills in their early journals---admitted that these mini-lessons helped them understand.

So, the explicit method is an important starting point for any unit or course that asks students to use analysis skills, but it is also important for instructors to remember that one lesson may not be enough for the entire class to understand. Instead, the explicit method of critical thinking instruction needs to be applied and reinforced throughout any unit or course using analysis skills. This was shown not only in this study, but also in previous research. Several researchers (Bissell and Lemons, 2006; Nenti and Zietlow, 2008) introduced critical thinking definitions, synonyms, and examples at the beginning of their units, and they continued to reinforce critical thinking definitions throughout the unit as well. By providing a clear explanation of what critical thinking activities students would be engaging in, Nenti and Zietlow (2008) were reinforcing the critical thinking component throughout the course, by going back to the first-day definitions. However, it seems these researchers did not necessarily have to re-define analysis throughout the unit, practice activities reinforcing the explicit method of critical thinking instruction, and ensure students were all understanding the critical thinking skills required of them throughout their units. For the most part, in their studies, students understood what was required of them going forward after the first day. For my study, this was not the case, so the definitions and examples had to be clarified throughout. As was seen, some students needed a lesson---in this case, what exactly analysis was---several times in order to fully understand.

**Finding #2: The majority of students quickly learned and used critical thinking skills. However, for some students, it took a little longer.** One of the most significant, and also surprising, findings from the study was how quick an impact the explicit critical thinking lesson had on students. Students came into the class with very limited knowledge of critical thinking, or in this case, analysis. As was evidenced in their pre-unit writings, and in what they wrote in their end of unit reflections about their skills before the unit began, most students were confused when they were asked to analyze. It seemed, from their pre-unit writings, that they believed analysis to be an extended, more detailed summary. But, really, a summary---no matter what detail is involved---is still a summary and is not analysis.

In the first class of the unit, I defined summary, and then defined analysis. And, we talked about examples of each, and how the two skills differed. It seemed that making this distinction first was an important step, since most students confused the two skills. And, defining these words was also an important step. It seems like an obvious statement, but too often instructors ask students to use skills that are assumed students already possess. Also, after seeing examples of the summary and analysis, and realizing the difference, students started to understand what each was. As discussed in Chapter Four, in students' first opportunity to use analysis skills---in their first homework assignment, Journal #1---they accomplished the task. Out of the students who submitted Journal #1, 61% of students exhibited analysis skills. This showed the immediate effect that the first explicit lesson had on students and their analysis skills.

However, there was some variation among students for this first journal assignment: 39% of students still did not demonstrate analysis skills in their first journal. This does not necessarily mean that the lesson was ineffective or that students were not eventually successful. It simply shows that students learn at different rates, and some students need repetition of lessons and assignments before grasping a new concept. This further emphasizes the importance of several different assignments, and a repetition of assignments, so that students have the opportunity to develop those skills. If students were asked to submit one product, as opposed to several products, they would not have that opportunity. It was through writing—and class discussions---that they were practicing analyzing and working on honing those skills. It also shows the importance of feedback, both written and orally, for that 39% who did not analyze right away. Those students needed guidance to understand exactly why what they were doing was not considered analysis, as well as how to improve so that they were analyzing. This guidance could be in the form of written feedback, or it could be in the form of questions. And, I found that students needed specifics. Instead of saying, “Expand on that,” it helped more to ask specific questions, such as, “Why do you think the author included the cat?” This feedback not only challenged students’ thinking, but it helped them to analyze, rather than summarize or provide opinions.

Additionally, for that 39% who needed more time to develop their analysis skills, the reflections helped as well. In the reflections, they were required to use their metacognitive skills, in thinking about their own learning. By having to assess whether or not they understood analysis, it helped them have a deeper understanding of analysis

skills and their own abilities. It was not enough for me, the instructor, to say, “Good job! You’re analyzing.” But, they also needed to notice that themselves and fully understand why that was considered to be analyzing. So, by having the opportunity to practice with analyzing skills, by receiving feedback and guidance along the way, and by reflecting upon their learning, students were able to improve and master analyzing. As was shown and discussed in Chapter Four, nearly all of the class (95%) eventually exhibited analysis skills. Only one student in the class never produced an analysis.

It is difficult to say if this finding matches prior research on critical thinking. Most of the research on critical thinking involves pre-test and post-test measurements. So, researchers within that specific field were interested in students’ skills at the beginning of the unit and at the end of the unit, not necessarily during the unit. Additionally, many researchers looked at one final product to assess critical thinking, using a rubric. Again, this does not necessarily assess the different learning patterns of students throughout the unit; it, instead, looks at the overall success of the unit itself.

Even though my methodology differed from other researchers’, the findings were similar, mostly in terms of success rates. Nearly all of the participants (95%) in my study analyzed by the end of the study. What was important with this particular finding was that 61% of the class analyzed nearly right after the initial lesson on analysis. This showed the immediate affect that the unit had on students’ analysis skills. The remaining 39% of the class took longer to demonstrate analysis skills, and one student was not able to analyze at all during the unit.

**Finding #3: Students developed their critical thinking skills over a continuum. In other words, critical thinking requires practice.** While Finding #2 involved when students *first* exhibited analysis skills, Finding #3 is more about the *development* of analysis skills. While the goal of the unit was to have students be able to understand, and use, analysis skills with *The Hunger Games*, the goal involved in-depth analysis. So, even though the majority of students exhibited analysis skills right away, this does not mean that their level of analysis was in-depth. It could have meant that students showed analysis skills in one sentence. The purpose was to see that students understood, even if only to a small degree, what analysis was after the initial lesson on analysis. So, a significant finding that is important for other educators to understand is that in order for students to further develop analysis skills, and in order for them to exhibit other higher order thinking skills such as synthesis and creation, it takes repetition and time. And, the components of the unit, such as class structure and homework assignments, provided students with the opportunity for repetition of analysis skills and gave them the chance to practice those skills.

This technique, using multiple assignments to have students practice critical thinking skills, has been used by researchers in the past. Reed and Kromney (2001) also used assignments both in class and outside of class to allow students to practice with analysis and interpretation skills in a history course. This proved to be effective, as students performed better on the post-test than pre-test when it came to critical thinking skills. Other researchers (O'Hare & McGuinness, 2009; White et al., 2011) have also found that critical thinking skills develop over time.



**Finding #4: There were several elements of the unit that contributed to students' learning, including whole-class discussions, small group discussions, journals, reflections, feedback, and the choice of novel for the unit.** The research that shows small group discussions promote higher order thinking skills is abundant (Eison, 2010; Hake, 1998; Johnson, Johnson, and Smith, 1991; Knight and Wood, 2005; Springer et al., 1998). One reason that small group discussions are effective is that students are engaged in the activities, instead of passively sitting through a lecture (Eison, 2010). Additionally, students are able to engage in discussion where the other's viewpoint may be different from one's own. Eison (2010) identified this as "academic controversy," which he defined as a moment "when one student's ideas, information, conclusions, theories, and opinions are incompatible with those of another student, and the two seek to reach an agreement" (p. 15). Eison (2010) pointed out that instructors are thus encouraging "critical and creative thinking, promoting student collaboration, and ensuring that students view an event or problem from multiple perspectives" (p. 15). So, by having students engage in small group discussions, instructors are giving them the opportunity to think critically, as well as interact with their peers.

The use of small group and whole-class discussions in this unit allowed students to engage in collaborative learning, which is learning together to create new knowledge based on individuals' integrated knowledge put together. Students admitted in their journals and reflections that these aspects of the unit helped them learn. Additionally, the repetition of writing journals (summary and analysis for each set of chapters) and reflections (thinking about how class discussion impacted their view of the chapters)

prompted students to develop their analysis skills, as was evident in their progress from journal to journal, and their writings about it in their end of unit reflections. Lastly, it seemed that my written and verbal feedback, as well as guidance, encouraged students to further develop their analysis skills, even though they did not directly reference this in their writings (with the exception of one student).

One of the most significant teaching methods used that helped students was the Socratic method. Oftentimes, I would ask students to start with initial thoughts first, both in class discussions and in their journals. By doing this, they did not feel as if they needed to answer questions correctly right away. They simply started with what they remembered. So, to get them to analyze, I would probe them with questions that involved “Why?” or “How?” By doing this, we would get to the analysis stage together. It was not clear whether students realized this is what we were doing or not, but they mimicked this skill in their journals. I encouraged them to look beyond a surface level thought or observation to explore the idea of “Why?” or “How?” And they did this in their journals, as well as in their discussions.

**Finding #5: Reading material choice was one of the most important elements to the unit.** Of course, I had my reasons for choosing the novel *The Hunger Games* for students to read: it was an easy, accessible reading that would allow for students to easily comprehend, so that we could spend the majority of time practicing analysis skills, rather than comprehension skills, per Bloom’s taxonomy. And, the novel was successful in achieving this purpose, as was evidenced in students’ performance on reading quizzes (that tested for comprehension only) and in students’ summaries of the chapters in their

journals. I know that it is not realistic for every college-level English class to adopt novels like *The Hunger Games*, especially if the curriculum involves more challenging reading. But, I think what is important for instructors to keep in mind is that the lower levels of Bloom need to be mastered before asking students to analyze, regardless of what students are reading. So, not only do they need to be understand analysis, per the explicit method of critical thinking instruction, but they also need to be able to understand and comprehend the reading material. It is a common mistake, I think, for instructors to ask students to analyze material before ensuring that they a) understand what analysis is, and b) understand what it is they are reading.

There also seemed to be other aspects of *The Hunger Games* that made it accessible for students. To them, this book presented many relatable elements. Some of the students connected with the characters, specifically Katniss, the protagonist. Others picked up on the class systems and struggles that occurred, comparing it to our own country's struggles. And others chose themes from the novel, such as survival, control, determination, and applied it to their own lives. So, *The Hunger Games* was a novel that was easy for them to both understand and relate to, which in the end, helped them with analyzing it as well. When looking at other texts or novels used in different English 112 courses, I think that those are not as easy for students to understand, and while there are themes that may be relevant to students' lives, I think it is harder to get them to see that as being relatable.

Many times throughout the semester many students also admitted to enjoying the novel---something that was not necessarily part of my intent for choosing it. And, most

significantly, many students admitted to reading the second and third books afterward, a task [reading] that was new to many of them. Even though reading instruction, or reading comprehension, was not part of this study, it ended up being a part of my findings----that the choice of novel in an English classroom can have a positive effect on students' reading comprehension abilities, students' interest in reading, and students' perception of their reading interest and reading skills. And, at the most basic level, if students are interested in what they are reading, they are more likely to read it, to understand it, and to be engaged in course activities.

Within the research on critical thinking, researchers do not spend a considerable amount of time discussing the effect of reading material on students' critical thinking abilities. Within the research on the explicit method of critical thinking instruction, several researchers applied Bloom's taxonomy to their critical thinking instruction. Bissell and Lemons (2006) followed Bloom's taxonomy in creating lessons within their science course. Additionally, Nenti and Zietlow (2008) also used Bloom's taxonomy in their business course. Even though reading material was not necessarily relevant, since both courses required textbook reading as opposed to novels, researchers did understand the importance of students understanding and comprehending the course material before asking students to apply, analyze, synthesize, and create.

**Finding #6: Organization of the unit plan played an important role in the success of the unit.** Although there were several different factors that made the unit plan successful, as were identified in my findings, such as reading material choice, repetition of assignments/skills, and collaborative learning, much of the success of this unit

centered upon the design, especially the steps within the unit. To design my unit plan, I drew upon the success of Nenti and Zietlow (2008). In their study, Nenti and Zietlow (2008) followed these steps in teaching critical thinking skills in a business course: define critical thinking skills, provide synonyms for these skills so students can understand better, identify the course activity that will be used to assess that skill, and provide an example of what mastery of that skill would look like. Even though Nenti and Zietlow (2008) used this study for a business course, I essentially followed a similar pattern. They also used several of Bloom's levels, whereas I mainly stayed within one, analysis. However, in following a similar pattern to theirs---since their study proved to be successful---I believe this helped me achieve success in my study. Essentially, I started by first making sure I was defining a specific critical thinking skill and understand it myself. I then made sure I provided synonyms to my students, along with the definition, and that I made it clear that we would be using several course activities for them to use this skill, such as journals and class discussion. Lastly, through mini-lessons, oral feedback, and written feedback, I showed them what mastery of that skill would look like, and they very quickly figured this out, as was shown and discussed in Chapter Four and above.

Additionally, I believe that one of the main reasons students were able to develop their critical thinking skills through this unit, and quickly, too, is because I only focused on critical thinking skills, not other content (e.g. research) or writing (e.g. grammar, organization) skills. This is vastly different from the other research conducted within the field of English on critical thinking (McLaughlin & Moore, 2012); however, I wanted to

avoid what Nosich (2005) defined as a “one of many” model for teaching critical thinking skills. Nosich (2005) identified the “one of many” model as a weak method for teaching critical thinking skills and explained that this may be one of the reasons students’ critical thinking skills are low. In the “one of many” model, instructors use critical thinking skills as, literally, one of the many ways students can demonstrate learning within a particular course or content area. This erroneously gives students the impression that the different skills are all equal, no one skill valued over the other. This was evident in my study when students first came in with the knowledge that summary and analysis were not only synonymous, but that they were similar in importance, even after understanding the difference. If educators, administrators, policymakers, and employers rank critical thinking as one of the top skills that college graduates should have, it certainly is not equal in weight to other skills, and instructors should not be using the “one of many” model when teaching it.

In eliminating other topics for instruction and assessment during my six-week unit on analysis, I was essentially eliminating and avoiding the “one of many” model (Nosich, 2005). I wanted to only focus on analysis, and if students mastered that, other higher order thinking skills in line with critical thinking definitions. I did not want to overwhelm students by also including lessons on grammar, research, and vocabulary, for instance. When students are asked to consider these other lessons, they can easily become distracted or overwhelmed. Or, they can choose tasks that *they* deem to be more important, or tasks that they identify as needing more help with. As is no surprise, this task is usually grammar. It is not to say that grammar is not important, but when

following the writing process, grammar is one of the last steps of writing, as it comes during the editing stage. Critical thinking, development of thought and ideas, is one of the first steps. After all, if a student has not developed their ideas and has not thought critically---or thought beyond the surface level---does it really matter if his/her grammar is impeccable? There must be a reason educators, administrators, policymakers, and employers did not choose to rank “grammar skills” as the most important skill college students should have.

**Finding #7: Collaborative learning played a critical role in students’**

**learning.** Collaborative learning, learning that takes place within a group of people, has been shown to be an effective method of teaching and learning (Burns, Pierson, & Reddy, 2014; Cabrera et al, 2002; Janssen, Kirschner, Erkens, Kirschner, & Paas, 2010). And, collaborative learning has also proven to enhance critical thinking skills (Gokhale, 1995). While I have always incorporated multiple methods for teaching in my courses, I underestimated how important collaborative learning was for students. This came out in several places throughout the unit: through students’ participation and rich discussions in small groups during class, through large-class discussions facilitated by myself, and through journals and reflections where students talked about the impact collaborative learning had on their ability to learn analysis.

Collaborative learning occurred in two main ways throughout the unit: small group discussions and whole-class discussions. What helped students further develop their analysis skills was both small group and whole-class discussions in class. As students mentioned in their journals and reflections, the practice of having conversations

with classmates helped them to understand details that they would not have before. And, it allowed them to see models of analysis, since we practiced analyzing the chapters in class. A good example of this was from students' journals that they could use as reflections. For these assignments (Journals #2, 4, 6, 8, 10, and 12), some students practiced developing their analysis skills by taking a concept they discussed in class and expanding upon it to further analyze an idea or concept from the book.

What helped students in the small group discussions (groups of 2-4 students) was that they were able to help each other analyze. If one student was struggling, another student would offer an idea; the act of witnessing the analysis process in person also could have helped them, since a classmate was modeling analysis. Several times throughout the semester, students wrote in their journals about how they were able to see different perspectives as a result of small group discussions. And they appreciated that, too. But even more significant was the fact that it created a community of learners. That is, if one student felt insecure or self-conscious about his/her inability to analyze, another student in the group might admit to the same thing. Just this initial admission of struggle helped students realize that they were not alone. A few students commented on this in their journals. In seeing that others were struggling too, it helped them feel "less stupid," as one student said. Analyzing is a difficult task, and as was shown in Chapter Four, not all students learn at the same rate. So, by working in small groups, students were able to relate to each other better, work together to analyze, rather than alone, which takes the pressure off some, and all have a say. When working in small groups, each student has the chance to contribute, each student is engaged, and it can be a much less threatening



environment than a whole-class discussion. And, research (Slavin, 1984) has shown that the more time students spend being engaged in learning activities, as they are in small group discussions, the more learning will occur.

Nonetheless, the whole-class discussion was also an example of collaborative learning that occurred during the unit. What was different about the whole-class discussion was that I was able to facilitate the conversation and probe students when they needed help analyzing. I tried to do this with small group discussions, too, but I could not spend much time with each group, since there were so many of them. An aspect of the whole-class discussion that students appreciated was my probing them (Socratic method). Several students admitted that the practice of questioning and discussing in class helped them see different perspectives, but also models of analysis.

Both the small group discussions and the whole-class discussions were helpful for students, and I think both were necessary for the unit, as examples of collaborative learning. Having the opportunity to discuss ideas with others helped students see different perspectives, and also helped them see that they were not the only ones who struggled at times. The journals, and written work, that students produced individually played an important role as well, but the collaborative learning created a strong foundation for learning for students in class, while the journals offered an opportunity to continue the learning and reflecting outside of class.

**Finding #8: Students have a strong ability to describe their own learning processes. In describing their learning processes with analysis, many students described it as a struggle.** In students' reflections throughout the unit and at the end of

the unit, they described their own learning processes with analysis. In doing so, students were using critical thinking skills. They were able to articulate their analysis skills coming into the class; describe which assignments helped them learn, re-learn, or strengthen those skills; and discuss how those aspects changed their perception of analysis by the end of the unit. In using those reflection skills, students were analyzing their own learning patterns, a critical thinking skill. But, also, by the end of the unit, they were defining analysis in their own words and demonstrated those skills in their writings.

There was a common element to students' learning processes with analysis: struggle. Students admitted that understanding analysis, and being able to use analysis skills, took time, repetition of assignments, feedback, and sometimes some bad grades and tears, before finally realizing what it fully was. What I learned from this as an instructor is that students were going through these emotions and thoughts privately, sometimes with other students in the class. And, until they admitted they felt this way in their post-unit reflections, I had no way of knowing. To me, this is an important learning moment, in that I want to create opportunities for students to share those feelings with me, so that I can help them with their struggles, but also comfort them in that they are not alone. But, perhaps the learning process with analysis is going to be a struggle for students because analysis is a difficult, higher order thinking skill, and it takes time to learn and master this skill. And, really, the learning process in general can be a struggle. Learning a new skill or new information, and having to master it, can be a struggle. But, being aware of one's learning, mapping that process, and identifying struggles---and solutions---along the way is what will help students master those skills.

## **Overall Discussion of Findings**

In looking at the findings from the study, there are many encouraging elements. The fact that the explicit method of critical thinking instruction was so effective, and was effective immediately for most students, is encouraging. Even after students first demonstrated analysis skills, then continued to further develop these skills as the unit progressed. What is also important and encouraging is the diversity and demographics of the class itself. There are many national initiatives (e.g. Achieving the Dream) to improve higher education success and retention rates for minority students. The fact that the students in this study were successful in analyzing in itself is encouraging, but the fact that 94% of the class was in a minority population shows that in this case, the research study was especially effective for minority students. If educators can find ways to better teach and encourage students, as was the case with this study, perhaps these students can continue to be successful throughout their college careers.

Another promising finding from this study is the fact that students came into the class being mostly confused about analysis, but the majority of the class exhibited analysis skills after just one lesson. And, over the six weeks, they continued to expand upon these skills, as well as exhibit other higher order thinking skills, too. The progress that these students made in these short six weeks is also promising when considering other higher education trends, such as online education, condensed courses, and hybrid formats for learning. Even though these different formats for higher education come with their critiques, what this study showed is that it is possible for significant learning to occur in a short period of time, using the explicit method of critical thinking instruction

and several different formats of assessment. Perhaps other researchers can explore the effectiveness of the explicit method of critical thinking instruction in other non-traditional formats for higher education to determine if this method is effective across different formats.

Another interesting element to this study was students' previous experiences with analysis and how this affected how they come into the class. Some students described analysis as "cruel" or an associated "fear" with it, due to negative past experiences, and others admitted to having no previous experience at all. It is easy to think that with these past experiences, these students might continue to struggle. Or, instructors may have a harder time teaching analysis to these students. But, this was not the case with this study. There were students who came in with these experiences, and these students did improve their analysis skills. They were able to leave those negative experiences behind, or they were at least able to not let those experiences hinder them from learning analysis in this class. With the explicit method of teaching critical thinking, it does not matter what previous learning occurred or did not occur. If students had an accurate concept of analysis before, they reviewed and strengthened that concept. This was shown with a few students who came into the class with a strong concept of analysis and an ability to analyze. Over the course of the unit, they still learned new things, including how to further expand on their analysis skills. If students did not have a concept of analysis before, or had an incorrect one, that did not inhibit them from learning analysis this time; if anything, it was remedied with the unit, with the exception of one student, and these students did effectively learn how to analyze.

When considering the original research questions for the study, it is clear that the findings provided insight for both.

- How does an explicit unit on critical thinking affect critical thinking skills?
- During a unit on critical thinking (using the explicit method of instruction), what evidence of critical thinking do students display?

Findings provide evidence that the explicit unit on critical thinking affected students' critical thinking skills positively. That is, nearly all students' critical thinking skills improved as a result of the unit. The unit did more than that, though. The other effect it had on students' critical thinking skills was that it forced students to think about, and reflect upon, how they were improving those skills. Not only were student asked to analyze, but they were also asked to reflect on their learning, their writing, and their analysis skills throughout the six weeks, both during the unit and at the end of the unit. Even for students who already had a basic understanding of analysis coming into the class, this unit positively affected their critical thinking skills by further developing and expanding upon those initial skills.

And, this was shown through the evidence gathered throughout the unit---pre and post unit writings, journals, reflections, discussions, field notes, and observations. I discussed the examples of critical thinking that students displayed throughout Chapter Four using these types of data. And because of what the data showed, it seemed that this was because of the explicit method of critical thinking instruction. The explicit method of critical thinking instruction involves defining critical thinking first, making sure students

understand the skill itself before they are asked to use it. This is what I did in my study with analysis. And I found that the majority of students' analysis skills improved directly after the initial explicit lesson. I also reinforced the definition of analysis throughout the unit, always coming back to those questions of "How?" and "Why?" to reinforce what analysis was and looked like, making sure students understood what they were being asked to do, while also understanding what analysis was. Students' reactions to these lessons were positive, in the sense that their analysis skills improved afterward, and they spoke about the lessons' effectiveness in their reflections. Students mentioned several times, through journals, informal conversations, observations, and reflections, that having that clear definition of analysis helped them. Many even admitted that they had never been taught this before, either. It was clear that the explicit method of critical thinking was one of the most important, if not the most important, factors associated with the effectiveness of this study.

I still wonder, though, how important it is for students to confirm that the explicit method of critical thinking instruction is the one aspect that helped them learn analysis. Am I expecting too much in hoping that students will realize this connection? Or, am I asking students to think like instructors when I think of this? While the explicit method is important, from an instructor's standpoint, it seems that it is important to define analysis and move on. That is, a lot of analysis teaching is implicit via discussion. If students focus too much on definitions, they could lose sight of what is important: analyzing. It is appropriate to define analysis to begin with, and give examples of tasks students are doing, like the higher order thinking skills chart, but still focus on skills, not necessarily

terms and not necessarily matching terms to skills. But, if I had more time for the unit, would matching terms to skills be an essential element of having students fully understand analysis? Is self-cognition an important element to fully understanding a skill or concept? Or, is demonstrating that skill evidence enough?

If I were to repeat this study, one of the changes I would make would be to add more skill-based assessments and data collection procedures throughout the unit, leading back to the explicit method. That is, I would have liked to ask students before the unit, during the unit, and after the unit, to define analysis in their own words, or to explain what analysis is. Even though I asked students to demonstrate analysis skills in their writing, I never directly asked them to define the term itself, although a few students did throughout the unit. Since this is a critical element to gauging students' understanding of a new term/idea, and since this was an essential piece of the critical thinking instruction using the explicit method, I think it would have provided some useful information and findings related to students' understanding of the term. However, there were a few moments throughout the unit, as was pointed out in Chapter Four, where students did provide a definition of analysis to demonstrate their understanding, perhaps to show themselves, more than to show me, that they understood.

This issue raises important questions relating to this study: Do students need to be able to exhibit analysis skills, or do they need to have self-awareness relating to these skills, too? That is, do students simply need to be able to analyze, or do they need to be able to understand when and where they are analyzing, explaining how and why what they are doing is analysis? If instructors are following the course content summary for the

course, it may seem that their main goal is to get students to analyze. However, what is not listed in that course content summary is the self-recognition piece. How important is it that students be able to understand when they are analyzing and be able to explain that to themselves and to others?

To me, it seems important that students can perform a variety of tasks: define analysis (since this is the starting point), exhibit analysis skills, and reflect upon those skills, showing a deep understanding of their learning along the way. As the AAC&U (2005) articulated in their research, students claimed to have an understanding of critical thinking (51% of student respondents in NSSE), but when asked to think critically (ETS Academic Profile), only 6% of seniors were proficient with this skill. Because students tend to overestimate their abilities, it is important to go beyond asking them if they believe they can or cannot think critically. And, several researchers (Behar-Horenstein & Niu, 2011; Ku, 2009) have shown the importance of using multiple measures of assessment with critical thinking. But, it is still important to include a metacognitive component to critical thinking assessment. So, when students claimed to be able to think critically, as they did in NSSE responses, instead of taking students' word for it, instructors could ask how they know that. This way, they are asking students to show they know it, rather than simply say they do. And, of course, instructors need to recognize that students admitting to knowing how to think critically does not necessarily mean they do, thus the importance of multiple methods of assessment.

But, the importance of having students think about what they know and how they know it involves metacognitive skills. Metacognitive skills, thinking about one's own



thought processes and knowledge acquisition, is itself a critical thinking skill. But it is also a crucial step in having students assess their own learning, so that measurements such as NSSE and the ETS Academic Profile more accurately align. In my study, I applied Osborne, Kriese, Tobey, & Johnson's (2009) two (out of three) ways of meta-knowing: metastrategic and metacognitive. With the metastrategic method, students were asked to think about what they know and how that knowledge came to be. Through reflective journals and end of unit reflections, I asked them to think about what they knew about analysis coming into the class and where that concept/knowledge came from. I also asked them to think about their learning from class to class, and journal to journal. With the metacognitive strategy, students are asked to think about their own thoughts. In asking students to analyze each class and each journal, I was having them use their metacognitive skills. By combining both strategies, I was asking students to not only think about *what* they knew, but *how* they know they knew it, or *when* they knew it. And, through journals, they were asked to demonstrate that they effectively knew what they claimed to know, too. That is, they had to show that they were able to analyze, in addition to talking about their abilities to analyze.

One other part of AAC&U's (2005) research that was surprising, other than the disconnect between perception of skills and actual skills, was that only 6% of seniors were proficient in critical thinking. Seniors are finishing their college studies and are soon entering the workforce. So, not only should they have already received critical thinking instruction throughout their college careers, but they are being expected to have those skills when entering the workforce. If only 6% of seniors possess these skills, what

does that say about college graduates who are entering the workforce, or intending to enter the workforce, if they do not possess the required skills? Furthermore, what does that say about the institutions in which students are supposed to be acquiring and mastering these critical thinking skills? As seen with this study, colleges are asking first- and second-year students to learn critical thinking skills, and are thus asking instructors to teach these skills to students at these levels, but clearly students are not getting it, or initial instruction is not sustained over time or across courses. This goes back to the importance of repeatedly using methods, such as the explicit method of critical thinking instruction, that are proven to be effective, and in doing so early on in students' college careers, so that they are understanding it early on, and they are able to use those skills required of them in future, upper-level courses.

An important question of this study, and much research within critical thinking instruction, is how do we teach critical thinking skills to students? Perhaps, though, a more important question is, how can educators better encourage students to realize when they are thinking critically, or in the case of this study, analyzing? Can we do this other than with 20/20 on a homework assignment? Throughout the unit, if a student analyzed in a journal, I would give them 20/20 on that journal. However, I questioned whether or not I was sending the wrong message in doing this. If students are receiving a 100% on an assignment, do they also think that there is no more room for expansion or in-depth analysis beyond what they wrote? Will they continue emulating what they did in that journal in order to continue earning 100% on future assignments? How do instructors

truly get students to develop their analysis skills when grades are involved? Or, how do instructors match grades and evaluation with that learning cycle?

Besides grades, my attempt to get students to think about their learning and development in analysis skills was in their reflections. I think metacognition played a role in these reflections, and in response to my questions above, I personally believe students have to have somewhat of an awareness that they are indeed analyzing in order for long-term learning to take place. Otherwise, they are only learning how to be parrots, not critical thinkers. In this study, students were able to notice that their analysis skills were poor to begin with, or they were able to write about how their analysis skills have been improving and how they were learning more about the chapters after discussing. This, in itself, because understanding what is required comes before recognizing the level of skill. Then again, students could simply be matching their grades to their perceived improvement of analysis. What helped show that students were, indeed, improving was the quality of their writings and discussions, as discussed in Chapter Four, but I do not know if there ever was a really strong measure of assessment that gauged their self-awareness of analysis itself and their progress with analyzing. This leaves room for future researchers to explore the role of metacognition in learning analysis, perhaps especially at the point where students have demonstrated that they effectively learned analysis. This is the point where researchers can further probe how students understand whether or not they have learned analysis, and how it is they know this.

There were some other challenges in terms of assessing students' critical thinking skills throughout the unit. One challenge was plagiarism. There were several moments

throughout the semester when I wondered, does independent thinking equal critical thinking? Or, do students need to be able to think independently in order to think critically? Three times throughout the semester, I found a student plagiarized his/her analysis by copying information from Spark Notes (online). I found this to be discouraging as an instructor because I wondered how many other students were plagiarizing, and if the assignment itself was accurately showing students' abilities to think critically or not. However, I realized that even when plagiarizing, students are forced to think critically in terms of analyzing what the assignment is asking for, identifying ways to find the information, and sorting through information on the Internet in deciding what to include in their paper (even if the idea itself is someone else's). Nonetheless, if a student plagiarized his/her journal, that student received a zero for the assignment, and I did not count it as analyzing in my findings. For my study, I wanted students to be able to demonstrate analysis skills on their own, not while plagiarizing.

One important consideration to note, though, about plagiarism, is that although instructors can never fully ever prevent plagiarism from occurring, they can certainly help to deter students from being tempted to do so. I noticed that in the journals, and most importantly, the reflections, throughout the unit, students would base the material and direction from class discussion. Often times, I would pose a question for students to consider for their journals, and many of them used this question in their journals. This would have made plagiarisms nearly impossible, unless they Googled the question and found an exact answer. However, since most students commented upon the effectiveness and impact of class discussion on their learning, their ideas of the chapters, and their

development of their analysis skills, the instructor has every opportunity to use this to his/her advantage. If discussion itself is an expression and practice of analysis, there is no room for plagiarizing---only active learning. This further emphasizes the importance, and the positive effect, of active learning and collaborative learning during class time, as was found in this study.

There were also other challenges to assessing critical thinking, including students regurgitating in-class material instead of expanding and adding their own thoughts, grading, page limits, and grammar. There were several occasions when students would repeat class material in journals instead of stating their own ideas. To me, the purpose of the journal assignments was for students to further practice analyzing, not repeat exactly what we discussed in class. However, students' repeating class discussion may show that they are good note takers and were engaged in class by taking notes, but also that they may have been doing this to try to make sense of information. Perhaps just the act of repeating information from class was showing that they believed it to be meaningful or important. I also found that some students would limit their analysis to one page for their journals because it was the minimum length required for the assignment. I wanted students to understand that analysis involves going into depth and sometimes requires more than a page, so they do not necessarily need to (and really should not) stop at one page. But, length of assignments will always be an arbitrary determination to some degree. If analysis is a skill that can constantly be improved and expanded upon, is there a true difference between one page and two pages? Asking students to write one page may also force students to use critical thinking skills, limiting what they want to write

about to the most important information---a skill in itself that involves critical thinking and analysis. If asked to write two pages, students are asked to exercise a critical thinking skill---expanding and going into depth.

In terms of assessing critical thinking, many other questions arose throughout the unit. How does completion of homework/assignments play a part in assessing critical thinking skills? If students are analyzing in their post-unit writing, but have not turned in a single assignment, what does the instructor do in terms of assigning grades?

Technically, the students have mastered the course content, but they could receive a failing grade in the course because they have not done anything. Or, what if students submit everything late, yet their work is exemplary? How do you remedy this as an instructor? It may lead into a bigger question of assessment and the purpose of college---to assess skills, or to teach lessons such as punctuality and structure. But, it is an issue that is highlighted by this research, too. The purpose of my research was to investigate the explicit method of critical thinking instruction and its effect on students' critical thinking skills, which did involve grading as part of the course itself, but also considered evidence in all forms, even if just one assignment, to demonstrate that learning had occurred. Submission of assignments, and completion of work, for a college course is just as important as mastering course content and student learning outcomes. This study did not change that; it simply produced larger questions relating to assessment.

There seemed to be a few unusual findings from the study. The first I discovered when reading students' end of unit reflections; it was clear that students had no idea what analysis was before the unit began. But, what is interesting about this is that not a single

student admitted this when asked to analyze in the pre-unit writing. In my field notes, I wrote that not a single student asked a question when given instructions to analyze for the pre-unit writing during the second class. Not a single one asked what I meant by analysis, or what they should do to analyze. What this shows is that just because students do not raise their hands to ask questions or tell you that they do not understand, it does not mean that they do understand. Of course, I discovered this after reading students' writings and end of unit reflections. Additionally, at the time of the pre-unit writing, I let students know that this was simply a starting point for the unit, that I did not expect them to fully understand what to do, but assured them that by the end of the unit, they would. So, these two factors could have affected their decision to not ask clarification questions, too. And, there is always the fear that students have in asking questions. Many are fearful of "looking stupid" by asking questions, or they do not want to be the only one to admit to not understanding. Other students may be fearful of "looking too smart" by asking questions. They have not familiarized themselves with myself, each other, or the social situation of the class at that point. So, those factors, too, could have affected their not wanting to ask questions.

Another surprising finding from the study is that students did not find written feedback to be as valuable as I thought they would. Only one student commented that written feedback helped her. However, students could have also interpreted "feedback" to be general, in the sense that it also involved oral feedback or my guidance in their discussions in class, too, which is something they did comment on. The oral form of discussion and feedback, mostly through the Socratic method, helped more. This also

may have shown that students did not need as much written feedback as I thought they did. Most students understood analysis quickly, and they developed their skills over time. It could also mean that students expect written feedback, so it was not necessarily something they would even think to comment on. After all, if a student does not receive a perfect score, the instructor should be writing something down to help that student understand what was missing, or what they could do to improve. I provided written feedback with every written assignment, regardless of the grade, and maybe students' other instructors did the same. So, perhaps aspects of the unit that they did comment on were stronger or more effective in their mind, but they also could have been aspects of the unit that were missing in other classes or lessons they had on analysis in the past.

The last takeaway from the unit was students' reactions to the Dave Barry article used for the pre- and post-unit writings. Students were asked to read the article, provide a brief summary, and then write an analysis. It was clear, when comparing the pre-unit writings to the post-unit writings that students had a better concept of analysis by the end of the unit, as was discussed in Chapter Four. However, some students seemed to struggle with the article itself, which may have affected their ability to analyze it. Many students did not identify the tone of the piece (satiric), so they analyzed the piece straightforwardly. This may be a sign of students' struggles to analyze tone in writing. But, it does also reinforce Bloom's taxonomy, in that if students are not understanding or comprehending what it is they are reading, they are not going to be able to analyze it. This certainly was the case for some students. However, a few other students mimicked Barry's tone in their analysis. It was harder to decipher if these students were



understanding his tone, and thus mimicking it in an emotional response, or if there was another purpose. This may show that if instructors use satirical pieces to gauge students' abilities to analyze, they may not be able to accurately assess students' understanding of analysis. Or, it could show that students' analysis skills do not necessarily transfer to different genres of writing. Even though nearly all students were able to analyze fiction, it did not necessarily mean that they were also able to analyze non-fiction. It also could have had different results if we spent the same amount of class time discussing Barry's piece, to ensure understanding, like we did with *The Hunger Games*, before I asked students to analyze.<sup>2</sup>

### **Implications and Recommendations**

There are several implications for theory and practice that could result from this study. First, any conclusion from this study is a learning experience for me as an instructor. Thus, the findings from this study not only help me, but also help other instructors who teach English 112, as well as others who teach critical thinking, especially in English courses. What I hope will come of this study, though, is showing that critical thinking is a complex idea and is difficult to evaluate and capture in a single assignment. Instead, if educators look at critical thinking learning as a process, over a continuum, perhaps we are better able to see how students' critical thinking skills are

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<sup>2</sup> There was one major missing element with students' pre- and post-unit writings, compared to their unit on *The Hunger Games*: collaborative learning. One of the most significant findings of the study is that collaborative learning has a positive impact on students. Since students were asked to individually analyze Barry's article in their pre- and post-unit writings, they may have struggled, since they cited collaborative learning as a significant element to their understanding analysis during the unit, and collaborative learning was absent for their pre- and post-unit writings.

improving over time, rather than putting the pressure on them to produce critical thinking material in one paper or exam.

As was discussed in Chapter One, there is agreement within higher education, among educators, administrators, and lawmakers, that critical thinking is an important skill and should be taught (AAC&U, 2005; Arum & Roksa, 2011; Paul et al., 1998). However, these beliefs are not always practiced, or, beliefs sometimes get lost in practice. Even though there is nearly unanimous agreement within higher education that critical thinking should be taught, it does not mean that it is being taught, or that it is being taught effectively. The data on students' critical thinking abilities shows this, in that students' critical thinking abilities are low, or absent altogether (Arum & Roksa, 2011; Blaich, 2007). As a result, educators and researchers need to examine if critical thinking is being taught, and if it is, how it is being taught. As Osborne, Kriese, Tobey & Johnson (2009) showed, little research has been conducted on how to best teach critical thinking. This research was the catalyst for this research study. I wanted to explore how to best teach critical thinking within the English classroom, and I believe I was successful in doing so, in relying on the explicit method of critical thinking instruction as my framework.

However, there may be bigger challenges to teaching critical thinking that are more difficult to remedy because it relates to instructors' metacognitive skills, as well as their egos. Even though the explicit method of critical thinking instruction has proven to be effective (Bensley, Crowe, Bernhardt, Buckner, & Allman, 2010; Hayes-Bohanan & Spievak, 2008; Liu, 2006; Reed & Kromrey, 2001; Solon, 2001; Marin & Halpern, 2011), many instructors do not use this method. In fact, many instructors do not use any

method at all. As Paul, Elder, & Bartell (1997) showed, 91% of faculty respondents in their survey admitted that they did not teach critical thinking at all. Even more startling, or perhaps explaining this, 81% of faculty respondents could not articulate what critical thinking was. Even though this phenomena was discussed in Chapters One and Two, it needs to be emphasized here again. What this means is that most faculty believe critical thinking is an important skill and should be taught, but they are not teaching it. Why? Because they do not understand it themselves. How is an instructor to teach a skill that they themselves do not understand? It seems like an easy enough solution: encourage instructors to first understand critical thinking themselves. But, how do we do this, especially when faculty egos and self-esteem are involved? Or, how do we first ensure that faculty understand critical thinking? There is not an easy solution to this question; thus, this should be a topic for future research and consideration. However, its importance is clear.

From this research, and from my study, there are some understated, or perhaps unstated, priorities that are essential to teaching critical thinking effectively to students. The first priority is for instructors to accurately, and clearly, define critical thinking themselves, ensuring that they are familiar with the term and the skills required. This was my first step for this study, and I narrowed my study to analysis as a critical thinking skill. Second, after ensuring that instructors understand what critical thinking is, as well as which critical thinking skill(s) they will focus on in their classrooms, instructors need to then decide how that skill/those skills will be taught and assessed. For me, I knew I was going to use the explicit method of critical thinking instruction, since it proved to be

effective already, and I would use a variety of assessments, including written materials, class discussion, and mini-lessons. My assessment would be based upon those initial definitions and skills identified in the first lesson on analysis. Every time I would be assessing whether or not students were analyzing, I would be referencing those skills and tasks, whether students were analyzing orally in class, or whether they were analyzing through written assignments.

It is clear through the research (Choy & Cheah, 2009; Mandernach, 2006) and through my own study that even though students admitted to being asked to analyze in other courses, most admit that they were never told what analysis was. The same goes with other critical thinking skills. Of course, mastering analysis involves more than defining it. It also involves understanding analysis, practicing with it, repeating the skill with a variety of assignments, reflecting on one's learning of it, perhaps struggling with it, discussing it, experiencing it, and writing about it. But, before students are able to move to those skills, they must first have a foundation, which is the definition.

Additionally, when instructors have no clear concept of critical thinking, most likely students have no clear concept, either. And, as a result, instructors end up teaching lower level thinking skills, rather than higher level thinking skills. And, the research showed that there was agreement that higher order thinking skills should be taught, not lower level thinking skills. Part of the problem is content---determining what skills instructors should teach and ensuring that they understand those skills before teaching them. The other problem is assessment---how do instructors then ensure that students are learning these skills? Paul, Elder, and Bartell (1997) found that 78% of faculty

respondents in their survey claimed that students were weak or absent with certain “intellectual standards,” but 92% of faculty respondents could not explain how those “intellectual standards” were assessed. It is always a sensitive issue when instructors are being blamed for a national issue such as students’ underdeveloped critical thinking skills. However, the research cannot be ignored, and instructors must first look at themselves before attempting to teach, and assess, critical thinking to students. If educators want to improve critical thinking skills among students, we need to start with instructors.

One solution is instructors using the explicit method of critical thinking instruction. Not only has it been proven to be effective, both in this study and in previous research, but it also forces instructors to define critical thinking before teaching and assessing it. This is important not just for the students, but it is also important for the faculty. Both are on the same page with what is expected and considered to be critical thinking, and both have a clearer understanding going forward. It ensures that instructor and students are working from the same framework from the beginning.

The explicit method of critical thinking instruction has already been proven more effective in terms of students’ learning (Bensley, Crowe, Bernhardt, Buckner, & Allman, 2010; Hayes-Bohanan & Spievak, 2008; Liu, 2006; Marin & Halpern, 2011; Reed & Kromrey, 2001; Solon, 2001), but I was glad to confirm this in my own classroom. Lastly, I found through this study that writing and thinking are two different skills. Writing is one way of expressing thoughts and learning, but assessing writing in terms of style, organization, and mechanics is different from assessing writing for ideas and

critical thinking. Thus, this study shows the importance of first assessing students' writing for critical thinking skills alone, since that is the most important learning goal for this study, and then later assessing it for aspects of strong writing as communication, such as organization and mechanics.

In addition to these implications for instructors and for myself, there are also implications of this study for others in higher education, including administrators and policymakers. While instructors are searching for ways to best assess critical thinking skills in the classroom, so are administrators at the program or degree level. How can colleges determine that graduates have strong critical thinking skills, skills that the nation is demanding of them? Perhaps by considering critical thinking assessment at the process level, not single product level, i.e. exit exams, standardized tests, and portfolios, administrators can better defend that students indeed are improving their critical thinking skills while in college. And, by simply sharing research on the explicit method of critical thinking instruction, they are sharing successful tools that have been proven to improve students' critical thinking skills. It solves even the most basic problem by clearing up the confusion on what critical thinking is ---something that instructors, students, administrators, and policymakers should all be doing, so that everyone is on the same page of understanding what the term "critical thinking" entails.

Lastly, I hope that my study shows the positive impact this lesson has on a diverse group of students. The site I selected for my study has a diverse student population, so my class was representative of the campus as a whole. But, the fact that the majority of the class was minorities proves that this explicit method of critical thinking is effective

for diverse groups of students as well. There are many national initiatives, such as Achieving the Dream, that are seeking ways to improve higher education success for these groups of students, so sharing successful lessons, such as the ones within this study, is important for the future of higher education.

### **Future Research**

The fact that so many students favorably commented on the reading selection for the course leads to so many more possibilities for future research on improving literacy in our country. Many of my students who admitted to enjoying *The Hunger Games* mentioned that it encouraged them to read the other books and confessed that this was the first book they have ever read, or enjoyed reading. These moments inspired me to further explore reading selection choices and their effect on literacy. However, my limited experience with, and knowledge on, literacy education kept me from doing so. But, it does raise the question, why can instructors who do have a choice in textbook selection not start offering interesting reads for students, even if those books (or I should say especially if those books) are targeted toward teens? This is important not just in terms of getting to analysis---and having students gain confidence with reading comprehension---but also in terms of getting students to find an intrinsic interest in reading. After all, students certainly cannot write about a text, let alone think critically about a text, if they are not reading it and understanding it in the first place. Even though this was just a micro example of literacy that resulted from this study, there is certainly room for future research on textbook selection's effects on students, as well as other areas of literacy education.

There is also, always, more room for future research on the explicit method of critical thinking, particularly in other disciplines within community colleges. Each discipline is unique, so a lesson using the explicit method of critical thinking---though the same foundationally---can look very different in a math class, compared to an English class. And, even within English classrooms, there is the opportunity for more, differentiated, research using this same method of critical thinking instruction. I would be curious to see if including grammar instruction and assessment would have changed the results of the study, so there is opportunity for future research to further explore that, as previous research in the field has. And, as mentioned earlier, there is also opportunity for future research that explores different formats for teaching the explicit method of critical thinking, such as hybrid formats or online learning, especially since these are common trends within higher education today.



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Stacey Alwine received her Bachelor of Science from The Pennsylvania State University in 2007. She has been employed as a professor at Northern Virginia Community College since 2008. She received her Master of Arts from George Mason University in 2009. Upon completion of this doctoral dissertation, she will receive her Doctor of Arts in Community College Education degree from George Mason University in 2014.