

AN EXPLORATORY STUDY OF THE USE OF CLASSROOM  
BLOGS TO IMPROVE STUDENT WRITING

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## ABSTRACT

Today's adolescents experience constant interaction with technology, which brings about new literacies. These literacies become part of school curriculums and ultimately, the future of adolescents. This study explored the use of a microblogging tool through *Edmodo* to determine if the students' writing changed. The study framed the writing assignments using the Inside Writing Frame theory as a platform for creating the microblogs and grading rubric. This qualitative case study examined six microblog work samples from six eighth grade students. The writing was analyzed to determine how the students' writing changed while using the microblog tool. Additionally, this study sought to gain knowledge of how adolescents viewed their experience with writing using the microblog tool. After all data were collected and analyzed, eight codes emerged. Those eight codes are: explore, investigating, gathering data, brainstorm, organizing, defining, redefining, connecting and citing. The participants began with strengths in brainstorming, organizing, defining, redefining and gathering data. From the start of the research, areas of weakness in writing surfaced with exploring, investigating, citing, and connecting. Through the duration of using the microblogs, the participants showed growth in each of those weak areas. Therefore, participants experienced a positive change in their writing through the use of microblogging with *Edmodo*. In addition to coding the writing samples, the researcher also used a focus group to examine the participants' experience with using the microblog as a tool for writing. The participants indicated a positive outlook with using the microblog as a tool for writing; they expressed how the tool should be expanded to other

subjects. Overall, the results showed a positive effect on the participants' writing while using microblogs both from the coding of samples and from the focus group responses.

## DEDICATION

This dissertation is dedicated to my family: loving grandmother and artist, Jane Potts, who encouraged me to know that the best moments in life require the right perspectives; my mother, Anna Singletary, who pushed all of her children to know that “all things are possible”; and my father, Jimmy Singletary, who taught me that “sometimes we just have to stop and watch the garden grow” or “wait for the fish to bite.”

I also am dedicating this study to my immediate family: Shad Jones, my loving husband, who expressed multitudes of understanding and care and to my dear son, Carson, who for at least eight months experienced every step of this journey with me in my womb. For Carson, this study is part of his future.

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*“Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond measure. It is our light, not our darkness that most frightens us. We ask ourselves: ‘Who am I to be brilliant, gorgeous, talented, fabulous?’ Actually, who are you not to be? You are a child of God. Your playing small does not serve the world. There is nothing enlightened about shrinking so that other people won’t feel insecure around you. We are all meant to shine, as children do.”*—

Marianne Williamson “A Return to Love”

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## CHAPTER 1

### INTRODUCTION

As technology grows not only in the economic world but also within the walls of the school building, students are immersed with technology each day, thus, digital literacy has become a major component of school curriculums. Students must be equipped with the skills and knowledge of knowing how to operate in a digital world. Through incorporating technology into the classroom, students are not only learning to use these tools correctly but also learning to become critical thinkers in analyzing these modes of literacy (Merchant, 2007). Through the use of search engines and other Web 2.0 tools, students have information at their fingertips. Today's adolescents are constantly engaging with information through texting, watching videos, listening to music, and even writing papers (Adams, 2013). Learning to properly interact with that information through writing presents a new challenge for the students of today because students are employing all of these applications at once and believe that they are multitasking successfully (Adams, 2013). Using a blog to incorporate information into writing, the students' interactions with technology and information intersect into the classroom setting.

#### **Statement of the Problem**

Today's adolescents live in a world where multitasking has become the norm. Students are bombarded with multiple modes of information throughout the day. In fact, today's adolescents have been deemed GenM or the 'multitasking generation' because they are constantly absorbing or distributing information through text messaging, videos, online reading, social media, and other web-based tools (Adams, 2013). Though multitasking can be a powerful

skill, today's adolescents must learn to perform tasks well. Adams (2013) states students must "learn when to slow down and critically examine the text or task at hand" (p. 6). Today's adolescents have grown accustomed to dividing their attention to several different activities through today's technology, therefore, writing and other academic activities are affected. Students are experiencing a new form of literacy (Adams, 2013). Therefore, as technology evolves, so do students in their learning (Adams, 2013).

With the digital pervade, Svensson, Zetterqvist, and Ingerman (2012) suggest that there is a sort of digital citizenship expected among young people and a dependency needed among humans and technology. In fact, it is nearly unavoidable. Stephens and Ballast (2011) point out that today's adolescents are bombarded with technology. For example, Stephens and Ballast point out that McDonald's has added digital toys and games as part of their Happy Meal. The researchers also highlight that many teens 18-24 have a higher business set-up rate than 35-44 year-olds because of the digital connections. They add that with the onset of digital businesses and infiltration of technology into businesses, writing becomes a skill that adults must know how to do well. Stephens and Ballast state that writing, "... opens pathways for success, and it is how opportunities are gained or lost" (p. 3). Adams (2013) explains that if students are expected to learn new literacies and the effective use of them, one way to address the problem lies in infusing these literacies into the classroom. Kist (2013) argues that knowing how to properly interact with technology plays a large role in the "quality of life" because of the interaction that will be required for students in the future. To expand on this definition, Kist explains that today's adolescents will have co-workers in other countries and will need the ability to interact with digital texts appropriately. Students, Kist offers, should practice interacting with the digital

literacy in the classroom setting to learn to interact appropriately with digital reading and writing.

Because of the number of tools students engage with each day, they are simultaneously engaging with writing through many forms: social media, text messaging, personal blogging, etc. In fact, the National Commission on Writing completed the Pew Internet & American Life Project, in which Lenhart et al. (2008) conducted a national phone survey and engaged in focus groups to evaluate the current standard of writing for today's adolescents. In fact, the Internet has created an environment that creates a "read-write environment where individuals can easily—without specialized and expensive software—create and distribute words and images to be read and responded to by friends, classmates, and teachers . . ." (Stephens & Ballast, 2011, p. 5).

Lenhart et al. discovered

93% of teens say they write for their own pleasure. Most notably, the vast majority embrace written communication with their peers as they share messages on their social network pages, in emails, and instant messages online, and through fast-paced thumb choreography on their cell phones. (p. i)

The study shows that teens are writing regularly, but the writing quality may be degraded because of the informal procedures present in association with technology and writing. In the same study, Lenhart et al. found that 60% of teens do not perceive the electronic writing as true writing. The researchers also discovered that teens thought their writing could be improved through greater writing instruction in the classroom and through the use of technology tools. The researchers state that 82% of adolescents thought that more writing instruction would improve writing, and 78% of adolescents agreed that implementing a technology tool would also impose positive changes in their writing. In fact, Lenhart et al. found that "86% of teens believe good

writing is important to success in life” (p. i). Students and adolescents recognize that there lies a need to improve writing in the technology age. Students engage in writing but desire the instruction that incorporates technology and writing instruction.

Today’s adolescents recognize technology’s effect on quality of life, and so do educational leaders. According to Stephens and Ballast (2011), one of the cornerstones of developing learning goals and activities for educators and student learning since the 1950s lies in Bloom’s Taxonomy. Because of the effect of technology on learning, the taxonomy has been changed from nouns to verbs. The old Bloom’s listed knowledge, comprehension, application, analysis, synthesis, and evaluation, which are nouns that focus on content. The new taxonomy lists verbs: remembering, understanding, applying, analyzing, evaluating, and creating (Stephens & Ballast). In fact, Stephens and Ballast state:

The revised hierarchy of thinking processes evolved from a six-year-long analysis of studies on how we learn, and the changes reflect our current knowledge regarding the value of active, situated learning, and metacognition, among other understandings. The impact that technology has had on how we access information, make sense of it, remix it, and create it is inherent in the new taxonomy. It is the kind of learning that will be needed as we move from the Information Age to the Conceptual Age . . . (p. 18)

With the new studies of students and how they learn, leaders have introduced the new Common Core Reading Standards (CCRS) adopted by the Alabama State Board of Education, which include technology components (<https://www.alsde.edu/>). For example, in the writing and production category for ninth grade students in the *Alabama Learning Exchange* (ALEX), CCRS 10, students are required to

use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information, and to display information flexibly and dynamically. [W.9-10.6]

Additionally, in 2008 the National Council for Teaching English (NCTE) developed standards for assessing writing and reading for literacy (NCTE, 2013). Among those standards is an assessment that requires the integration of technology tools. Through the College and Career Readiness Anchor Standards for Writing, NCTE contrasts the literacy of today's students to learn to employ digital tools in direct association with the content. This GenM of students learn to effectively implement those multitasking skills through synthesis, application, and evaluation through the use of digital media:

They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. (NCTE, 2013, para. 1)

It remains important to recognize that all students will be in contact with technology tools in their daily lives. Therefore, in order to meet these standards, students must learn to effectively integrate writing as well as navigating a technology tool. Students are expected to acquire appropriate information for the content and use proper writing techniques to integrate the information component into writing. The problem remains that today's GenM students conduct multitasking activities daily, but they must learn to channel those skills to create and write in a digital mode filled with useful and coherent information.

## **Purpose of the Study**

The purpose of this study was to explore how adolescent students use classroom blogs and microblogging in their writing practices in an English class. More specifically, the goal of the study sought to explore students':

1. Use of an interactive technology tool to develop their self-assurance in informational writing assignments.
2. Overall involvement with an interactive technology tool as a means to reveal their growth as writers and improving the writing process when incorporating informational writing.

## **Significance of the Study**

Exploring the use of interactive technology to transform answering open-ended questions from pencil and paper to a digital screen can prove to be a valuable tool for improving and honing adolescent writing skills as well as digital literacy. In a literacy study, Merisuo-Storm (2006) found that students are more motivated to write when the nature of the writing is more communicative in nature. *Edmodo*, an educational, social media site that employs microblogging, gives writing a new form of communication rather than traditional pencil and paper format. Microblogging involves short, digital writing compositions. Microblogging is generally used for social purposes but for this study, the tool was incorporated into a learning environment so the writing was educationally focused.

Writing using *Edmodo* provided an avenue for creating communication by allowing students to comment on entries and give a more direct purpose for writing because of the audience involved. Moreover, employing microblog writing accommodated the NCTE standards and the emerging Common Core Standards as well as assist students in their everyday encounters with the digital world.

This study contributes to the knowledge base of the educational realm by providing evidence of the effectiveness of employing blogs to meet the standards of technology. The study also contributes knowledge of students' reactions to incorporating microblogging within the classroom curriculum. The findings may be published in pedagogical or technology education journals to add to the research of incorporating technology tools in the curriculum.

### **Research Questions**

The primary research question asked is: How does an adolescent writing procedure and experience expand or change when writing using microblogging? Since this will be a qualitative, exploratory-based study, sub-questions were developed:

1. How does adolescent students' informational writing change when writing using an interactive technology format?
2. How do students view their experience while writing employing the interactive technology format?

### **Conceptual Framework Inside Writing Frame**

The digital age has not only changed how students learn, but also the process by which they write. Stephens and Ballast (2011) have developed frames for writing instead of assuming a strict "process" for writing that has been traditionally found in language arts classrooms. This writing frame can be integrated across content areas. According to Grabe and Kaplan (1996), there was a shift in the view of the process of writing even before technology became a major competitor. Writing was once seen through this lens:

Up to just mid-century, writing instruction in the USA was approached in a rather uniform way. Through expository assignments, students were taught such patterns of logical arrangement as definition, classification, comparison, and contrast, etc., and told

to write an essay imitating a given pattern. Essays were written in one draft and errors were corrected by keying to a writing handbook, these in turn providing answers and exercises on various aspects of grammar. (pp. 84-85)

As society began to experience change and trends in learning began to change, so did the expectations of what makes good writing. With the development of new theories for writing, students were freed from a process that carried so many boundaries such as the strict paragraph format, grammar rules, and the linear process of outlining, drafting and revising. Certainly, these elements remain important but what researchers realized is that “different writers will approach the task employing different processing strategies” (Grabe & Kaplan, 1996, p. 92).

With these processes, Stephens and Ballast (2011) recognize a need for a framework for writing that accommodates the needs of today’s multitasking learners. The researchers developed four frames for writing: inside writing, responsive writing, purposeful writing, and social action writing. These frames for writing may be used linearly, or they may be incorporated as single strategies. The frames are not considered to have a strict structure because students may reach into several frames with a single assignment, but the frames do consist of a hierarchy of learning levels. The researchers chose this format for evaluating writing because of how they believe the minds of this generation’s multitaskers and digital natives naturally approach the writing process.

This shift in the way writing is approached has occurred because of the read-write Web of today’s world, and perhaps, the adolescents of today have “outgrown” the old process way of writing (Stephens & Ballast, 2011, p. 14) Inside writing represents the first level of the process of writing which involves writing and research to support opinions and encourage a personal connection to the content. For example, a student may be asked to write about a literature passage about Harriet Tubman, but the inside frame seeks to encourage students to use the Web

to find further information about Harriet Tubman and to connect the old information with the new information they have discovered. The students may write about how these events continue to affect their lives today and perhaps, they may discover that there are even new forms of slavery that exist today. The next frame simply builds upon the inside frame by moving the writing to a more collaborative activity for students. Through collaboration the students generate new ideas and opinions. The next frame lies in purposeful writing by which the students create a new medium with their writing such as a website or presentation. The writing becomes more refined and ordered during this frame. Inside writing serves as a starting point to get the ideas written down. Purposeful writing takes the collaborative ideas and moves them into a more smooth form of writing. The last frame occurs with the social action writing. The students use this frame to take a stance to express an opinion, challenge their peers to think about the cause, and then the students advocate for that cause. This form of writing may come in many mediums through a website, presentation, blog or other forms of expression.

For the purpose of this study, the inside writing frame will serve as the framework for writing because this framework encourages the use of a technology tool to develop and enhance writing. Stephens and Ballast state, “Exploring and researching (inside writing) can happen at any point of the writing process, particularly when what is produced is in an interactive environment like a blog” (p. 13). They define inside writing as “The investigation of a topic using Web 2.0 tools. Inside writing is what a learner experiences as she begins to connect with the text, images, sounds, animation, and so on” (p. 27). Through this process, the teacher will give the students a topic and students will begin to use search engines to find information. Students will compile the information through brainstorming or note-taking with what they have learned and then write a personal response to the information. Different students will connect

differently to a single bit of information. For example, if the assignment lies in discovering the historical background of a short story by researching Harlem, one student may be intrigued by the musical involvement of the era while another student may find a personal connection with the form of freedom offered with the history of Harlem. With inside writing frame, technology plays a large role in the process because students will be exploring ideas about a topic and then culminate a product that shows the students' new understanding of the topic based on what they have learned. The participants will use the frame to move their writing from remembering to analysis and evaluation. The use of information from the Internet will require them to analyze and evaluate new information to determine if it will be useful for enhancing their topic for microblogging. The product may come in many forms for this frame but for the purpose of this study, the students will produce open-ended responses on *Edmodo* that reflect their learning experiences. Not only will students explore the Web for the new connections and ideas, but they will evaluate the good information versus the bad. In addition to this, students will learn the importance of copyright of information by providing sources with their responses. The philosophy behind this frame lies in that students become the best writers when they are able to make a personal connection to the content, and today's students use technology to reach those connections.

The driving theory behind this model originates with constructivism, in which "learners construct their own understanding of the environment that surrounds them" (Stephen & Ballast, 2011, p. 29) through their experiences and opportunities inside and outside of the classroom. Technology helps to supply the exploration needed to enhance the writing of today's learners. Fox-Turnbull (2002) confirms, "Technology is a holistic and practically based curriculum, which is ideally suited to constructivist approaches to teaching and learning" (p. 46). For Stephens and

Ballast's model, inside writing occurs when students are given the tools to explore and expand on their learning, which filters into their writing. As constructivism suggests, students must also be given the opportunity to develop a sense of self-regulation in their learning. When given a topic to explore and write about and the Web 2.0 tools to gather and translate information, today's multi-tasking students will explore numerous mediums to gather and relate to the content.

In this learning environment, Stephens and Ballast (2011) explain that the teacher is seen as "the captain of a crew on a learning journey" (p. 36). The teacher provides the topic to explore and allows the students to make personal connections and write about those connections. For example, the teacher may be planning a lesson surrounding the Industrial Age. With this lesson, most teachers will start with supplying the students with basic information. Then the teacher may assign the students a learning activity such as "a summary of a topic, theme, or issue of the time period" (p. 35), which may come in the form of a blog that includes pictures, links to websites or videos related to the topic of their choosing within the time period. Students will explore the time period and write a blog about the topic or theme of their choosing. Stephens and Ballast state that with a lesson like the example, students go through a particular process of writing by experiencing "exploring, investigating, gathering information, brainstorming, organizing, and synthesizing" (p. 42). This process is a key element for the inside writing frame. With exploring, which would fall in the category of Revised Bloom's remembering, students use search engines to identify broad categories of information; then the students move to investigating where they explore a particular theme or topic. This stage of the frame moves the participants from remembering to understanding and applying. They must be able to read the information, understand, and apply an old concept to a new concept by making comparisons. Next, they move

to gather information about that topic and begin to brainstorm and organize those ideas into a coherent piece. These methods range from remembering to applying because the participants use minimal skill level to gather information on a topic but must know how to properly organize the information into a readable and understandable format. Finally, students synthesize all of the information into a digital format. The inside writing frame allows students to take ownership of their learning to enhance writing through information and exploration. Figure 1 shows the basic process for Inside Writing Frame:

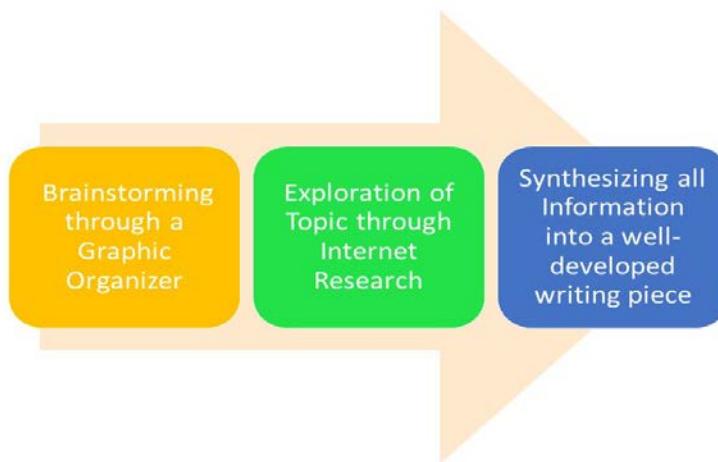


Figure 1. Illustration of the Inside Writing Frame process.

### **Operational Definitions**

For the purpose of this study, conceptual definitions of frequently used terms are given in order to clarify and unify meaning.

*Blogs* are a digital space on a website or learning site “where individuals write commentaries on an ongoing basis” (Clark & Meyer, 2008, p. 259). Users may use the blogs to express and organize thoughts and have potential to become influential by maintaining an audience (Clark & Meyer, 2008). Microblog writing will be used in the realm of classroom

setting using *Edmodo*. Students will post responses to open-ended questions and also comment on the responses of their peers. The students will maintain the audience of their classroom peers as well as parents of students participating in the class.

*Microblogging* is a digital form of writing that includes brief compositions completed on a particular topic. According to Mills and Chandra (2011), “Microblogging is a computer-mediated form of communication that is producing social practices . . .” (p. 41). Microblogging occurs on social sites such as *Facebook* and *Twitter*.

*Edmodo* is a free, digital classroom application that allows teachers and students to interact collaboratively with academic information. *Edmodo* hosts the blogging space for microblogging and posting comments to a discussion board that students will be interacting with to write responses to open-ended questions. Students and teachers have the capability to interact and complete assignments anywhere and anytime. The application can be downloaded on almost any electronic device such as a computer or smartphone ([www.Edmodo.com](http://www.Edmodo.com)).

*Flipped Classroom* is a pedagogical method that employs technology to assign activities outside of the classroom in order to provide greater enrichment for students while in the classroom (Arnold-Garza, 2014).

*Digital Literacies* means becoming adept in the area of learning and communicating in the digital realm. According to Simsek (2013), to be literate simply meant to master reading, writing, and arithmetic, but in today’s digital world, more tools have emerged that require computer-related skills. With the emergence of Web 2.0 tools and social media such as Twitter, Instagram, Facebook, blogs, online classrooms, and e-mail applications, there are common expectations from today’s generation that there should be more immediate interaction and access to information. These expectations have become infiltrated into the workplace. Today’s citizens

will need to add another skill to the literacy list through having the knowledge and competence to interact effectively with technology and its tools (Simsek, 2013).

*Web 2.0 tools* are a collective number of tools that are hosted on the Web or Internet.

These tools provide a platform for social interaction and media. According to Jimoyiannis, Panagiotis, Roussinos, and Siorenta (2013), the Web 2.0 tools today “are more personalized and communicative Web spaces that support active participation, connectivity, collaboration, and sharing of knowledge and ideas among users” (p. 248). Many digital tools hosted on the Internet fall under the definition of Web 2.0 tools.

*Vivo Coding* is a method of coding where the researcher identifies patterns and reoccurring themes throughout the work samples. The researcher uses the coding to develop an analysis of the work samples (Marshall & Rossman, 2011).

### **Assumptions**

The following assumptions guided the development of this research:

1. The students completed all interactive technology assignments independently.
2. The students understood the assignments.
3. The students adhered to the writing rubric for completing assignments.
4. The sample was representative of the population.
5. The technology tools remained consistently dependable for completing the assignments.
6. The teacher consistently assigned the tasks throughout the research time frame.
7. The teacher consistently used the rubric to grade assignments.
8. Digital literacy skills were cross-curricular and useful for multiple curriculums as well as applicable in real-world applications.

## **Delimitations**

1. Participants for this study were delimited to selected students at a junior high school in Alabama whose parents granted permission.
2. The sample was additionally delimited to students who participate consistently in completing the interactive technology assignments.
3. Participants for this study were delimited to a number of students from a school in central Alabama as well as limited to the subject of English, informational reading; it was not a randomly selected subject pool from across the United States. One problem with this sampling is that the sample may produce similar responses while reducing the range of representation within the sample.

## **Limitations**

Certain limitations are inherent in exploring the multidimensional topic of writing with technology. The following limitations shape the development of this study.

1. Only eighth grade adolescent students enrolled in the classes at the junior high school were included in the study.
2. The participation of students was voluntary with parental consent.
3. The researcher served as the teacher who administers microblogging assignments.
4. The time-frame of data collection was limited to six assignments of collection, which may affect the accurate gauging of writing growth.

## **Organization of the Study**

This study will have five chapters. Chapter 1 includes an introduction, statement of the problem, purpose of the study, significance of the study, conceptual framework, definitions of terms, delimitations, limitations, assumptions, and organization of the study. Chapter 2 contains a review of the literature referencing previous studies conducted on blogging in association with writing. Chapter 2 also reveals certain aspects of student learning and adolescent characteristics associated with technology and writing. Chapter 3 describes the methodology that will be used in gathering data for the study. Chapter 4 presents the analysis of data including themes that have arisen through the data and the results of the research. Chapter 5 presents a summary of the findings, conclusions, and recommendations for further study.

## CHAPTER 2

### REVIEW OF RELATED LITERATURE

#### **Introduction**

With the technology available in today's world of social media, teachers have the power to transform social media into a world of learning. This study seeks to maximize students' learning opportunities outside of the classroom and to join adolescents in their world of technology. When thinking about adolescents, writing and their use of technology each day, the literature review will highlight digital literacy, technology tools and writing, *Edmodo*, flipped classroom, blogs, microblogging, learning styles and Revised Bloom's Taxonomy, adolescent learners and writing, motivation, and metacognition.

#### **Schema Theory and Inside Writing Frame**

Parts of the Inside Writing Frame stem from the Schema Theory. This theory was developed in the early 1900s to help explain how learners make connections to new information in order to move the new information into a concept of understanding and relating to old information (Stephens & Ballast, 2011). Schema theory "illustrates how prior knowledge provides a mental framework that we use to make sense of new information" (Stephens & Ballast, 2011, p. 28). Schema, as described by Smith 2008, employs information that needs to be connected to new information. When the schema grows and moves, learning has occurred. The connections of learning made through prior knowledge or organizing information causes the schema of the brain to move and grow. As a direct connection to Inside Writing Frame, the prior knowledge assists in making the personal connection to information, as outlined in the Inside

Writing Frame through the use of Internet exploration and graphic organizers for brainstorming.

Both of these components enhance the activation of prior knowledge and the personal connection needed to expand learning. The researchers, Stephens and Ballast, expand on this idea to relate to today's generation of adolescents by explaining that "...writers who are digital natives use technology to enhance personal connections" (Stephens & Ballast, p. 27, 2011). Therefore, to connect to today's learners, the Inside Writing Frame contains components to include today's digital learners and brainstorming techniques to enhance personal connections. When the growth and connections of the schema have been made, the students then transfer this growth into writing, which creates a much more intriguing writing experience. As a result, Stephens and Ballast echo the need for personal connection to enhance writing by stating, "Before a student can become engaged in learning and using language purposefully and effectively, she must make personal connections with concepts in order to claim her place not only in the classroom but in the larger community that embraces the classroom" (p. 27). Using technology for the writing process only enhances the growth of learning and personal connection needed through the Inside Writing Frame.

### **Digital Literacy**

As technology grows not only in the economic world but also within the walls of the school building, digital literacy has become a major component of school curriculums because of the digital age that students are engulfed in each day. Today's students are learning to interact with technology in multiple modes. Digital technology has been filtered into many areas of adolescent literacy, and Rycik and Irvinz (2001) highlight students' interaction with digital literacy:

As students' progress into middle and high school grades they learn to use and program graphic calculators, write computer programs, create Web pages, publish papers, and access multiple resources from around the world via World Wide Web. They interact with other students, scientists, authors, university professors, and others via e-mail, and carry on dialogues through chat lines, newsgroups, and discussion groups. Each of these improves their literacy and communication skills as they interact. . . (p. 191)

Communication through writing remains an important link in learning new digital literacies. Through these interactions with digital literacies, students are gaining new skills in communication. School curriculums have placed emphasis on students being aware of the importance of using and mastering new digital literacies. In fact, Witte (2007) highlights that the No Child Left Behind Act of 2001 (NCLB) had required a focus on digital literacy and that the "NCLB states that every student should be technology literate by the eighth grade, students must focus their efforts on bridging the gap between the traditional definition of literacy and technologies" (p. 95). Literacy serves to help students gain a broad understanding of the world around them through reading, writing, and mathematics combined, but the new component comes in the form of computer literacy.

Students must be equipped with the skills and knowledge of knowing how to operate in a digital world. Digital literacy can be defined as "the study of written or symbolic representation that is mediated by new technology" (Merchant, 2007, p. 120). There are many forms of digital literacy through blogs, texting, advertising, video, discussion boards, and e-mail. Students are faced with many modes of digital literacy each day; teachers must include this literacy as a part of daily teaching tasks. Technology assists in many ways other than simply teaching students how to use a computer, as Whitby, Leininger, and Grillo (2012) state, "Technology has been

shown to be a promising intervention in addressing expressive language deficits. . . .” (p. 53).

Teachers may view this as a grand opportunity to transform their teaching into an interactive classroom where students are not only learning to use these tools correctly but also learning to become critical thinkers in analyzing these modes of literacy (Merchant, 2007).

Digital literacy can be implemented through the use of several digital tools such as student computers, iPads, iPods, and Interactive White Boards. Despite the tool or tools a school chooses to implement, that implementation remains a vital part of the reconstruction of the definition and conceptualization of literacy in the classroom as well as preparing students to be successful within a technological society (Saine, 2012). In addition, Rycik and Irvin (2001) note that today's adolescents will be interacting with technology tools within the community and the workplace, and that “The workplace in a global society demands technological changes and proficiency in electronic literacy skills” (p. 195). Preparing students to interact digitally with content also prepares them for the future. Blogs contribute to teaching these digital literacies through teaching students how to appropriately use these tools to become more professional and equipped to join the workforce.

Today's students are engulfed with Web 2.0 technology tools. In this digital world students are presented with numerous tools that can be implemented in the classroom setting for enhancing writing and learning. Blogs are only one Web 2.0 tool that can be operated to improve and teach digital literacy. In one study, Olthouse and Miller (2012) found in a national survey of 938 adolescents that 93% use the Internet in some way and 64% of those who use the Internet are utilizing some form of communication tool including blogging. Since students are already engaging with these tools for personal use, educators should incorporate these Web 2.0 tools as a form of digital literacy. Tools such as websites and creating e-books may be an option for

incorporating the tools with writing skills. Olthouse and Miller (2012) stress that writing for today's adolescents takes on a social form and becomes a platform for presenting their creativity and talents. The researchers also stress the importance of providing the appropriate tool for the audience, but Olthouse and Miller (2012) also categorize tools into ranges of elementary to secondary tools. For example, Glogster, a tool used to create online collages, is considered to be an elementary interactive tool with embedded teacher controls. With all of the tools available, the task of finding one that works for the students can be challenging for the teacher. In order to bridge the gap, Wanago (2013) offers tips for teachers to guide them through the process of implementing these tools and also suggests to start students with something small, explore the tool, allow students to be leaders with the tool, and most of all, keep focused on the content of the lesson and not so much on the elements involved with the tool. Students may have a tendency to get bogged down in the creation and individuality aspects of using the Web 2.0 tools.

### **Technology Tools and Writing**

With the dawn of technology and Web 2.0 tools, the word processor has become a major tool for writing in a digital medium. Blogs are infused with a word processor. Word processors are important tools; Morphy and Graham (2008) state that word processors equip learners with supportive elements such as spelling and grammar checks and provide students with a quick way to share the information. In a study, Morphy and Graham also found that writers who are considered to be reluctant are more likely to engage in writing when they have a word processor to assist them with the intricacies of writing. In the report of a meta-analysis of writing and word processing, Morphy and Graham found that incorporating a word processor while writing showed gains with the quality of writing, especially among students in grades four through twelve but not a great deal of motivation for writing. Not only does word processing contribute

to the enhancement of writing, but the use of other digital tools can produce greater writing results. Boas (2011) conducted a study incorporating writing with the use of blogs and a common social networking site and concluded that “it is important to structure a writing curriculum around the discourse genres that correspond to those situations where students will use English communicatively in their personal, academic, and professional endeavors” (p. 26). Boas continues to explain that the importance of technology integration is revealed through the evidence of research and collaboration that shows through the students’ writing samples and that it is especially important to include a social media component to the technology integration because today’s adolescents are so conditioned to social interaction with digital writing. At the conclusion of Boas’ study with incorporating writing through the social networking site, the researcher determined that “web-based social networking tools offer excellent opportunities to conduct the pre-writing, drafting, peer review, and revising steps of the writing process” (p. 32). This study will incorporate a similar type of social networking site for writing assignments and students will experience writing through digital and social mediums. With the social interaction provided by combining digital resources and Internet, there becomes a new dynamic to writing. In fact, Coskie and Hornof (2013) state that “the act of writing is becoming more and more an act of composition--using texts, images, and sound to interact and collaborate with the reader--and this requires us to rethink how we use and create text in our classrooms” (p. 55). Digital writing offers a much more illustrative community of writers thus allowing for more critical thinking and metacognition when composing.

### ***Edmodo***

For this study, the medium of technology to be used for the writing response will be hosted by *Edmodo*. *Edmodo* has often been referred to as an educational version of *Facebook*.

While the appearance and user features of *Edmodo* are much like *Facebook*, Krutka, Bergman, Flores, Mason, and Jack (2014) define *Edmodo* as “a course management system that doubles as a closed social media service with a Facebook-like interface” (p. 83). *Edmodo* has many features of a traditional course management system but also maintains a social atmosphere for students. With *Edmodo*, teachers create classes, post messages on a discussion board, assign assignments, and attach documents, links, and other media for enhancing learning. Students are able to interact with the content through *Edmodo* as well as post reflective responses. In addition, students may read and comment on other students’ posts just as they would post on a social media site like Facebook.

Mao (2014) defines social media as “new technologies and applications that utilize the Internet and Web 2.0 tools and allow users to create and participate in various communities, sharing, collaborating, publishing, managing and interacting” (p. 213). *Edmodo* does offer students the feature of being a part of different communities from the aspect of having the capability to enroll in different courses at the school or even join other educational communities within *Edmodo*. With *Edmodo*, the nature of the tool rests primarily on academic groups. With *Edmodo*, students are able to collaborate with classmates and teachers while also sharing information such as photos, videos, or links to content related to the subject area. In addition, Mao reports that social network assignments for the classroom afford students the opportunity for “validation and appreciation of creative work, peer alumni support, and school-task related support” (p. 214). Students are able to view and produce the content through multiple modalities.

The social aspect of *Edmodo* remains a key element for the attractiveness of the tool. Krutka et al. (2014) states, “We live in an age of rapid technological and cultural change and it is vital for the field of education to keep pace” (p. 83). Krutka et al. expands on this declaration to

state that today's digital natives have been shaped by social media and technology, and this has affected the way students give and receive information on a daily basis. Mao asserts that "The use of new technologies, especially social media, is becoming increasingly ubiquitous in students' daily lives . . . and is shaping how we should communicate, teach, and learn" (p. 213). Therefore, students are able to relate to the social aspect of connecting educational content to social media. Social media sites allow students to capitalize learning through "communicating, sharing, collaborating, publishing, managing, and interacting" (Krutka et al., 2014, p. 83) with the content.

*Edmodo* provides a platform for the classroom where students will be able to employ all of these learning experiences because students are able to share links and files with the entire class. Ractham and Chen (2013) contend that "If used properly, social technology could be an effective tool to help students acquire skills in analytical and diagnostic thinking, develop strong persuasive skills, and make decisions under conditions of uncertainty" (p. 291). For this study, eighth grade students will be the focus of the study and the persuasive element involved with the use of a social technology remains a key element for the study. According to the "Exemplar Writing Test Questions" for the ACT Aspire assessment for eighth grade students, which is an annual standardized test used to measure student progress at the school at which the study is based, students are evaluated heavily based upon persuasive writing components. The Aspire assessment requires a full essay and with *Edmodo*, students will primarily be micro-blogging, which is defined as "online communication on social network services that is relatively concise" (Krutka et al., 2014, p. 84). *Edmodo* provides a platform for enhancing persuasive writing techniques.

There remains little research involving adolescents and the use of social media and learning. Mao (2014) concurs by stating “research on social media in the context of K-12 education is less extensive . . .” (p. 240); therefore, much of the research encompasses post-secondary subjects. For example, Krutka et al. conducted a study involving pre-service teachers using *Edmodo* as a reflective response platform. During the study, the researchers found that the pre-service teachers were persuasive in their reflective writing posts and produced quality reflection. According to Krutka et al., “Quality reflection requires a deeper consideration and consequently, posts that did not move (and received) fewer responses” (p. 91). The researchers found positive results while employing *Edmodo* as a platform for writing open-ended responses. In fact, Krutka et al. state, “we found *Edmodo* a promising medium for collaborative reflection appropriate for our digital age” (p. 91).

The current study incorporated adolescents, so another important feature of *Edmodo* lies in the “closed” feature of the classes. Only students that are a member of the class may post and view content within the page. This feature maintains continuity and relieves distraction. In fact, Mao conducted a study in which the researcher surveyed 14-17-year-old students about the uses of social media for content implementation where he discovered that students perceive the use of open-ended resources such as Facebook to become more of a distraction than a learning tool. Mao quoted students responding to the questionnaire, “‘You can go on Facebook and other social sites so you might get distracted in class.’ and ‘Although we allow Facebook for research purposes (such as finding quotes in a message for the school newspaper), some students abuse the privilege and spend the whole day on it’” (p. 216). Because *Edmodo* only allows students to interact with the class in which they are enrolled, the students do not become as easily distracted by other social elements as offered by some social sites.

Because *Edmodo* provides the unique ability to host the virtual classroom anywhere by being supported on mobile devices and computers through the availability of Internet services, this aspect has expanded the learning community for students. Ainsa (2014) states that “The availability of free quality course content and multi-media interactive classroom technology presents new learning and challenges to teachers, (primarily) students, (secondarily), and parents” (p. 162). *Edmodo* provides new challenges for content because teachers now have the ability to require students to carry classroom knowledge anywhere such as at a baseball stadium doing homework while watching their little brother plays t-ball. This transformation of having the classroom in “any” setting can be a distraction for students and a challenge for parents to help students to maintain focus on the task of homework. Ainsa notes that a study completed in Auburn, Alabama examined mobile learning using iPads where one group of students used the iPads for mobile learning and the other group of students did not use the iPad for learning. The results identified that the students without the iPad showed a lesser improvement in academic results than those with the device. *Edmodo* offers students the opportunity to incorporate writing and social networking while also moving the classroom to new venues.

### **Flipped Classroom**

Hawks (2014) defines the flipped or inverted classroom as “a pedagogical model that employs asynchronous video lectures, reading assignments, practice problems, and other digital technology-based resources outside the classroom and interactive, group-based, problem-solving activities in the classroom” (p. 264). The current research project employs a flipped classroom philosophy because the microblogs completed through *Edmodo* will be completed as outside classroom activities when they may normally be in-class activities. According to Arnold-Garza (2014), “The flip evolved out of a history of experimentation with the concept of hybrid or

blended learning and problem based learning, using active learning techniques and new technologies to engage students” (p. 8). This evolution allows for greater opportunity for more in-depth class discussion and activity because the students will have already analyzed the reading content as a homework assignment. Through these activities, Arnold-Garza states, “there is more time for extended classroom discussions and exercises, helping students reach deeper understandings of concepts” (p. 9). The flipped classroom is categorized as a constructivist approach to teacher through student-centered learning activities.

Constructivism seeps into the classroom environment in different ways. In fact, Hawks (2014) states, “Constructivism supports shorter more frequent assessments to assess progressive increases in knowledge retention and critical thinking ability rather than fewer, more comprehensive exams” (p. 265). With the use of microblogs, the students will complete numerous short, open-ended writing assignments where they will research outside information to enrich their writing and critical thinking ability. According to Arnold-Garza (2104), this method of inverting the assignments also helps to accommodate students who may need more time to complete, read content, and process the writing assignments. The students will come to class more knowledgeable about the content through completing the writing assignments.

Hawks (2014) conducted a study with nursing students, employing the flipped classroom, and found positive results from the implementation. Hawks found that the flipped classroom “format supports creativity and charges the student with taking responsibility for his/her own learning” (p. 268). The flipped classroom originated with middle school learners and has grown from those experiments (Arnold-Garza, 2014). The aspect of maintaining that responsibility was found as an important factor in Hawks’ (2014) study: “Because students become involved in and responsible for their own learning, the driving force for learning becomes intrinsic rather than

extrinsic" (p. 268). By assigning the microblogs through *Edmodo*, students become responsible for their learning and engagement with the content. The teacher no longer hovers over the students as they write open-ended responses; students intrinsically take charge of their writing processes.

### Blogs

Blogs are websites used to record content in a chronological order. They are updated periodically and give the author the ability to state opinions openly and freely. In many ways, *Edmodo* serves as an interactive blog where students interact with the content from the course through responding to open-ended questions, information texts, polls and other content through writing in a blog-like format. The blogs allow others to comment and can even provide a file and link sharing feature. Blogs can be designed so they are aesthetically pleasing to the eye (Kurt & Izmirli, 2011). Blogs contribute to improving writing and strengthening critical thinking skills:

Blogs contribute to students' learning in a way that blogs help write learning logs and help students organize their thoughts as well as determine the areas--through self-reflection activities--in which they need to develop themselves. In addition, blogs not only allow students to make comparisons among their peers and to distinguish between what is good and what is bad but also increase students' individual responsibility and enable teachers to contact with their students rapidly and to provide feedback. (Kurt & Izimiri, 2011, p. 80)

Using blogs as a medium for writing, students are able to expand their writing experience from simple pencil and paper to a digital medium that offers a sense of responsibility and allows for other students to be a part of the writing process.

According to Hashemi and Najafi (2011), not only have blogs gained more popularity and visibility around the world, teachers have begun to use blogs to enhance instruction with

language and writing. With the widespread use of technology in our lives and the lives of adolescents, it is essential that educators imbed these tools. With such an audience, students have the potential of being a part of a much larger learning community than what lies within the four walls of the traditional classroom. Students can receive feedback from multiple sources: peers, mentors, teachers, or even admirers of their work. This opportunity would give students the ability to interpret fact from opinion and even encourage the use of critical thinking skills by challenging the students to respond to any feedback received, whether negative or positive.

Flately (2005) studied blog implementation in the classroom and found that students “entered clear, concise posts, a skill that will give them good real-world skills. Additionally, they reported that the use of blogs enhanced their motivation . . .” (p. 79). Stephens and Ballast (2011) recognize that the inside writing frame encourages the use of blogs to help expand knowledge and encourage students to make personal connections to the content. Through employing a blog, students go through the stages from exploring to synthesis in order to sift through information to create a blog.

While studying teachers’ use of blogs and student interaction, Fessakis, Dimitracopoulou, and Palaiodimos (2013) found that students experience more interaction inside and outside of the classroom along with more peer to peer feedback and collaboration. The students participating in the blogs proved to be more engaged and were more motivated to apply reflective and collaborative practices. Students learn from each other’s experiences and are able to add to their knowledge and skills. The researchers also found that the use of blogs increased communication in numerous areas such as teacher-to-student as well as student-to-student communications. Fessakis et al. referred to blogs as learning by design, which leads to different venues for students to maintain ownership of their learning. Learning by design maintains a sense of

creativity but the term brings awareness to the fact that, with blogs, students are able to manipulate the text to have different fonts and colors. The students may even add in images, links, videos, and other multimedia to enhance their blogging experience.

### **Microblogging**

Microblogging ties hand-in-hand with social networking because of the nature of writing and communication modalities on these web-based tools. In fact, Marques et al. (2013) state, “The communication tools and the structuring of messages are important as they can lead to more interactions among the users and they also influence the type and value of such interactions” (p. 395). Messages or microblogging serve as a major component of social networks such as *Edmodo*, which will be used during this study. Microblogging has become a major communication tool; Grosseck and Holotescu (2010) assert that “microblogging has become one of the first words associated with Web 2.0 as far as online social interactions, conversational discourse, communication . . .” (p. 21). According to Mills and Chandra (2011), “Microblogging is a computer-mediated form of communication that is producing social practices and conceptions of communities of learning across time and space that differ from print-based models of writing in educational sites” (p. 41).

Microblogging consists of short, concise works of writing whether for social or academic purposes. Microblogs should not be confused with blogs because “A blog is a Web page to which the author sends messages called ‘posts’ . . . the democratization of information in a journalistic context” (Marques et al., 2013, p. 396). Blogs are longer and more narrative in nature and are published for all to read. Readers may post responses or reactions to the information offered by the writer. In the secular realm, microblogs serve as “a means of information exchange” (Marques et al., 2013, p. 397). Users may post brief messages to their community on

a “personal network” in which these messages are displayed on a digital page in chronological order. According to Mills and Chandra (2011), “Unlike traditional blogging, brevity is essential” (p. 36). The microblogs normally are “pushed” out to all members of the same community and shared for the community to read and participate in the conversation. A “push” occurs when the hosted site delivers the information directly to the consumers or members of the community by notifying the members of the community through email or smart phone notifications. Unless the user changes the settings of these digital notifications, the users may continually be aware of the information as it is distributed to the community (Marques et al., 2013).

With the microblogging process, “Updates appear to friends and followers as a continuous newsfeed, amalgamated with updates from other subscribers” (Mills & Chandra 2011, p. 37). The microblog posts are set in linear order in which responses to specific microblogs are directly connected to the specific microblog in an order. A microblog to the entire community may appear at the top of a line and then responses to the microblog occur on a sub line (Marques et al., 2013). The ordering and displaying method sets microblogging apart from a regular blog because the responses to a regular blog may merely be listed at the end of the blog in chronological order without specific notation of a reader commenting on another reader’s comment. Visitors to a blog may have confusion if the blogger fails to specify if the response was created for the author or for a reader. The linear system of a microblog creates a more-user friendly method for response, especially for creating a classroom environment.

When considering using a platform for digital writing, the choice to incorporate a microblogging platform versus a blogging platform became evident based on a study conducted by Marques et al. (2013) who conducted a study with students to determine the effectiveness of both sources. Marques et al. found the following:

Students like using microblogs, as 82% reported that posting about subjects of class was good. Some students provided more feedback about the experience: “I liked (using microblogs in learning activities); it encourages good interaction and searching for content,” “using microblog helps on improving student interaction, contributing for increasing participation of everybody, making the activity pleasant.” (p. 399)

Marques et al. (2013) determined that the majority of the students involved with the study preferred microblogging as opposed to regular blogging when associated with learning and content. Microblogs serve as a tool to increase the incorporation of digital literacies into the learning environment. Mills and Chandra (2011) also found that microblogging found a more positive outcome than conventional journaling with pen and paper method: “observing that students wrote about a topic more frequently over a more extended period of time when using microblogging, leading to a deeper cognitive engagement . . .” (p. 37). Therefore, the choice of microblogging is shown to produce positive results over traditional forms of writing and blogging.

With concern, Mills and Candra (2011) confirm that incorporation of digital texts and responses remains an area of concern for educators: “Literacy educators are increasingly aware of the need to harness authentic digital communication tools in educational settings, to extend but not replace literacy practices” (p. 36). Mills and Chandra (2011) argue that “exclusively print-based conceptions of reading and writing are no longer adequate . . .” (p. 36). The researchers expand on this confirmation by explaining that literacies today must account for the vast amount of ways to communicate involving the technology mediums across the digital realm. Students traditionally interact with microblogging in social settings such as Twitter, Facebook, Instagram and other digital mediums through sharing “messages about one’s activities, opinions

and status, varying from sharing life activities and accomplishments with friends, relatives and co-workers; sharing news opinions with interested readers; and seeking knowledge . . .” (Marques et al., 2013, p. 297).

Most students currently incorporate microblogging in their social lives outside of school so educators have begun to funnel this prior knowledge into the classroom by using sites that emulate popular social networking sites such as *Edmodo*. Through this emulation, educators have the unique opportunity to intentionally intersect prior knowledge, content knowledge, and social networking into a learning community. In fact, Mills and Chandra (2011) agree that “Teachers are giving students the opportunity to draw on these out-of-school media literacies to enhance in-school literacy learning” (p. 36). In this digital age, teachers must support the growth of digital literacies of students.

Mills and Chandra (2011) conducted a study incorporating microblogging into the course content. The subjects of the study consisted of college-aged students who were given open-ended writing assignments of microblogging on *Edmodo*. The researchers found positive results while incorporating *Edmodo* for microblogging. Mills and Chandra state,

The microblogging activity required its multiple authors to draw on metacognitive reading comprehension strategies, such as previewing a text to activate background knowledge, clarifying their understanding of the text as they read, and making inferences to draw conclusions. . . . (p. 39)

For microblogging, Mills and Chandra (2011) highlight that the students are able to achieve this feat because the “authors of print-based texts, microbloggers are simultaneously readers and authors. Microblogging allows students . . . to occupy the same reading and writing in rapidly interactive writing” (p. 39). The researchers observed that the students were reading

the responses of their classmates before writing their responses and then also reading the responses after they had written. The students continuously reflected on the responses on the content through reading the responses of their classmates. Participants in the study helped rationalize the constant interaction through stating that microblogging “Actively engages students with reading and writing through the ‘hook’ of technology. Students are encouraged to read through all posts before submitting their own: requiring them to interpret and infer meaning from the information and continue the blog” (Mills & Chandra, 2011, p. 39).

According to Revised Bloom’s Taxonomy, inferring and interpreting lay at the second level of learning. This serves as a stepping stone to moving students to the higher levels of cognitive thinking through evaluating and analyzing texts and the microblogs of classmates (Amer, 2006). The researchers found that not only did the microblogging produce steps to higher thinking but also a more precise form of writing. The researchers “observed that microblogging threads are not static, discrete units, but are dynamic and malleable, open to reauthoring multiple times” (Mills & Chandra, 2011, p. 39). Often traditional forms of classroom writing, with pencil and paper, do not lend themselves to an editing and re-editing feature as that of microblogging. Mills and Chandra found that “In traditional writing classrooms, there is a greater emphasis on individual authorship and the teacher as an authoritative source of knowledge” (p. 40).

Microblogging offers a foil to the traditional classroom by providing a venue for giving students the authority to prove and show their knowledge of the subject matter. In fact, many students incorporate prior knowledge into their microblogging to make connections to the content. Through the study, Mills and Chandra (2011) found that students would incorporate “Weaving intertextual references to popular iconic figures from movies, songs, and the media, the students made connections to their existing knowledge and experiences” (p. 40). This

constant adding of content, making connections to the text through multiple mediums, correction, reading and re-reading opens an avenue for metacognitive processes. Mills and Chandra affirm the rise of metacognition by stating, “In this respect, microblogging was found to be a meta-discursive practice, reflecting upon itself as each new reader-author added posts in the thread” (p. 39). Amer (2006) acknowledges that metacognition occurs in three categories of Revised Bloom’s Taxonomy: strategic knowledge, self-knowledge, and knowledge about cognitive tasks, and these are the mental processes that learners use to monitor, control, and regulate their cognition and learning. The metacognitive process involved with microblogging advances the writing activity as opposed to the one-dimensional frame offered by traditional forms of writing.

Microblogging also offers a self-monitored scaffolding process for students. Students having greater cognitive levels within the content would provide more advanced information and other students would write according to their level of learning. Mills and Chandra (2011) note that “The students identified that the joint writing of an online text provided participants with the opportunity to ‘scaffold’ on another’s contributions . . .” (p. 41). The students naturally scaffold the assignments without the necessity of differentiating assigned by the teacher. In the study conducted by Mills and Chandra, students noticed that microblogging enabled them to work at their own pace and level as noted by one of the student participants in the study: “For those students who struggle with reading and writing microblogging is a way of allowing them to participate in these avenues without feeling pressured” (p. 41). In a traditional classroom setting, students may potentially feel pressured to comment on text or answer questions due to some vulnerability associated with the classroom atmosphere. Microblogging offers an alternative to traditional classroom discussions. Though microblogging does not replace traditional classroom

activity, it offers an effective supplement to “dialogue that extends beyond the boundary of classroom walls” (Mills & Chandra, 2011, 42). At the conclusion of the study, Mills and Chandra were encouraged by the use of microblogging and claimed that:

Microblogging is a ubiquitous practice that can be geographically and temporally unlimited: Users can contribute and receive feedback from peers and the teacher anywhere, at any time. Nevertheless, there continues to be an authority-novice relationship between facilitator and students that places some boundaries around the content of the posts. Therefore, this form of learning remains specifically educational. (p. 42)

With the results, Mills and Chandra (2011) concluded that though students are given authority and right over time and place, there remains an omniscient presence of authority held by the teacher. According to the findings of Mills and Chandra, students will be more likely to remain focused on the content and writing within the content with the use of *Edmodo* as a platform for microblogging. The researchers confirm that this method of instruction remains fairly new by stating, “microblogging in educational settings has not yet been widely addressed” (p. 36). Therefore, research on the usage of such digital tools within the educational setting remains fairly limited.

Although there are numerous positive aspects for using microblogging, there are also drawbacks. In a survey conducted by Holotescu and Grossek (2011), students who participated in a classroom microblogging experience revealed that there existed certain negative results to using the microblogging format for writing assignments. First, the participants revealed that the microblogging format might not function well with the technology provided for the application, thus causing frustration for the users with the assignment. Additionally, students confessed that

they found it difficult to transition from using the SMS language. SMS language is used when someone is using shorthand language that may be used when text messaging to a friend. They often confused the two and did not use the formal language required for the assignment. Lastly, the students found that not all students were as digitally educated as others. Some students required more training to use the technology application where microblogs where written. This aspect caused some students to have less time to complete the assignment due to the proficiency of knowledge.

### **Learning Styles and Revised Bloom's Taxonomy**

An important part of moving forward from the traditional pencil and paper method of learning and implementing a student-centered classroom is acknowledging the students' learning makes learning easier and leads to better achievement. In order to incorporate appropriate correlations between learning styles and activities for students, there must be a clear definition of what those learning styles involve. Rakap (2010) cites a learning style model directly related to technology called VARK. The VARK model recognizes learning styles as "visual (V), aural (A), read/write (R), and kinesthetic (K)" (p. 107). Visual learners learn primarily through material that is presented as an object or mostly by seeing things presented. Aural learners learn best through hearing and discussion of material. Read/write learners learn best by manipulating the information such as creating diagrams or organizing information. Kinesthetic learners process best through experience with the information such as applying a lab activity to a topic (Rakap, 2010).

Rakap (2010) elaborates that technology serves as a great tool to provide motivation for students while also meeting their diverse learning styles. Students may possess more than one type of learning style, therefore, a tool to accommodate all learning styles would provide the best

teaching situation for planning lessons for students. Using blogs serves as an excellent resource to enhance all of these learning styles. In fact, Saeed et al. (2009) conducted a study to measure the effects of technology on learning styles and found positive results. Using technology to enhance writing, Saeed et al. found “well-balanced academic performances across all learner types” (p. 106). Saeed et al. also report that when technology is used appropriately to meet the needs of those learning styles, technology positively impacts the learning and learning products of students. To know the students, teachers must know their learning styles.

In direct correlation with learning styles comes scaffolding the content in order to challenge students. Technology can assist in moving students into higher cognitive levels of thinking while also accommodating those learning styles. Lightle (2011) states, “I’m convinced that handing a student a mobile learning device or laptop won’t magically improve achievement” (p. 6). Paired with technology must be meaningful learning activities and objectives are a necessity when incorporating technology appropriately. Technology integrates cognition and interaction when consulting the Revised Bloom’s Taxonomy. According to Lightle (2011), “This revision turned the nouns into verbs and did some rearranging of terms--from Remembering to Creating” (p. 6). The new Bloom’s shows that students reach the highest levels of learning while creating and building products. In fact, Lightle (2011) suggests that this type of writing falls into these categories but remains significant: “It is important for our students to be able to understand, summarize, and classify the massive amounts of information they have access to” (p. 7).

The remembering and understanding levels of cognitive thinking are necessary to moving students into the higher levels of cognitive ability. As can be viewed in Table 1, Lightle (2011) outlines and compares the Old Bloom’s to the new Bloom’s levels as seen below. Creating has been placed at the top of the new Bloom’s levels of cognitive learning, therefore, in order to

move students to the highest levels of learning, they must first maintain a base level of knowledge. With microblogging, students have the potential to reach higher levels of thinking such as Analyzing and Evaluating. With the blogs, students will be “making connections, comparing, organizing, and presenting information” (Lightle, 2011, p. 8) through responding to other students’ posts as well as writing their response analysis to the text or medium associated with the content. In addition, there is enormous potential for students to push even further to the evaluation level of the taxonomy by “making judgments” not only about the content but also about their peers’ comments. In addition, reflecting lays deeply rooted in the evaluation level and through microblogging, students are essentially reflecting on the content (Lightle, 2011).

Table 1

*Comparison of Bloom’s Old and Revised Taxonomies*

Old Bloom’s Taxonomy Higher Order Thinking Skills	Revised Bloom’s Taxonomy Higher Order Thinking Skills
Evaluation	Creating
Synthesis	Evaluating
Analysis	Analyzing
Application	Applying
Comprehension	Understanding
Knowledge	Remembering
Lower-Order Thinking Skills	Lower-Order Thinking Skills

With the emergence of a revised Bloom’s edition came several digital representations of Bloom’s for today’s learning environment. With the great impact of technology involvement, students are learning more frequently with digital tools. Mary Bertram (2014), a classroom teacher, created this form of Bloom’s Digital Taxonomy for adolescents (Figure 2). The taxonomy shows numerous tools for incorporating the levels of cognitive learning through technology. Lightle states that “Bloom’s digital taxonomy helps us navigate through the myriad tools and make choices based on the kinds of learning experiences we want students to engage

in” (p. 10). If *Edmodo* were on this pyramid, it would be the equivalent of EVERNOTE as seen in the applying level on this pyramid. EVERNOTE presents a way of writing that makes planning and note-taking easier for business professionals but employs microblogging as a major writing source. Students are able to write responses to content using this application. As can be seen, Bertram (2014) places blogs in the creating level of the taxonomy, but since the current study will not be incorporating full blog creation, but rather microblogging, students will experience an understanding to the evaluation level of cognitive thinking through the use of *Edmodo*.

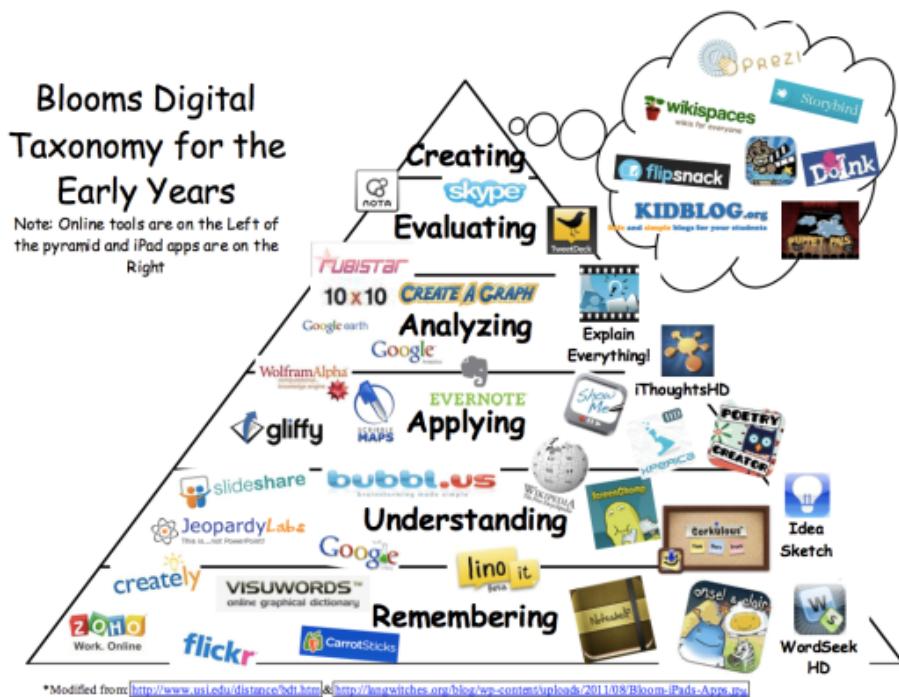


Figure 2. Bertram's Model of Bloom's Taxonomy.

Integrating both Revised Bloom's and digital taxonomies provides not only scaffolding for the students but also a direct correlation to the current workplace. Holland (2014) states “The current workplace knowledge-based economics are requiring more high-level creative thinking skills with workers” (p. 18). Students will be expected to reach the highest level of the revised

taxonomy and incorporating technology tools plays an important role in helping students to reach this feat. The digital taxonomy plays an important role in assisting teachers to choose the appropriate tools for students in order to appropriately scaffold technology activities. With confirmation, Holland (2014) states, “Providing meaningful integration of new technologies through the careful selection of quality tools aligning to the best instructional practices can alter how learners and instructors engage with concepts and each other to achieve powerful learning” (p. 18). The learning activities available through multiple digital resources not only encourage higher orders of thinking, they provide quality instruction while also motivating students to engage with the curriculum.

### **Adolescent Learners and Writing**

Adolescent learners or middle school-age learners have a multitude of learning gauges to tune into each day from social to textual to concrete to environmental. With all adolescent students are faced with each day, if they are entering into this new world as a struggling learner, it can become increasingly difficult. Casey (2009) states that literacy as an adolescent becomes increasingly complex because students are expected to be literate in order to learn instead of learning to be literate. Students who may be struggling learners are overlooked and therefore continue to struggle. Casey suggests that students will be more adaptive if the learning activities are individualized and target specific skills. Incorporating blogs into the learning assignments can assist in creating an individualized activity with specific targets in the content for the students to meet.

From the National Assessment of Educational Progress (NAEP 2011), also known as the Nation’s Report Card, adolescent learners proved to have higher scores in writing if they had teachers who included computer tools as a part of their writing assignments. The survey found

that teachers who assigned computer-assisted writing assignments to draft and revise their writing proved to score higher on the national assessment. Scores revealed that teachers who stated that they never used the computer as a tool to improve writing produced lower scores on the national assessment (The Nations Report Card, 2011). Most blogs have editing features embedded into the program so students will incorporate the skills of drafting and revising when using the blogs for classroom activities.

## **Motivation**

Part of constructivist theory is maintaining a student-centered environment in the classroom and part of that is to find ways to motivate students in their learning. According to Arnold-Garza (2014), the student becomes more motivated by the flipped classroom concept, “Motivated by learner centered design, they put students in control of preparing themselves for class engagement with the assignments” (p. 12). Martin (2004) determined from data analysis that there were certainly differences in degree of motivation among boys and girls. But, the data did not present a specific kind of motivation that would create a specific need for motivating boys. The data show that girls are stronger in areas that involve planning and managing but also girls proved to have more anxiety in learning than boys. The boys’ data show that they are more likely to “self-sabotage” in their motivation. Martin suggests that there are not many differences in motivating boys and girls, but the main issue of motivation lies in pedagogy. “What this implies is that addressing (gender-related) motivation and achievement issues is primarily tackled through quality pedagogy” (p. 143). In order to accommodate for the motivational differences, microblogs will provide a venue that has the potential to motivate both boys and girls to improve writing. In fact, Lightle (2011) states, “Teachers who are integrating technology report that students are more motivated to learn, apply their knowledge to practical problems,

and take ownership of their learning” (p. 6). Technology integrates the students’ interests and learning into the classroom.

### **Metacognition**

In today’s traditional classrooms, teachers spend countless amounts of time probing students and motivating them to answer the question: “Why?” Through Stephens and Ballast’s (2011) inside writing frame, students are given the means to explore the answer to this question. Metacognition can contribute to answering this question, why, with more detail and thoughtful answers. Sperling, Ramsay, Richmond, and Klapp (2012) state that metacognition can best be defined as “thinking about your thinking” (p. 1). Metacognition was introduced over 30 years ago in the field of psychology and continues to be studied in numerous areas of psychology including educational psychology (Efklides, 2008, p. 279). In fact, Sperling et al. (2012) find that metacognition plays a large and important role in student learning, reaching goals, and moving information into the long-term memory. As stated earlier, metacognition is not a new concept and has been the focus of research for education for many decades. In the 1980s, Marzano and Arredondo (1986), stressed that technology was a force that was steadily shifting the needs of society. Schools and teachers could no longer focus on just teaching students facts and knowledge. Students must be equipped with skills of reasoning. In order to maintain a place in the workforce, students must be able to access, organize, and use the information around them to be effective (Marzano & Arredondo, 1986).

The trend of technology in society and the workplace continues to alter the way teachers and schools must conduct learning and help students to transform their thinking. Students will need to be able to know how they know what they know and to be able to “think about their thinking.” Metacognition appears to be such a complex concept and teaching students to think

about their reasoning or understanding why they know something to be true can be a very difficult skill to teach and even communicate.

Can adolescent students engage in such a complex skill as metacognition? Sperling et al. (2012) conducted a study with seventh grade students and applying metacognitive methods with science content. The researchers found that the seventh grade students certainly can utilize metacognitive skills and that using those skills improved achievement scores in science, where there are numerous facts and processes which the students must know for the course objectives. As metacognition can be a difficult subject to analyze and measure, there have not been many studies involving education and metacognition especially in relation to blogs. Through Stephens and Ballast's (2011) inside writing frame, blogs can serve as a medium for producing metacognitive objectives to help students organize and process information as they explain why they think what they think and know what they know about the content.

### **Summary of the Literature**

As Morphy and Graham (2008) highlight, word processors and writing have become synonymous and inseparable for today's adolescents. Additionally, in order to meet the needs of the learning styles of today's hands-on, multi-tasking adolescents, technology incorporation remains a valid tool to implement to meet the various learning styles of today's students (Rekap, 2010). Not only does technology play a role in meeting the needs of students within the educational realm but also with the realm of the future. To insure a proper well-being for all students and to prepare the students for the workplace, it remains vital to provide students with proper experience and training with technology. Students will need the knowledge and wisdom of how to effectively interact with digital tools in order to truly gain a new insight into the technological world's literacy within today's workforce (Rycik & Irvin, 2001). Therefore, the

root of learning within the digital literacies of today is not only a skill but a lifeline for today's students to survive within the working realm of the future. As Casey (2009) points out, students in today's world are expected to be literate in technology in order to learn within the workforce instead of learning to be literate. Students will need the prior experience with technology tools in order to learn the skills necessary to function appropriately within today's working world.

In conjunction with the expectations of the digital world in the workforce, employers are also expecting employees to enter the workforce with the ability to think rationally and analytically (Marzano & Arredondo, 1986). Unlike technology, the concept of metacognition has surfaced for many years. Metacognition allows students to analyze, rationalize, and think about the content; it is not merely fact but rationalizing the facts. Studies have shown that technology can play a role in assisting in incorporating metacognitive skills through writing within the content and gaining positive results (Sperling et al., 2012).

Within the realm of today's technology, there lies a wide variety of Web 2.0 tools, which can be used to maintain technology skills but choosing a tool for the task of writing while also incorporating technology skills can be a tough objective. Keeping learning objectives basic is key when incorporating technology into the learning environment (Wango, 2013). Students learn to incorporate their learning into a digital form with the least amount of distraction and confusion. Therefore, narrowing tools down to the specific objective to be met while also incorporating one technology tool keeps the students from getting bogged down into learning too many tasks at once (Wango, 2013).

For the purpose of this study, the tool that closely encases the skill of writing, while also incorporating digital literacy lies within the blogging tool. With microblogging, students are able to think through metacognition using numerous mediums in order to enhance writing skills.

Microblogging specifically caters to the skill of writing by providing a built-in word processor to assist students with spelling and grammar problems while also enhancing writing through the digital realm of being able to add photos and other multimedia to advance the writing skills into connecting the writing to other sources. With a study, Kurt and Izimiri (2011) found that blogs assist students in reflecting on the content, organizing their thoughts while writing while also providing an element of motivation through the digital aspect of learning. Through incorporating a blog, the students are able to take ownership of their writing and learning, which adds an element of skill for the future of their working literacy (Fessakis et al., 2013).

Though Fessakis et al. (2013) found that students learn to take ownership of their writing through incorporating a blog, there lies little evidence from the research if blogging assists in improving writing organization and skills over time. This underscores that there remains a need for additional study in the area of incorporating writing and technology. Examination of writing through blogging can add to the research of writing through incorporating technology for adolescent learners.

## CHAPTER 3

### METHODOLOGY

This study was conducted as a qualitative exploratory case study. Creswell (2007) defines a case study as, “study of an issue explored through one or more cases in a bound system (i.e., setting, a context)” (p. 73). In this study, multiple cases will be studied within one issue or concern (Creswell, 2007, p. 74). Within the study, the researcher, who was also the teacher, employed the use of microblogs through *Edmodo* to obtain work samples and provide writing rubrics for all of her participants, including the study participants. At the end of the collection of work samples, a focus group was held by an outside facilitator with participants of the study.

This chapter will discuss the research methodology. It begins with an explanation of the Institutional Review Board process followed by a discussion of the setting in which the data were collected. Then the chapter leads into how participants were chosen, setting, characteristics of the participants, instruments and data sources, and how the analyses were completed.

#### **Institutional Review Board Process**

In harmony with The University of Alabama requirements, The University of Alabama Institutional Review Board (IRB) approved this study. The researcher also received certification from the IRB to work with human subjects in a non-medical setting. Protecting the participants' identities was the researcher's main concern, especially since the participants were adolescents. First consent was sought from the school principal, eighth grade vice principal, and the superintendent of schools to conduct the study. Letters of informed consent from parents and letters of informed assent from participants were both signed by each participant.

Protecting the participants' identity and data was of high concern for the researcher, therefore, she safeguarded this information. After both signed forms were returned, the researcher checked each of the forms for completion. Those participants' names were placed into an Excel spreadsheet in random order. The list of participants began at approximately 50 participants. Because the researcher is also the teacher, in order to protect from bias of grading and the purity of the study, the researcher did not revisit this list until the work sample process had been completed, as all participants were required to complete the assignments, participants or not. This process did not affect the study.

After all six microblog assignments were completed, as part of the normal, classroom routine, the researcher was able to narrow the list based on completion of all assignments so the work samples would be complete for each student. Those participants who were missing one or more of the assignments or were no longer enrolled in the class were deleted from the participant list. Then the researcher randomly selected 15 of these participants to participate in the focus group. The random selection was done by selecting every other student until 16 had been selected. From that 16, the researcher then randomly selected 6 participants as a case study for the writing of microblogs through *Edmodo*.

There were no foreseeable risks to the participants beyond missing half of one class to participate in the focus group. The focus group was the only part of the research that was not part of the normal routine of the participants' daily activities. Transcription of recordings and data were kept confidential through the use of pseudonyms. The identity of the participants was known only to the principal researcher.

The main benefit of participating in the study was to further the learning of each student, as all participants had the opportunity. The participants who participated in the focus group

benefited from talking freely about the processes conducted using the framework and *Edmodo* as a tool. Participants had the opportunity reflect on their work and discuss that with other participants. There were no other incentives.

### **Setting of the Study**

The study was conducted with eighth grade participants who attended a central junior high school in Alabama, and the participants served as the primary participants in the research. The researcher generated a sample of participants from five English classes that the researcher taught. The combined number of participants in these classes was approximately 150 students. From these students, 16 were randomly selected to participate in the study for the focus group. From that 16, 6 participants were randomly selected as part of the case study.

According to the *State of Alabama of Education: Enrollment by System, School, Sex, and Race* 2013-2014 report, the subject school enrolled 1,062 students with 511 students in the eighth grade and 551 students in the seventh grade. In the eighth grade, there were 57 Black females, 62 Black males, 184 White females, and 172 White males with no other races listed within the eighth grade. For a socioeconomic profile, the State of Alabama Department of Education report for free and reduced lunch percentages for 2013-2014 listed the school as having 33.99% of students eating reduced lunch and 7.70% eating free lunch. In comparison, this rate lies below the state average of total free and reduced lunch of 59.2%. Within the academic realm of the school profile, the students took the *Aspire*, a national standardized test, in the 2013-2014 school year. The current eighth grade students, who were seventh grade students at the time of taking the test, scored 49.5% proficient in writing and 45.8% proficient in reading informational texts. The test required students to answer constructed response questions that included written responses. The national average for writing is 65.8% and for reading 61.1%; therefore, the

current eighth grade students scored significantly below the national average in both areas. This study concentrated on the combination of reading and responding to open-ended questions through writing using microblogging on *Edmodo*. On a higher level, the high school into which this eighth grade class transitions has an 83% graduation rate for 2013-2014, which lies above the state graduation level of 80%.

Within the school, each student had access to a computer lab for student use. Therefore, even if participants did not have access to Internet or a computer outside of school, they had the opportunity to complete all assignments within the school. Every classroom was equipped with a Smart Board, laptop, projector, and Elmo. Participants also had access to online textbooks, the school website, and software tools for use during instruction. In addition, many teachers employed the use of *Edmodo*, a free, online classroom portal that appears much like *Facebook* that works in conjunction with computers and mobile devices. Each student had his or her own access code and password for the *Edmodo*. This application was employed for creating the open-ended blog-style writing assignments to conduct the study.

### **Recruitment**

The researcher was random in her selection of participants for this case study, as is appropriate in order to show different perspectives on the same issue (Creswell, 2007, p. 74). Adolescent, eighth grade participants were the core participants in this study because the study involved exploring using a writing frame and *Edmodo* among adolescents. They were all eighth grade participants, who were enrolled in the researcher/teacher's eighth grade English classes. The teacher/researcher had no knowledge or control over the students to be enrolled in her classes. The guidance counselor and school leadership had authority of enrollment. All of the students in the researcher/teacher's English classes were given the explanation of the study and

the appropriate forms. Those who returned the consent and assent forms signed were considered as part of the sample. Those who did not give consent and assent were not considered part of the study and were not penalized in any way for this.

The researcher chose 0a small sample size to maintain credibility in this study (Creswell, 2007, p. 127). This study has been held to six case study participants in order to create opportunity for identifying themes and to conduct cross-case theme analysis. With a larger number, the themes may become too great in number and too complex (Creswell, 2007, p. 128).

## **Participants**

The participants for this study consisted of eighth grade students at a junior high school. The combined classes consisted of approximately 150 female and male students. From those 150, the researcher randomly selected 16 students, who represented the group, to conduct the focus group. The participants were sorted into male and female to allow for balance in gender. Eight males and eight females were randomly selected from each list. Then from those 16, 6 were randomly selected to conduct a case study. Only those students that returned signed parental permission and student assent forms participated in the study. The permission and assent forms can be found in Appendix C. The researcher conducted the study within her own classroom.

For the assignment dates, the participants were given direct access to a computer and Internet while at school, during instructional time, in the event that they did not have access to the *Edmodo* outside of school. Every student had the opportunity to complete the assignments because the assignments were given as part of routine coursework or homework assignments. In the nature of *Edmodo* microblogging assignments, they were timed, but participants had 24 hours to complete each assignment. Participants also had the option, if class was missed, to complete

the assignments outside of school. If they did not have Internet and computer access, the teacher/researcher provided opportunities at school for the participants to make-up the missed assignment. As part of school policy, each student was afforded time to complete missed assignments.

The participants were in no way penalized for participation or lack of participation in the study. The participants' grades were not affected by the single factor of participating in the study. All participants were required to complete the microblogging assignments because they were part of regular class activities. The researcher did know the participants' names and had interaction with the participants for 60 minutes each school day. The researcher/teacher taught approximately 31 participants in each class period, and there were five classes taught. All participants were assigned the microblogging assignments, but all participants were not expected to participate in the study. Those students who did not participate were not included in any of the research findings. Participants arrived in the course with an array of writing skills and had different writing experiences. Pseudonyms were used within the data collection in order to protect the privacy of the participants.

Recruitment for participants began in August 2015, at the start of the new school term. All students in the researcher/teacher's classes were given the consent and assent forms. Every class was given a detailed explanation of the study, and the researcher/teacher allowed the students to ask questions about the study. When the forms were returned, the researcher obtained approximately 50 forms. After all six microblog assignments were completed as part of normal, classroom routine, the researcher was able to narrow the list based on completion of all assignments so the work samples would be complete for each student. Those students who were missing one or more of the assignments or were no longer enrolled in the class were deleted from

the participant list. Then the researcher separated the list into male and female in order to have an equal number for gender. Then the researcher randomly selected 16 of these students to participate in the focus group. The random selection was done by selecting every other student until 16 had been selected. From that 16, the researcher then randomly selected six students as a case study for the writing of microblogs through *Edmodo*. Having the exceptional opportunity of being the researcher and the teacher, the researcher had the day-to-day contact with each participant to know them well. The six participants are described in the following section.

### **Alice**

Alice is an eighth grade female student in the teacher's sixth period class, which occurred from 2:15 p.m. to 3:15 p.m., making this the last class of each school day for Alice. This class served advanced students and was considered to be a more rigorous course than a regular English class. Students were expected to think on higher cognitive levels than those in a regular class. Day to day, Alice had a positive attitude about learning. Alice was part of the school archery team, where she participated in afterschool practices and out-of-town shooting tournaments. Additionally, Alice was enrolled in the advanced band class, which involved extra practices after school and concerts to special events.

### **Madison**

Madison was an eighth grade female student in the researcher/teacher's second period class, which occurred from 9:10 a.m. to 10:10 a.m. This class served regular and special education students. This course experienced the same content and standards but at a slower pace and somewhat less rigorous level than a regular or advanced English class. This class was also a much smaller class consisting of only 19 students. Madison is not considered a special education student. Though not always completing every homework assignment and having some trouble

with the classwork, Madison came to class each day with a positive attitude for learning. She was not afraid to ask a question or for assistance with understanding an assignment. Madison had no extracurricular activities to the researcher/teacher's knowledge.

### **Carol**

Carol was an eighth grade female student in the researcher's first period class, which occurred from 8:05 a.m. to 9:05 a.m. This served as the first class of the school day for Carol. Like Alice, Carol was also in an advanced setting, where coursework moved at a faster pace and was more rigorous than a regular English class. Carol participated in numerous after school sports activities such as soccer, dance, and baseball batgirl. Though having a busy schedule, Carol maintained good grades in the English class and always had a hard-working spirit in class.

### **John**

Like Alice, John was an eighth grade male student in the researcher's sixth period class, which was from 2:15 p.m. to 3:15 p.m., making this the last class of the school day for John. This class served advanced students and was considered to be a more rigorous course than a regular English class. Students were expected to think on higher cognitive levels than those in a regular class. To the researcher/teacher's knowledge, John was not involved in any extracurricular or afterschool activities. But, John was an avid reader and constantly read books during spare time. Additionally, John sought 100% accuracy on every assignment and inquired why he made mistakes in order to improve for the next assignment.

### **Clint**

Clint was an eighth grade male student in the researcher's third period class, which was from 10:23 a.m. to 11:23 a.m. and directly after an eighth grade student break time of 10 minutes. This class was a regular English class, therefore, the pace of the course moved at a

moderate pace and on grade level curriculum was used to meet grade level standards. Clint came to class each day ready to work, but had a “let’s just get it done” attitude. Clint completed all class work assignments and most of his homework assignments for the course. Moreover, Clint truly had a helpful spirit; he often served his classmates by passing out materials and even helping to clean the classroom. This served helpful to the researcher/teacher because this class was at full capacity of 31 students. Additionally, he was involved in sports activities such as school football and city league baseball.

### **Brad**

Brad was an eighth grade male student in the researcher’s first period class, which occurred from 8:05 a.m. to 9:05 a.m. This served as the first class of the school day for Brad. Like Alice, John, and Carol, Brad was also in an advanced setting where coursework moved at a faster pace and was more rigorous than a regular English class. Brad’s main goal for his future was to play football at a major university. He has been to several football camps for training and played a vital role on the school’s football team. Though Brad’s passion lied in playing football, he understood the importance of combining achievement in the classroom with skill on the field. He remained consistent and conscientious about his assignments both in the classroom and with homework.

### **Data Sources**

Three sources of data were analyzed and triangulated: work samples of microblogs from *Edmodo*, grades, and one focus group. Data were collected from September 2015 to November 2015. The first month of school, August 2015, allowed the researcher time to obtain consent and assent from students and parents. Each *Edmodo* assignment and microblog was given a two-week period for completion to allow for time to make up assignments in the event of an absence.

This also afforded the teacher/researcher time to grade each microblog assignment before the next was to be assigned. The teacher/researcher assigned six microblog assignments on *Edmodo* over the course of twelve weeks.

After all work samples had been completed in November 2015, the teacher/researcher then scheduled a focus group containing 16 randomly selected participants. Focus groups prove to be valuable sources for collecting qualitative data (Dilshad & Latif 2013). The participants were all eighth grade students who had completed all six of the *Edmodo* microblog assignments, which was an important factor to connect for an optimum level of participation and discussion of the topic. All of the students shared a common experience of completing microblogs using *Edmodo* and wrote about the same topics; therefore, they were able to discuss that experience within the focus group (Dilshad & Latif 2013).

Another important factor in the focus group was to avoid bias, therefore, the researcher/teacher did not conduct the focus group. The moderator of the focus group was the school librarian, who held a mediator stance and made the participants comfortable because they all had seen her before. The librarian did not know the participants' names as she did not interact with the participants on a day-to-day basis. She also was asked not to ask the participants' names but to refer to them as the boy in the black shirt, etc. The facilitator also encouraged the participants to speak freely as there was no judgement or grade associated with their responses. The researcher/teacher provided questions developed based on Dilshad and Latif 2013's research regarding focus groups. All of the questions focused on the participants' experiences with the writing process, Inside Writing Frame, and their experiences using *Edmodo* and microblogging as a writing tool (Appendix E). The researcher fully explained the content of the research so that the facilitator would know how to direct the questions to lead the focus group.

## **Focus Group Questions**

For the focus group, the researcher sought to have at least 8 of the 16 participants present at the session. Creswell (2007) states that “Focus groups are most advantageous when the interaction among interviewees will likely yield the best information, when interviewees are similar and cooperative with each other . . .” (p. 133). The purpose of the focus group was to answer the question: How do students view their experience while writing employing the blog format? In order to gain access to the students’ experiences, the researcher instructed the facilitator to ask the following questions but explained that she could add additional probing questions:

1. How would you describe your experience with microblog writing?
2. What specific elements about microblog writing did you prefer?
3. What specific elements about microblog writing using *Edmodo* did you not prefer?
4. How would you say your writing was affected by using a microblog format?
5. What process did you use to gain information before completing your microblogging assignment?
6. How did you incorporate this information into your writing?
7. Did you include information in your writing that was new or not discussed in your textbook or in class? If so, can you give an example?
8. Did you use any other Web 2.0 or Internet tools such as videos or links on your blog site to enhance the writing content? If so, what did you use? Give specific examples.
9. Did finding new information help your writing process? If so, how?
10. Did you ever find yourself wanting to incorporate *Edmodo* writing assignments into another content area? If so, why?

11. Do you have suggestions or recommendations for how to improve the assignments? If so, what?
12. How and where did you complete your assignments? Was the experience different? How?
13. How do you think differently using blogs vs paper and pencil?
14. Would you say that the process of brainstorming, researching on the Internet, and then writing about the information helped you to make a personal connection to the content or stories read? Explain. Give an example.

After the school day's end, the researcher/teacher carefully transcribed the discussion by writing only Boy 1, Girl 1, etc. based on voice recognition. The true identities of the participants were not revealed in the transcription. The entire duration of the focus group was one hour, four minutes and thirty seconds. The focus group was recorded using an app on the researcher's iPhone. The participants were aware that they were being recorded.

The third source data came from the grade the students received on each assignment. The researcher compared how these scores relate to the codes and themes associated with the work samples. The numeric value was obtained through the grading of the work samples using the researcher/teacher created rubric. The teacher/researcher sought to obtain accuracy and credibility of the data, as is of high importance for teacher-researchers in a qualitative study (Mertler 2012, p.131). Therefore, the teacher/researcher had no knowledge of the participants that would be participating in the focus group or part of the case study before scoring the writing samples using the rubric. Trustworthiness of the study was established because the participants were not randomly selected until all class assignments and work samples had been scored (Mertler 2012, p.131) therefore, making this data pre-existing data at the time of collection. This method ensures that the analysis of the quality of the work samples closely measures with the numeric value given to the quality of writing through the use of the rubric. As consequence,

these independent data sources should align or not directly contradict one another (Mertler 2012, p. 131).

### **Instruments**

The instructor/researcher assigned the students a microblogging space for the microblogging using *Edmodo* because the participants would be able to access the interactive technology tool from a school lab, their mobile device, tablet or personal computer. Since the process was a performance-based activity, a rubric was employed for measurement. Miller et al. (2009) suggest to “Clearly communicate performance expectations in terms of scoring rubrics by which performance will be judged” (p. 239). The instructor used a holistic rubric for assessing the blog. According to Miller et al. (2009), the holistic rubric included “descriptions of different levels of overall performance” (p. 271). The researcher used the Inside Writing Frame Rubric (Appendix B) for determining the enhancement of student writing. The rubric was created by the researcher in order to align the grading and coding processes with the Inside Writing Frame. The rubric followed the Inside Frame design by evaluating based on the categories: Brainstorming Graphic Organizer; Exploring and Investigating Internet Use; Synthesis Paragraph Organization; Paragraph Construction; and Mechanics. Each category was worth 20 points and each microblogging assignment was worth a total of 100 points. The brainstorming graphic organizer was worth a total of 20 points, but the actual writing portion of the microblog was worth 80 points of the assignment.

Because the study was conducted in an English classroom, writing including the content remained a major component for enhancing writing. By employing the use of a rubric, validity was maintained in the grading process. Participants were aware of the grading process and the teacher employed the same method for grading throughout the study. The rubric was made

available to the participants for viewing and critiquing during each microblogging activity allowing the participants to properly engage with the instrument. Thus, the validity of the work samples collected remained consistent throughout the study. Stellmack, Kohiem-Kalkstein, and Manor (2009) confirm, “To say that a rubric exhibits validity means that it measures the underlying variable of interest” (p.103). The “variable of interest” lied in the quality of writing and incorporation of content based on the rubric provided. In addition, the participants would be able to view their scores at the time they were graded along with the particular areas that needed improvement. Thus, this afforded the participants the opportunity to employ the use of metacognition to think about his or her writing. Also, a focus group was conducted with 16 of the participants. The participants employed metacognition when participating in the focus group to measure their motivation and personal growth in writing while using the blog format for writing.

The researcher employed “analysis of documents” and “content analysis” (Marshall & Rossman, 2011) through the collection and coding of writing samples and student work samples. For coding, the researcher applied a constant comparative method, which Creswell (2007) defines as, “This process of taking information from data collection and comparing to emerging categories . . .” (p. 64). Marshall and Rossman state, “Probably the greatest advantage of using documents and other artifacts is that it does not disrupt ongoing events: These materials can be gathered without disturbing the setting” (p.161). In fact, the researcher did not analyze any of the participants writing for the purposes of research at the time of collection, therefore, contributing to the easy flow of data collection.

## **Researcher Positionality**

The researcher had direct contact with the participants daily during the school week. Because the researcher also taught at the school and taught the participants, the participants were aware and familiar with the researcher. The researcher has taught at the school for three years. The researcher is an eighth grade English teacher and conducted research within her classroom. Being a teacher who teaches writing, this study remains an important part of the researcher's daily routine. The researcher values this research for improving her teaching by evaluating the quality of using microblogs for writing assignments. The researcher had direct contact with the scoring of writing assignments. In order to remain unbiased, the teacher/researcher graded all writing assignments using a rubric. The researcher did not in any way harm or persuade the participants to participate in the study. The participation of the study did and will not affect the participants' grades or well-being. The researcher acted as an unbiased educator but used the data to conduct research.

## **Research Questions**

The primary research question asked was "How does an adolescent writing procedure and experience expand or change when writing using microblogging?" Because this is an exploratory-based study, sub-questions were developed:

1. How does adolescent students' informational writing change when writing using an interactive technology format?
2. How do students view their experience while writing employing the interactive technology format?

## **Data Collection**

The data were collected in the form of writing through microblog posts, grades from those assignments, and a focus group. The blog posts were developed using *Edmodo*, a software application employed by the students at the research location. Both the teacher and participants were familiar with the application. Data were collected for six assignments during the school term. The teacher/researcher assigned six open-ended prompts to which the participants responded. Each prompt was based upon a literature short story read in class. The writing component followed the guidelines of the Inside Writing framework to include reading of informational texts as researched by the participants using the Internet.

As the inside frame suggests, participants had a brainstorming component (Appendix A) that was not part of their microblogs but was considered in the research process as well as part of the grading rubric. Information from the brainstorming organizer was included in the writing for the microblog. Each brainstorming graphic organizer was different in order to accommodate the content of each short story passage. The brainstorming organizers consisted of the content skill focus for the selection, and participants used the organizer to delineate examples from the text that they were expected to include in their responses as part of the investigation portion of inside writing. For week one, the major skill focus for the selection are in conflict: internal and external. The participants should have identified where the characters experienced conflict, have written those experiences, and then identified the experiences as internal or external conflicts. Another part of exploration and investigation lies in researching related topics from the Internet to probe prior knowledge and form a personal connection to the text. The classroom researcher/teacher chose the texts or medium associated with the open-ended questions. The participants wrote a microblog response on the *Edmodo* microblogging assignment page. The

participants were expected to combine the knowledge from the graphic organizer with new information discovered using the Internet to explore topics that have the same types of themes. These topics were directly related to the text to provide additional information. The participants were instructed to show the relationship of the topics in their writing response. In order to allow for absences or other interruptions to the class, the quiz was made available for completion for approximately two weeks on *Edmodo*. Once the two weeks had passed, the quiz would no longer be available for completion. As is the nature of *Edmodo* microblog assignments, when the participants clicked on the quiz to begin, a timer was set to 24 hours for completion. Because of the duration of the assignment, each participant had ample time to complete the short assignments but this allowed for any unforeseeable interruptions.

Participants were graded on their progress using the Inside Writing Frame Rubric (Appendix B) created by the researcher based on the inside writing frame. The rubric followed the Inside Frame design by evaluating based on those categories: Brainstorming Graphic Organizer; Exploring and Investigating Internet Use; Synthesis Paragraph Organization; Paragraph Construction; and Mechanics. Each category was valued at 20 points and each microblogging assignment was worth 80 points thus made a total numeric grade of 100 for each assignment. The rubric included evaluation of brainstorming and completion of the graphic organizer. Participants were evaluated based on exploring and investigating through use of the Internet. Then participants related that information by incorporating the new, informational facts and information from the graphic organizer based on the short story into the writing. The next category lay within the construction of the paragraph to determine if the participants were able to effectively synthesize a microblog entry through combining the information from the reading material with the new information from the exploration. Lastly, the participants were evaluated

based on their completion of the graphic organizer and their paragraph construction and use of mechanics while writing. The teacher assigned a numeric value to the responses and recorded those scores in the grade book. This information was used to help triangulate and determine the quality of writing. The schedule of assignments given is shown in Table 2.

Table 2

*Microblogging Assignments and Timeline of Study*

Date	Literary Selection	Prompt	Inside Frame
9/1/15	“Too Soon a Woman” by Dorothy M. Johnson	Read the literary selection. Using the external and internal conflict chart, identify external and internal conflicts. Using the Internet, research others in history you know of who have faced internal and external conflicts for a noble cause. Synthesize a well-developed paragraph explaining the conflicts from the selection. Provide a comparative example from your Internet search.	Explore: Access prior knowledge and conduct further research  Personal Connection: Access prior knowledge  Brainstorming and Organizing: Internal and external chart  Synthesize: write a well-developed comparative paragraph.
9/15/15	“The Green Mamba” by Roald Dahl	Read the literary selection. Complete the inference chart as you read. Using the Internet, research information about the green mamba and snake safety. Synthesize a well- developed paragraph to identify three inferences you made while reading that are now confirmed by your research.	Explore: Research the green mamba and snake safety  Personal Connection: prior knowledge of snakes  Brainstorming and Organizing: Inference chart  Synthesize: write a well-developed paragraph.

(table continues)

Date	Literary Selection	Prompt	Inside Frame
9/29/15	“There Will Come Soft Rains” by Ray Bradbury	<p>Read the literary selection. Complete the personification chart. Using the Internet, identify a form of technology that exhibits “personification”. Synthesize a well-developed paragraph that highlights your research and sights two other examples of personification from the selection.</p>	<p>Explore: Research new technology</p> <p>Personal Connection: Compare technology to those in the selection</p> <p>Brainstorming and Organizing: Personification chart</p> <p>Synthesize: write a well-developed paragraph.</p>
10/13/15	“The Fog Horn” by Ray Bradbury	<p>Read the literary selection. Complete the monster chart. Using the Internet, research historic and movie monsters. Determine which monster would fit your personality. Synthesize a well-developed paragraph describing how the monster in the selection “is” the monster in the narrator and then how the monster you researched represents you.</p>	<p>Explore: Research movie and historic monsters</p> <p>Personal Connection: What kind of monster are you?</p> <p>Brainstorming and Organizing: Monster chart</p> <p>Synthesize: write a well-developed paragraph.</p>

(table continues)

Date	Literary Selection	Prompt	Inside Frame
10/27/15	“Ribbons” by Laurence Yep	Read the literary selection. Complete the character chart. Using the Internet, research ancient Chinese custom. Synthesize a well-developed paragraph explaining how understanding ancient Chinese custom for girls helps you better characterize the main character.	Explore: Research ancient Chinese custom Personal Connection: Understanding different cultures through character analysis Brainstorming and Organizing: Character chart. Synthesize: write a well-developed paragraph.
11/10/15	“Thanksgiving: A Meal without Forks and Other Feast Facts”	Read the literary selection. Using the Internet, find an article about Thanksgiving in 1621. Use a compare and contrast chart to organize the differences and likes between Thanksgiving in 1621 and the Thanksgiving traditions you experience. <i>Synthesize a well-developed paragraph comparing and contrasting pilgrims' Thanksgiving to yours.</i>	Explore: Research 1621 Thanksgiving Personal Connection: Compare today's Thanksgiving tradition to those of 1621 Brainstorming and Organizing: Compare and contrast chart Synthesize: write a well-developed paragraph.
11/17/15	Focus Group		

## **Data Analysis**

The data from the microblogging posts and focus group were analyzed using open coding and categories from Inside Writing were employed to develop themes generated by the researcher to report findings. Marshall and Rossman (2011) state that assigning of themes to the data should be generated from theory as well as *in vivo* codes, which is a *coding* process that is developed through reoccurring themes and patterns within the work samples. The focus group provided information on the quality of the experience and evaluated the personal connection experienced by the participants. The inside writing frame drove the basis for coding by focusing on the gathering of information to enhance writing through a blog-style writing format.

As is appropriate for qualitative research, the researcher made notes and highlighted the work samples and then reduced the data into codes from the inside writing frame along with *in vivo* codes. Then the data were organized into tables (Appendix F) in order to show the data in an organized manner. With those tables each participant is represented and with degrees for each code (Creswell, 2007). The categories were coded from categories of the inside writing frame: exploring, investigating, gathering data, brainstorming, organizing, and defining and redefining. These categories were present within the microblogging assignment as well as the brainstorming activities. As appropriate in coding for qualitative research, the researcher often molds the analytical procedures while in the field of study (Creswell, 2007, p. 150). While note-taking, the researcher discovered that the codes were evident within the samples but occurred at different degrees of usage. There was not always a clear “yes” or “no” but degrees. Thus, on the tables, these categories were represented in degrees of usage by each participant. In Table 3, those degrees are described in relation to the work samples.

Table 3

*Degree of Codes*

Degree of Usage	Explanation
None	No evidence of this code in the sample
Some	There is little evidence of this code and any evidence had to be inferred by the researcher
Moderate	There is evidence of this code in the sample but not a clear pattern of intention
Evident	This code appears multiple times throughout the sample and clearly shows a pattern of intentional use.

As the coding for these categories was being conducted, the researcher noticed other reoccurring patterns that served as *in vivo* codes such as connecting to the text and citing evidence from outside sources. While coding, the researcher made notes of these *in vivo* codes. After coding all work samples, the researcher placed the *in vivo* codes into a table as well. The researcher began by coding each writing prompt assignment for each participant and placing those into a table. An example of how each microblog sample was analyzed is in Table 4.

Table 4

*Coding Analysis Sample*

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
Alice	Some	Some	Some	Evident	Evident	Evident	Evident
Madison	Some	Some	Some	Some	Moderate	Moderate	Moderate
Carol	Some	Some	Moderate	Evident	Evident	Evident	Evident
John	Some	Some	Some	Evident	Evident	Moderate	Moderate
Clint	Some	Some	Some	Evident	Evident	Evident	Evident
Brad	None	None	Some	Evident	Evident	Evident	Evident

When all of the writing prompts had been coded, the researcher then placed each participant's results into a table to note any trends that occurred throughout the samples. The rubric assisted in coding through the grading process by assigning the numeric value of a grade for each microblogging assignment. The rubric was used to determine levels of writing and if writing was enhanced through the process of blogging through showing a numeric value for each blogging assignment. The researcher made a table for each assignment and notes to determine the point value given to each sample. Table 5 shows an example of how this was done for the first microblog sample.

Table 5

*Rubric Analysis Numeric Value.*

	Graphic Organizer	Points 20/20	Notes	Microblog	Points 80/80	Notes	Total Score
Alice	Complete	20/20		Complete	70/80	-10 no citations	90/100
Madison	Complete	20/20	Brief descriptions	Complete	65/80	-5 Explanation -10 vague	85/100
Carol	Complete	10/20	No page numbers	Partial	65/80	-15 No relation	75/100
John	Partially Complete	10/20	Missing info.	Complete	70/80	-10 Vague topics	80/100
Clint	Complete	20/20		Complete	65/80	-5 explanations -10 vague	85/100
Brad	Complete	20/20		Partial	60/80	-20 no research -5 errors	75/100

After placing the rubric and numeric grade information into a breakdown for each writing sample, the researcher took that information for each participant to show the development of writing through the 12 weeks and six assignments. Then the researcher compared the coding data with the data from the rubric and numeric grading. Once coding and creating themes was

completed, the researcher placed this information into graphs to show the development of writing both holistically and individually through the inside writing process over the six assignments and twelve weeks. Each degree of completion was assigned a numeric value in order to provide a visual images and graphs of development. Through gathering this information, the researcher tied the themes together to produce a summary based on all data and provided guidance for future studies that can be pursued in this area of research.

### **Triangulation**

In order to increase the validity of the qualitative study, the researcher applied the method of triangulation. This method depends upon multiple sources of data that substantiate evidence from each of the participant's work samples, grades, and perspectives as cited from the focus group (Creswell, 2007). The data sources used for triangulation in this study were work samples from the microblog, numeric grade based on a rubric, and a focus group. The data from these three sources provided a more complete picture of the development of writing through *Edmodo* microblogs as well as the participants' perspectives and experiences with the process and tool.

## CHAPTER 4

### RESULTS

#### **Introduction**

This section will discuss the results of the data from the research. The purpose of this study was to explore how adolescent students used classroom blogs and microblogging in their writing practices in an English class. More specifically, the goal of the study sought to explore: How does an adolescent writing procedure and experience expand or change when writing using microblogging? Since this was an exploratory-based study, sub-questions were developed:

1. How does adolescent students' informational writing change when writing using an interactive technology format?
2. How do students view their experience while writing employing the interactive technology format?

Research sub-question one allows a broad amount of results, but specific codes were developed based on the Inside Writing Frame model and *in vivo* coding. These codes helped to describe how the informational writing changed throughout the six writing prompts using an interactive technology format: microblogging through *Edmodo*. These data were gathered through the participants' work samples and grades. Research sub-question two serves as a subset to sub-question one by focusing on the student's experiences. The data for the experiences the students had with the interactive technology and process for writing the microblog were gathered from a focus group.

The chapter begins with the breakdown of codes and the degree the students achieved each code. The data, collected from six participants' and six writing microblog assignments for each student from September to November 2015, yielded a great deal of information to code but consistent trends were found across the data. Six codes were created out of the Inside Writing Frame: explore, investigating, gathering data, brainstorm, organizing, defining, redefining, and then two additional codes surfaced from *in vivo* coding because of trends and patterns in the writing: connecting and citing. Tables for each writing prompt were made to show the degree to which each code appeared in the participants' microblogs.

Once those frequencies for each student and each writing assignment had been coded, the researcher prepared charts for each code for all participants to show any change in writing for that code from the first assignment to the last. This section of the chapter gives a description of the codes and discusses any change in writing. The next section of this chapter discusses each student case by case to show any change in writing for that particular student. Graphs were created for each student and the code and as part of triangulation; grade charts included show the coding trends with the grading process. To further triangulate, comments from the focus group concerning change of writing are discussed. The chapter continues by discussing the overall themes found through coding and any overall changes in writing found. In addition, the chapter discusses the participants' overall experiences with the microblogging tool and process through the focus group discussion. As the chapter closes, the researcher provides a brief summary of the data and findings.

### **Analysis**

The researcher had dual roles as the teacher and the researcher, and as the teacher she assigned the six writing prompts over approximately 12 weeks of time. The teacher has been

consistently incorporating Edmodo in her classroom for at least three years. The teacher also is familiar with how to grade student writing using a rubric as she has been using rubrics for twelve years while teaching. The teacher and researcher graded all participants' work before completing the process of selecting participants for the study. Therefore, all of the work samples were existing data. This also created less bias for the grading process for the teacher/researcher. Each of the prompts were written in accordance to the Inside Writing Frame process. The participants read a fictional short story, completed a graphic organizer for the academic standard associated with the story, researched further information from the Internet about topics from the story, and then included all of this information in a microblogging format on *Edmodo*. It must be understood that as each assignment was graded, the researcher must also be a teacher and as the teacher noticed trends among participants, some remedial teaching must be done in order to help participants meet grade-level standards. After the twelve weeks were up and all work samples had been completed and graded, the researcher randomly selected the sample of participants for the focus group and the case study.

The first writing prompt read as follows:

Read the literary selection. Using the external and internal conflict chart, identify external and internal conflicts. Using the Internet, research others in history you know of who have faced internal and external conflicts for a noble cause. Synthesize a well-developed paragraph explaining the conflicts from the selection. Provide a comparative example from your Internet search.

The prompt called for the participants to complete a brainstorming graphic organizer as they read the short story that helped them to organizer the external and internal conflicts the characters faced. Then the participants were to use the Internet to research a person in history that faced

internal and external conflicts in a historical event. After their research, they were to combine all of the information into a comparative paragraph as a microblog in *Edmodo*. As used for demonstration earlier, Table 6 shows the participants' codes and to what degree they achieved those codes.

Table 6

*Sample One Coding*

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
Alice	Some	Some	Some	Evident	Evident	Evident	Evident
Madison	Some	Some	Some	Some	Moderate	Moderate	Moderate
Carol	Some	Some	Moderate	Moderate	Evident	Evident	Evident
John	Some	Some	Some	Evident	Evident	Moderate	Moderate
Clint	Some	Some	Some	Evident	Evident	Evident	Evident
Brad	None	None	Some	Evident	Evident	Evident	Evident

The codes can be simply defined in writing terms. First, explore means that there has been evidence from the short story or an Internet article of exploration of information. Exploring would represent the lowest levels of Revised Bloom's Taxonomy with remembering and understanding because this step involves a simple world search for information. Moving up on the taxonomy to applying is investigating, which involves a more detailed description of details such as specific quotations or details from the short story or the Internet. Gathering data involves proof that outside data have been gathered by summarizing or quoting data. Brainstorming refers to the graphic organizer completed as the participants read the short story. Organizing involves the order in which the microblog is written; it should show that the paragraph has been written in a logical order with topic, supporting, and concluding sentences. Defining identifies the main topic of the paragraph in terms of the short story. For example, this microblog would define

external and internal conflicts. Gathering data, brainstorming, organizing, and defining all work closely in the area of applying on the Revised Bloom's taxonomy because they all require some level of application of the information gained. Redefining takes those external and internal conflicts and translates them into a different context, such as information from an article online. Because the participants were expected to translate information from one context to another, redefining moves up on the taxonomy to analyzing. Participants must analyze and compare two pieces of information.

As can be seen, for the first assignment, there is a clear pattern that the participants scored weakest in the areas of exploring, investigating, and gathering data. These three categories relate to finding information on the Internet. As the researcher took notes, while coding, *in vivo* codes surfaced: connecting and citing. Connecting refers to making a clear connection of ideas between the short story and the informational text. Citing demands that participants provide a citation of where they found the additional and comparative information. In comparison to Revised Bloom's Taxonomy, all of these codes would fall under the level of applying except for redefining and connecting. Redefining and connecting require levels of analyzing and evaluating because the participants must be able to critically compare texts and ideas to the original text before conducting their research. Those codes also were rated by degree of occurrence in Table 7.

Table 7

*In vivo Sample One Coding*

	Connecting	Explanation	Citing	Explanation
Alice	Evident	Clear connections between the short story and the real life event were made and clearly stated	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
Madison	Moderate	There was a relationship described in the microblog between a modern day event and the short story, but the evidence was lacking and not specific enough to make a clear connection to the short story.	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
Carol	None	There was no direct connection or correlation made between the short story and the real-life event other than that they both have internal and external conflicts. The connection is not apparent in the microblog.	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
John	Some	There was a relationship described in the microblog between a modern day event and the short story, but the evidence was lacking and not specific enough to make a clear connection to the short story.	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
Clint	Evident	Clear connections between the short story and the real life event were made and clearly stated	Some	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
Brad	Some	A connection was made but the participant connected the information to his own personal experiences, which was not the assignment. The assignment prompted the participants to researcher an event that could relate.	None	No additional research was conducted

The *in vivo* coding includes detailed notes to explain the reason for giving that degree of writing found within the microblog assignment. For connecting, only half of the samples were able to make a clear connection of ideas between the short story and the informational texts. For citing, only one student showed any evidence at all of citing a website or article from the Internet for using information from that source. Therefore, as this sample truly represented the whole, the teacher/ researcher was prompted to conduct some re-teaching in the areas of weakness before the next writing microblog was to be completed.

The second prompt for the microblog was:

Read the literary selection. Complete the inference chart as you read. Using the Internet, research information about the green mamba and snake safety. Synthesize a well-developed paragraph to identify three inferences you made while reading that are now confirmed by your research.

For this question, the participants were to complete a graphic organizer, as they read, to show how they learned more about the species, green mamba, from reading the story and making inferences. Then the participants were asked to confirm those inferences through conducting research on the Internet. Table 8 shows how the participants fared for this microblog.

Table 8

*Sample Two Coding*

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
Alice	Evident	Evident	Evident	Evident	Evident	Evident	Evident
Madison	Some	Some	Some	Evident	Some	None	None
Carol	Evident	Evident	Moderate	Evident	Evident	Evident	Evident
John	Evident	Evident	Evident	Evident	Evident	Evident	Evident
Clint	Some	Some	Some	Evident	Moderate	Moderate	Moderate
Brad	Some	Some	Some	Evident	Some	Some	Some

As can be seen, half of the sample improved with exploring, investigating, and gathering data. All participants showed improvement with brainstorming. But, there seemed to be difficulty with defining and redefining for this particular question. As can be seen in Table 9, connecting and citing showed some improvement. As defining and redefining are closely related to citing evidence, perhaps the participants needed continued instruction in the area of citing research.

Table 9

*In Vivo Sample Two Coding*

	Connecting	Explanation	Citing	Explanation
Alice	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
Madison	None	There was no direct connection or correlation made between the short story and the informational texts. The connection is not apparent in the microblog.	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
Carol	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated. Superb use of examples from the short story.	Moderate	Evidence of exploration and investigating information is evident but only one site is named as gaining information. Clearly, more than one site has been explored.
John	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
Clint	Moderate	Clear connections between the short story and the informational passage were made but lacked some explanation.	Some	Reference to the “Internet” was made but no direct citation has been provided
Brad	Some	A brief connection was made but not enough explanation of ideas to make a clear connection.	Some	Reference to the “Internet” was made but no direct citation has been provided

The third writing prompt was:

Read the literary selection. Complete the personification chart. Using the Internet, identify a form of technology that exhibits “personification.” Synthesize a well-developed paragraph that highlights your research and sights two other examples of personification from the selection.

For this prompt, the participants were to read the selection, complete the graphic organizer to identify examples of personification in the selection and then they were to research modern technology that shows to have been personified. Once the participants have collected the information, they were to combine all of the facts into a well-developed paragraph on their microblog. The results from this prompt are shown in Table 10.

Table 10

*Sample Three Coding*

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
Alice	Evident	Evident	Evident	Evident	Evident	Evident	Moderate
Madison	None	None	Some	Evident	Some	Moderate	None
Carol	Moderate	Moderate	Evident	Evident	Evident	Evident	Moderate
John	Evident	Evident	Evident	Evident	Evident	Evident	Evident
Clint	None	None	None	Evident	Some	Some	None
Brad	Moderate	Moderate	Moderate	Evident	Moderate	Evident	Evident

For this prompt, some of the participants seemed to have only used prior knowledge without gathering outside data to complete the assignment because only two participants showed evident degrees of success in the areas of exploring and investigating. There is, however, continued success in the area of brainstorming. As for defining and redefining, the information seems to be present, but the participants were not able to make a clear connection (Table 11) between the two sets of information. It was written as if it were two different assignments. For this assignment, two of the participants were able to cite specific website addresses for the

additional research conducted. The other participants showed only a reference to the “Internet” or nothing at all to explain their additional research. This is also the first assignment where direct quotations have been used either from the short story text or the informational text. Thus, it shows evidence that the teacher/researcher had done some intentional instruction to improve those areas.

Table 11

*In vivo Sample Three Coding*

	Connecting	Explanation	Citing	Explanation
Alice	Moderate	Clear connections between the short story and the Internet investigation of topics were clearly stated. Part of the evidence to be connected was not accurate.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing. There is evidence of citing directly from the text of the short story with direct quotations and page numbers provided.
Madison	None	There was no direct connection or correlation made between the short story and the informational texts. The connection is not apparent in the microblog.	Some	There was no evidence of outside, Internet research. However, there is evidence of citing directly from the text of the short story with direct
Carol	Some	A comparison was made but that comparison was not clearly connected to the examples of personification within the story.	Moderate	Evidence of exploration and investigating information is evident but the reference to an advertisement is made and not a direct website for the product. There is evidence of citing directly from the text of the short story with direct quotations and page numbers provided.

(table continues)

	Connecting	Explanation	Citing	Explanation
John	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.  There is evidence of citing directly from the text of the short story with direct quotations and page numbers provided.
Clint	Some	A brief connection was made but not enough explanation of ideas to make a clear connection.	None	No citations from the Internet were made and there appears to be no research conducted beyond common knowledge.
Brad	Moderate	A brief connection was made between ideas but not connected and explained clearly and in an organized manner.	Moderate	Reference to the “Internet” was made but no direct citation has been provided. Direct quotes have been made from an Internet source.  There is evidence of citing directly from the text of the short story with direct quotations and page numbers provided.

The fourth prompt allowed participants to make a personal comparison while also connecting to the text. The prompt read as follows:

Read the literary selection. Complete the monster chart. Using the Internet, research historic and movie monsters. Determine which monster would fit your personality. Synthesize a well-developed paragraph describing how the monster in the selection “is” the monster in the narrator and then how the monster you researched represents you.

For this prompt, the participants were to read the short story and complete the graphic about the characteristics of the monster in the story. Then the participants were to write about how the characteristics of the monster in the story and closely compare with the traits of the narrator of the story. Then the participants were to transition into how comparing themselves to a monster

from a movie might relate to their own characteristics and personalities. The results are as follows in Table 12.

Table 12

*Sample Four Coding*

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
Alice	Evident	Evident	Evident	Evident	Evident	Moderate	Evident
Madison	None	None	Some	Evident	Evident	Moderate	Moderate
Carol	Some	Some	Some	Evident	Evident	Evident	Evident
John	Evident	Evident	Moderate	Evident	Evident	Evident	Evident
Clint	None	None	Some	Evident	Moderate	Moderate	Moderate
Brad	None	None	Some	Evident	Evident	Evident	Evident

For this prompt, the participants continue to struggle with exploring, investigating, and gathering data within their writing. But, brainstorming remains strong and organizing, defining, and redefining have certainly shown improvement from the last prompt. As is related to defining and redefining, as shown in Table 13 all participants appeared to make some connection between the text and the outside information, but only one student showed clear evidence of citing from the text and Internet articles. It appears that the participants used mostly prior knowledge or simply forgot to cite where they found information about the topics.

Table 13

*In vivo Sample Four Coding*

	Connecting	Explanation	Citing	Explanation
Alice	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated. There was only a moderate connection from the short story to the personal connection component.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing. Specific quotations have been made from the short story, without page numbers. Specific quotations from the Internet sources have been provided.
Madison	Some	Somewhat clear connections between the short story and the information for personal connection were made but the connection appears to be based solely on prior knowledge.	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
Carol	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated. Superb use of examples from the short story.	Some	Evidence of exploration and investigating information is evident based on the level of details but not specific citations have been made.
John	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	Moderate	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing. No specific quotations from the sources were provided.
Clint	Some	Somewhat clear connections between the short story and the information for personal connection were made but the connection appears to be based solely on prior knowledge.	None	No reference to the Internet was made and no direct quotations or citations have been provided
Brad	Evident	Clear connections between the short story and the information for personal were made but the connection appears to be based solely on prior knowledge.	None	No reference to the Internet was made and no direct quotations or citations have been provided

The fifth prompt was as follows:

Read the literary selection. Complete the character chart. Using the Internet, research ancient Chinese customs. Synthesize a well-developed paragraph explaining how understanding ancient Chinese customs for girls helps you better characterize the main character.

For this prompt, the participants read a short story involving a Chinese family. The participants completed a graphic organizer that characterized the grandmother. Then the participants were to research Chinese customs that were present in the short story to gain a better understanding of both the events in the story and the characters' actions and motivations. After researching, the participants were to type all of this information into a paragraph in a microblog. Results of this process are shown in Table 14.

Table 14

*Sample Five Coding*

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
Alice	Evident	Evident	Evident	Evident	Evident	Evident	Evident
Madison	Evident	Evident	Evident	Evident	Moderate	Some	Some
Carol	Moderate	Moderate	Moderate	Evident	Evident	Evident	Moderate
John	Evident	Evident	Moderate	Evident	Evident	Evident	Evident
Clint	Moderate	Moderate	Moderate	Evident	Evident	Evident	Moderate
Brad	Evident	Evident	Evident	Evident	Evident	Moderate	Evident

The coding shows that all participants improved in every area except for one student. One student continued to have trouble with defining and redefining of the terms. But, all participants showed improvement in the areas of exploring, investigating, and gathering data. Perhaps, the reason for this is because the participants had very little prior knowledge of the subject. In addition to improving in those areas, Table 15 shows the participants improved in citing sources, and all participants showed evidence beyond inference by the researcher that they did conduct

some outside research using the Internet. In addition, either participants were able to make a clear connection between the short story and the informational text or they made only little connection. The important factor is that all participants showed at least some relationship between the short story and the informational text.

Table 15

*In vivo Sample Five Coding*

		Connecting	Explanation	Citing	Explanation
Alice	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	The participant clearly stated that the research helped her to understand the character in the story better.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
Madison	Some	Mostly clear connections between the short story and the Internet investigation of topics were vaguely stated.	No connection to understanding the character because of the research was stated.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
Carol	Some	Mostly clear connections between the short story and the Internet investigation of topics were vaguely stated.	No connection to understanding the character because of the research was stated.	Moderate	Evidence of exploration and investigating information is evident but only one research site is named as gaining information. No direct quotations have been made.
John	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	There was a clear connection that the research helped the participant understand the character from the short story better.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.  Citing is clear but there are not quotation marks for direct quotes used.

(table continues)

	Connecting	Explanation	Citing	Explanation
Clint	Some	<p>Mostly clear connections between the short story and the informational passage were made but lacked some explanation.</p> <p>No connection to understanding the character because of the research was stated.</p>	Moderate	One reference and quotation was given as a citation of outside research.
Brad	Evident	<p>Clear connections between the short story and the Internet investigation of topics were clearly stated.</p> <p>There was a clear connection that the research helped the participant understand the character from the short story better.</p>	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing

For the final prompt, the participants read a short story about a familiar tradition, Thanksgiving. This topic would have been on the participants' minds during the time the assignment was given because it was assigned in November, very close to their Thanksgiving Break. The prompt read as follows:

Read the literary selection. Using the Internet, find an article about Thanksgiving in 1621. Use a compare and contrast chart to organize the differences and likes between Thanksgiving in 1621 and the Thanksgiving traditions you experience. Synthesize a well-developed paragraph comparing and contrasting pilgrims' Thanksgiving to yours.

The literary selection was a short story about a character's experience with Thanksgiving traditions in 1621. The participants were to complete a compare and contrast graphic to help them brainstorm the differences between their experiences with Thanksgiving traditions and the experiences of those from the past. Then the participants were to find informational texts and

articles from the Internet to continue to compare those experiences. Table 16 shows the results from coding for this prompt.

Table 16

*Sample Six Coding*

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
Alice	Evident	Evident	Evident	Evident	Evident	Evident	Evident
Madison	Evident	Evident	Evident	Evident	Evident	Evident	Evident
Carol	Evident	Evident	Evident	Evident	Evident	Evident	Moderate
John	Evident	Evident	Evident	Evident	Evident	Evident	Evident
Clint	Moderate	Evident	Evident	Evident	Evident	Evident	Some
Brad	Moderate	Evident	Evident	Moderate	Evident	Evident	Evident

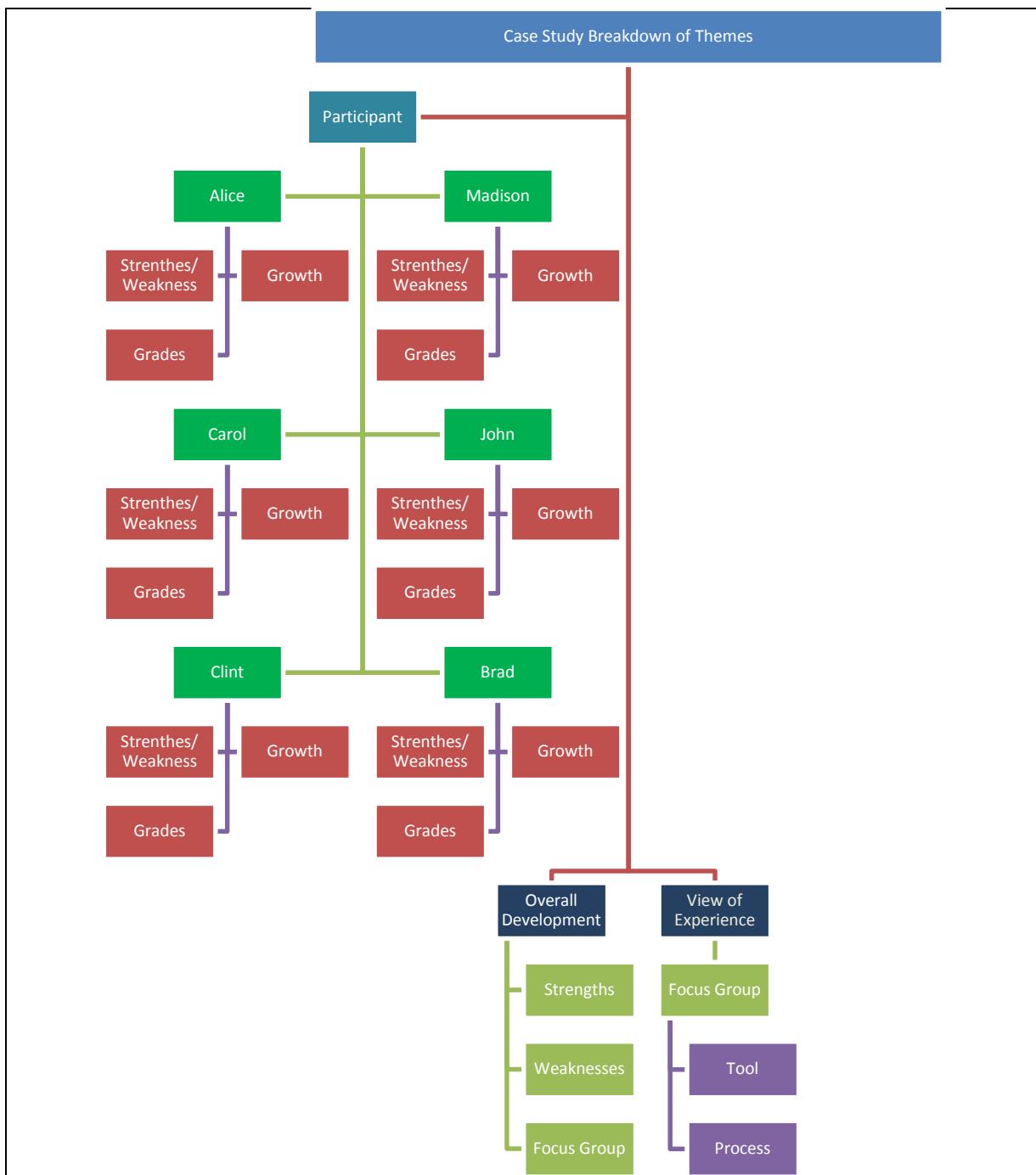
Like microblog assignment number five, the participants continued to show improvements in every coded area for this entry. Only one student scored a degree of “some,” in which the researcher had to infer that redefining was present in the writing. In addition, as Table 17 shows, the participants made at least a moderate connection between the short story and the informational text. Furthermore, all participants quoted directly from a text at least one time, and all participants cited from an outside source or article from the Internet at least one time.

Table 17

*In vivo Sample Six Coding*

	Connecting	Explanation	Citing	Explanation
Alice	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing. Clear quotations and page numbers were provided from the short story.
Madison	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.  Clear quotations and page numbers were provided from the short story.
Carol	Moderate	Clear connections between the short story and the most Internet investigation of topics were clearly stated.  The paragraph is ended with a quote and no explanation of its relevance to the writing.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.  Clear quotations and page numbers were provided from the short story.
John	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.  Clear quotations and page numbers were provided from the short story.
Clint	Moderate	Clear connections between the short story and the informational passage were made but lacked some explanation.	Moderate	Evidence of exploration and investigating information is evident and only one site has been cited within the writing.  Clear quotations and page numbers were provided from the short story.
Brad	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated	Moderate	Evidence of exploration and investigating information is evident and only one site has been cited within the writing.  Clear quotations and page numbers were provided from the short story.

Going through the above process showed a trend of differences in writing from the different codes and participants. In order to pinpoint case by case, the information for each student, for each code was placed into graph charts to illuminate the themes of strengths and weaknesses as well as to comment on the overall growth within their writing. In order to do this, each of the degrees of codes was given a number representation so the researcher could graph the information. The number rating went as follows: none = 0, some = 1, moderate = 2, and evident = 3. This process allowed the researcher to use Excel to place numbers into a table and then use graphing to show progressions or pitfalls amongst the codes for each microblog. In addition, each participant's grades were also placed into a table to help triangulate the data and the findings. Microblog work samples provided further illustration of writing trends. Figure 3 shows the breakdown of themes that will be explained throughout the next section of this chapter.



*Figure 3. Case study breakdown of themes.*

## Case Study and Participant Analysis

### Alice

Figure 4 represents Alice's degrees of success for coding within the writing microblog.

From this bar graph, themes of strengths and weaknesses were determined.

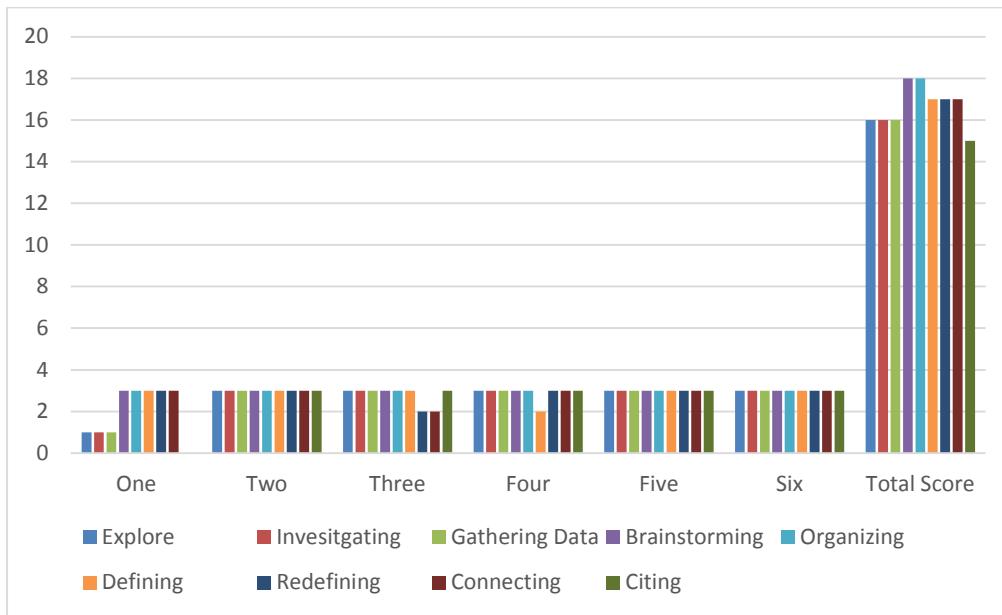
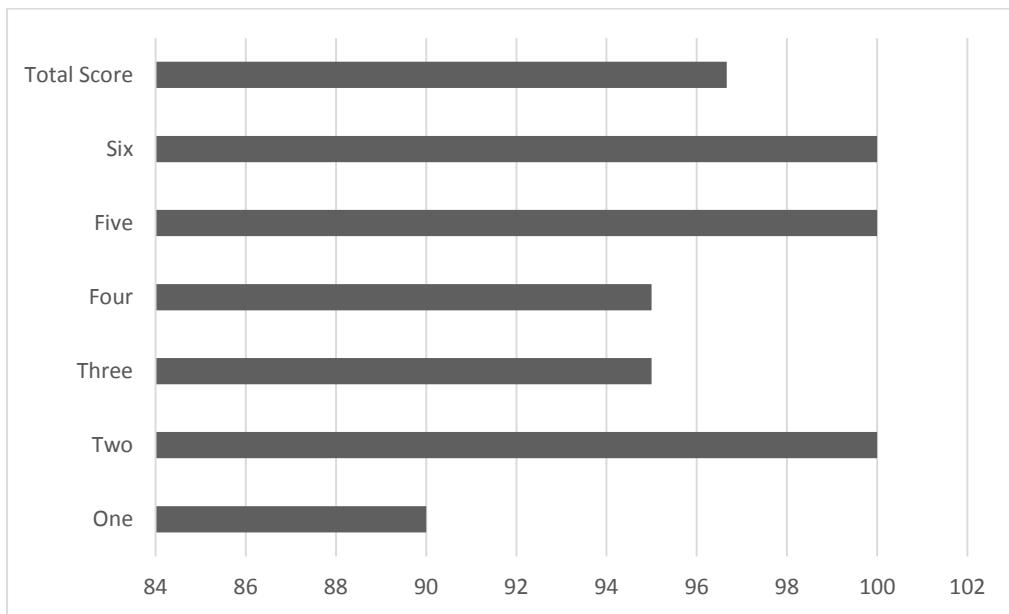


Figure 4. Alice's degrees of success.

As can be seen from the graph, Alice shows her greatest, overall strengths in the areas of brainstorming and organizing, though not far behind those are defining, redefining, and connecting. According to the graph, Alice appears to have made some consistent growth changes in writing from the first assignment to the last. Alice's weakest area overall in the microblogging processes was citing information. It shows clearly that Alice began the first microblogging sample with no citing at all because it does not appear on the graph for the first sample. As she progressed, the citing became more evident in her writing.

For the purpose of triangulation, it remains important to compare the grades from each microblog assignment with the progression of growth. When comparing the growth of writing categories and skills to the numeric grade, there is consistency with the degrees of skills and the

grade. Where Alice displayed the most strength for all writing codes, her grades reflect those strengths by being the highest scores in the group. Alice showed the highest scores for samples two, five, and six where she also showed her greatest strengths for all areas of writing skills. Where her grades are lowest, samples one and three, her skills were also lowest. These trends support that the coding matches the numeric grade to further support that Alice does show growth in those areas of strength and weakness.



*Figure 5.* Alice's grades.

Comparing the first sample of microblogging to the last sample, one can clearly delineate that Alice shows improvement with informational writing. Screenshots from *Edmodo*, Figures 6 and 7, show the two samples aligned. According to the skills chart and the grades chart, sample one was Alice's weakest entry and sample six was one of her strongest entries. In order to analyze the growth in informational writing, it is important to seek the specific details involved in the informational portions of the writing. To start, looking at Figure 6 supplies some evidence of Alice's weakest areas as well as some of her strengths. Then looking at sample six allows the

researcher to further see how she progressed as the assignments came to an end for the sample collection.

In the story "To Soon A Woman," all the characters go through both internal and external conflicts. This story is fiction, but people go through these types of conflict in the real world as well. In this story, Mary is conflicted internally because of her past; her life before this story takes place was bad enough she ran away from it. Looking back in history, similar events have happened to real people. In the 1930s, when races were segregated, Martin Luther King, Jr. was a subject for racism because of the color of his skin. Mr. King didn't run away, but he was hurt by people's comments and actions; we can assume Mary was hurt by something someone said or did to her, which caused her to flee that place.

In the story "To Soon A Woman," Pa is worried about his family because they didn't have enough food to last them their entire journey. He is worried that his children will starve to death. Martin Luther King didn't worry about lack food, but he did worry about his children. He worried about what kind of world they would grow up in; he didn't want them to grow up being told they were less important than a white man because their skin was black. So both men worried about the effect the world would have on their children.

Even though the characters in the story are fictional, they had conflicts just like people in the real world. Both fictional and real people had to deal with their internal and external problems.

*Figure 6.* Alice's sample one.

By simply glancing at the first sample, it is clear that there have been no citations made as well as no direct quotes from either the short story or the informational text from the Internet because no quotation marks can be identified in the writing. When looking and reading closely, one of Alice's strengths can be identified as well because her writing has been well organized into separate paragraphs of ideas. Although citing and gathering data appear to be a weakness, Alice did some research because she used specific dates for the event. She writes:

In the story "To Soon a Woman," all the characters go through both internal and external conflicts. This story is fiction, but people go through these types of conflict in the real world as well. In this story, Mary is conflicted internally because of her past; her life before this story takes place was bad enough she ran away from it. Looking back in history, similar events have happened to real people. In the 1930s, when races were

segregated, Martin Luther King, Jr. was a subject for racism because of the color of his skin. Mr. King didn't run away, but he was hurt by people's comments and actions; we can assume Mary was hurt by something someone said or did to her, which caused her to flee that place.

In this sample, there clearly was some outside investigation and exploration because there is a specific date, but Alice received zero points for citing the information because she did not include where she obtained this information.

With this excerpt, one can see that Alice did show her strengths by connecting and defining. She connects the short story to the informational writing by stating, "This story is fiction, but people go through these types of conflict in the real world as well." This sentence clearly states her topic and purpose for this paragraph is to connect the conflicts from the fictional story to conflicts that have occurred in reality. Alice also connects the two events by doing an excellent job of comparing and contrasting not only Mary from the short story but other characters to Martin Luther King, Jr. Showing her organizational skill, in the second part of her microblog, she starts a new paragraph as she writes about Pa:

In the story "To Soon A Woman," Pa is worried about his family because they didn't have enough food to last them their entire journey. He is worried that his children will starve to death. Martin Luther King didn't worry about lack food, but he did worry about his children. He worried about hwat [what] kind of world they would grow up in; he didn't want them to grow up being told they were less important than a white man because their skin was black. So both men worried about the effect the world would have on their children.

For this part of her response, she made a clearly aligned connection between Pa and Martin Luther King, Jr by explaining that "...both men worried about the effect the world would have on their children." Though she is not specific about whether this is internal or external conflict, Alice does give a clear explanation of events.

Even though we based our modern Thanksgiving on the original in 1621 and we still have many of the same traditions, there are multiple differences between the two time periods and how each celebrated. When you think of Thanksgiving what's the first thing that comes to mind? Most people think about the food, and it seems it was the same way in 1621. "Thanksgiving: A Meal Without Forks and Other Feast Facts" states that a "...meal is still consumed..." on page 137; this shows that both the pilgrims of the past and Americans today both enjoy delicious food at their tables. Americans today think of dressing, turkey, pumpkin pie, and potatoes as staples of the modern Thanksgiving meal, but the pilgrims did not. Most foods seen on today's menu were not on the table in 1621; the article "The First Thanksgiving Meal" on <http://www.history.com> states "Whether mashed or roasted, white or sweet, potatoes had no place at the first Thanksgiving." Taking away potatoes, dressing, turkey, cranberry sauce, and pumpkin pie is almost the entire modern meal! Not only did the pilgrims not eat what we modern Americans think of as the most important part of the holiday, but they also didn't eat the food like we do. Today, we make sure we get some of everything on the table but according to "Thanksgiving: A Meal Without Forks and Other Feast Facts" the pilgrims "...just ate what was closest to them." (page 139). Can you imagine not getting any turkey just because you didn't sit near it? People would begin fighting for chairs! So although Americans celebrate Thanksgiving in honor of the pilgrims and Native Americans gathering together for a meal, today's traditions are quite different from 1621.

*Figure 7. Alice's sample six.*

For sample six, improvements in citing and gathering data are evident by glancing at the work. Clearly Alice has included direct quotes and a web address of where she collected the information. Additionally, page numbers have been cited to show that information was directly quoted from the short story. In this sample, Alice makes a clear connection from the short story to the informational text in the first sentence, "Even though we based our modern Thanksgiving on the original in 1621 and we still have many of the same traditions, there are multiple differences between the two time periods and how each celebrated." After her purpose has been stated, she dives into the task by comparing at least three aspects of her experiences with Thanksgiving to those of the past. In the excerpt below, she shows diverse citing by not only citing from the short story but also from an article she read online:

Most foods seen on today's menu were not on the table in 1621; the article "The First Thanksgiving Meal" on <http://www.history.com> states "Whether mashed or roasted, white or sweet, potatoes had no place at the first Thanksgiving." Taking away potatoes, dressing, turkey, cranberry sauce, and pumpkin pie is almost the entire modern meal! Not only did the pilgrims not eat what we modern Americans think of as the most important part of the holiday, but they also didn't eat the food like we do. Today, we make sure we get some of everything on the table but according to "Thanksgiving: A Meal without Forks and Other Feast Facts" the pilgrims "just ate what was closest to them" (page 139). Can you imagine not getting any turkey just because you didn't sit near it? People would begin fighting for chairs!

As can be seen, her citing has certainly improved because she started in sample one with nothing and has progressed to citing websites and even the title of the article she read online. Also, she has grown in the area of citing by providing direct quotes from both the article and the short story.

In addition to improving her weakness, citing, she continues to shine in her strength by making clear connections between ideas. Also, she consistently provides organized writing by showing a flow of ideas in a rational order. Part of this organization can be contributed to the process of the Inside Writing Frame process because she consistently performed well with the brainstorming chart, which helped her organize her thoughts and then she was able to take that information to translate into her writing. This actually is an improvement from the first sample because she completed the brainstorming for the first (Figure 8), but did not clearly combine those ideas when writing. Comparing sample six to sample one brainstorming, it is clear that her

processes have progressed because she includes direct quotes in sample six. But, sample one includes only briefs statements with page numbers noted.

Different: Then
1. lasted 3 days
2. they did not eat turkey
3. it was not annual
4. no football
5. it was in honor of the harvest
Same:
1. cranberries
2. everyone gathers together
3. use spoons and knives
Different: Now
1. we pardon a turkey
2. however we eat most turkeys
3. we watch football
4. happens on November 4th
5. is annual
Quote #1: "...meal is still consumed..." pg 137
Quote #2: "...they just ate what was closest to them." pg 139

Figure 8. Alice's sample six brainstorming chart.

External
Mary: (pg. 173) whipped by whom ever she lived with before, (pg. 172) lack of food
Pa: (pg. 171) scared and desperate because his family needs food
Boy: (pg. 172) lack of food and lost
Internal
Mary: (pg. 170) upset about something from her past to the point that she ran away
Pa: (pg. 171) has to leave his children alone in the woods to find food
Boy: (pg. 172) worried about making his father angry or dissapointed

Figure 9. Alice's' sample one brainstorming chart.

### Growth Summary

Overall, Alice's strengths were in the areas of brainstorming and organizing the information for writing. In addition, she proved strong in the areas of defining, redefining, and connecting. Although these areas were of great strength from the beginning, she continued to show more advanced skills through providing more clear connections between the short story and informational texts by inserting direct quotes from both sources. Organizing became more advanced because she was able to use transitions well in order to connect her ideas, where she began in sample one by simply creating a new paragraph.

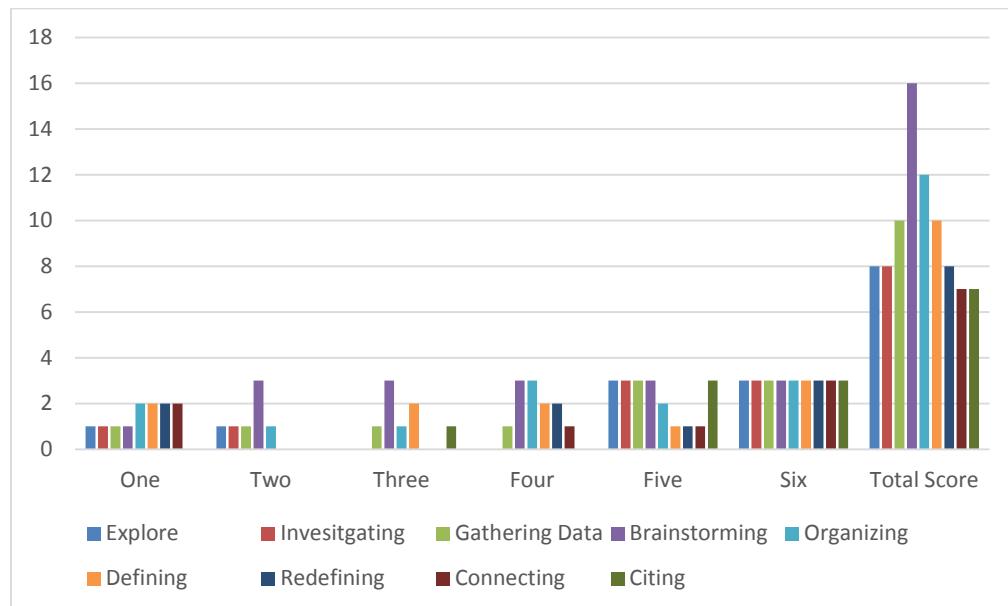
As for her weaknesses of citing, exploring, investigating, and gathering data, all of these are directly correlated because they are all dealing with information and showing the ability to communicate that information in writing. Alice started sample one with no direct quotes and no

citations from an outside source. By sample six of her microblog, she was able to quote information from both an online source and from the short story; additionally, she was able make a clear connection in her explanations for including that information in her response.

Along with these growths, Alice showed development in the area of voice. Voice, in writing, refers to having a unique manner of writing that may give the reader a vision of who is writing. Although not included in the coding process, because it did not become a clear pattern for all participants, in sample six, Alice uses rhetorical questions that give her a voice in her writing. For example, she writes “Can you imagine not getting any turkey just because you didn’t sit near it? People would begin fighting for chairs!” She adds her own personality to her writing and includes some human emotion instead of simply stating the facts and differences between the two events.

### **Madison**

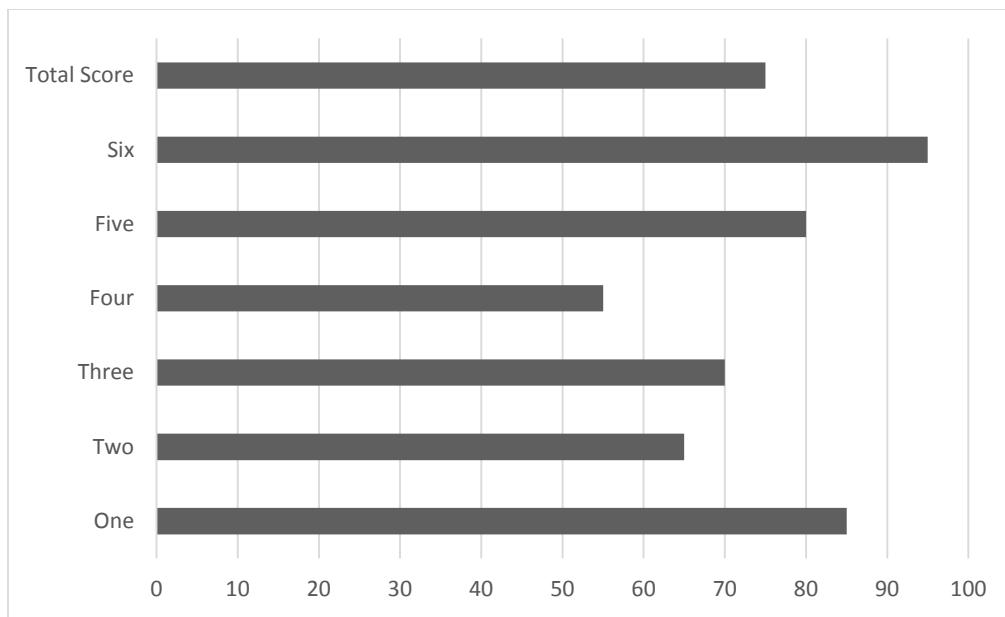
Figure 10 represents Madison’s degrees of success for coding within the writing microblog. From this bar graph, themes of strengths and weaknesses were determined.



*Figure 10. Madison's degrees of success.*

First impressions from this graph show that Madison remained quite inconsistent throughout the sampling period until she reached assignments four, five and six. At the end of the sample period, she began to show consistent growth in all areas. As can be seen from the graph, Madison shows her greatest, overall strengths in the areas of brainstorming and organizing, though not far behind those are defining, redefining, and connecting. Madison's weakest areas overall in the microblogging processes were citing and connecting information. Her progress in these areas is somewhat inconsistent. She began assignments one, two, and four with no citing at all. But, assignment three does show some evidence of citing. As for connecting, she does make some sufficient connections in the first assignment but then drops the skill completely until assignment four, where she begins to show consistent growth in connecting.

For the purpose of triangulation, it remains important to compare the grades (Figure 11) from each microblog assignment with the progression of growth. When comparing the growth of writing categories and skills to the numeric grade, there is consistency with the degrees of skills and the grade. Where Madison displayed the most strength for all writing codes, her grades reflect those strengths by being the highest scores in the group. Madison showed the highest scores for samples five and six where she also showed her greatest strengths for all areas of writing skills. Where her grades are lowest, samples two and four, her skills were also lowest. These trends support that the coding matches the numeric grade to further support that Madison does begin to show growth in those areas of strength and weakness.



*Figure 11.* Madison's grades.

For the purpose of showing development of writing, the most consistent growth appears to be present in entries four, five and six. Because of the level of inconsistency, it remains important to scrutinize those most consistent in development, therefore, it is important to compare the three closely. Figure 12, Figure 13, and Figure 14 show the three writing assignments.

Figure 12 shows week four, which was clearly Madison's weakest performance. In glancing at the entry it becomes clear that there has been no additional or outside research done, which shows why exploring and investigating do not appear on the bar graph. She clearly received no points for these codes. There is evidence of some organization and gathering information. Madison writes about the sea monster from the short story and describes him.

The Sea monster in the story matches the light house keeper because they are both lonely. The Sea monster has none of his family and try's to find his family. The light house keeper try's to get his family to stay with him so he wont be lonely, but the Sea monster scares them. They are both trying to find/keep their family with them. They both are sad because they cannot find their family and they are lonely. I believe that the character that fits me best is Art, from Monsters University. We are both very flexible. We are both funny and cheerful. In the movie Art is the odd ball who is funny. I believe i am funny and can make people laugh when i'm not meaning to. That is how me and Art from the movie Monsters University are alike and how he fits me the best.

*Figure 12. Madison's sample four.*

However, Madison does not make a clear transition between the short story and comparing herself to a modern day monster. She jumps right into the comparison with no explanation:

They both are sad because they cannot find their family and they are lonely. I believe that the character that fits me best is Art, from Monsters University. We are both very flexible. We are both funny and cheerful. In the movie Art is the odd ball who is funny. I believe i am funny and can make people laugh when I'm not meaning to. That is how me and Art from the movie Monsters University are alike and how he fits me the best.

Moving directly from the characters in the short story to the movie character, Art, makes it seem as if this character may also be found in the short story. There needed to be a stronger connection made between ideas, which explains why her score for connection was very low for this sample.

Madison is successful in making a personal connection with the monster she mentions by comparing her characteristics with the monster, which is why she did receive some points on the connection category.

She needed to explain the relationship of ideas from the story and from her personal experience a bit better but does show that she has the ability to define and redefine. She defines the relationship between the first monster and the lighthouse keeper by describing the monster's characteristics to the lighthouse keeper:

The Sea monster in the story matches the light house keeper because they are both lonely.

The Sea monster has none of his family and try's to find his family. The light house keeper try's to get his family to stay with him so he wont be lonely, but the Sea monster scares them. They are both trying to find/keep their family with them. They both are sad because they cannot find their family and they are lonely.

Then, as already shown above, she proceeds to redefine the relationship between humans and monsters by comparing a modern-day monster to herself. From the sample above, it can be noted that Madison did gather information from the text. Though she did not appear to do any additional research outside the short story, she did appropriately gather information from the short story. To make this selection stronger, she should have included direct quotes from the text.

In the next sample, Figure 13, Madison still does not include any direct quotes but shows some improvement in the area of research through exploring, investigating, and citing information.

During my process of researching about the Chinese culture i found many different thing related to papa. On <http://www.fairobserver.com> it says that women assumed a relatively subordinate position to men. In the story the narrator found papa giving Ian the ice-cream she bought for herself. Papa didn't know any better because she lived in China her whole life. On <http://www.thedailybeast.com> it says that foot binding was the cruel practice of mutilating the feet of young girls, was once pervasive in turn-of-the-century China. The story says that papa takes the shoes cause she thinks those were the shoes that messed her feet up. Papa didn't like her feet like that and she didn't want the girls feet to get messed up.

*Figure 13. Madison's sample five.*

Clearly, Madison includes websites of where she gathered additional data and as can be seen in the excerpt below, she does summarize data from those websites:

On <http://www.fairobserver.com> it says that women assumed a relatively subordinate position to men. In the story the narrator found papa giving Ian the ice-cream she bought

for herself. Papa didn't know any better because she lived in China her whole life. On <http://www.thedailybeast.com> it says that foot binding was the cruel practice of mutilating the feet of young girls, was once pervasive in turn-of-the-century China.

Though her methods of citing are not completely accurate, Madison has an appropriate order to her writing by stating the web address and then summarizing her findings. Then she continues by relating the information to the story, which helps to form a direct connection between the information and the short story. This aspect of her writing has shown a vast improvement from sample four.

Though the research aspects of her writing improved with this selection, Madison was unable to clearly define, redefine, and make a personal connection to the information and the short story. In the writing prompt, the participants were directed to explain how the new information they discovered in their searching helped them understand the character better. Madison gave great information but did not explain how it helped her understand:

The story says that papa takes the shoes cause she thinks those were the shoes that messed her feet up. Papa didn't like her feet like that and she didn't want the girl's feet to get messed up.

Madison successfully explains the reason PaPa does not like the shoes but really needs more defining of "the shoes" and how the feet are "messed up." Then she needed to further redefine that information by explaining how the new information helped her to understand the actions of Papa in the short story. In addition, explaining how the new information helped Madison understand the character's actions would have helped to make a better connection both with the story and personally.

In sample six, Figure 14, Madison shows improvement in making direct connections and the research categories. At a glance, the entry below shows quotation marks and a website cited.

There are many ways their Thanksgiving was the same and different from ours. Over time some things have changed and some have stayed the same. Some ways they are different is their Thanksgiving was a three day holiday. Our Thanksgiving is a one day holiday. In our textbook it say "... cooking methods and table etiquette's have changed as the holiday has evolved...". The people in 1621 at deer for Thanksgiving, unlike us we eat turkey. Also in our textbook it says " People weren't served their meals individually, foods were served onto the table and then people took the food from the table and ate it.". Some ways we are the same is we both have cranberries for Thanksgiving. we both serve them different ways, but they are both cranberries. We both give thanks to people. On <http://www.plimoth.org> it says " Giving thanks for the creator's gifts have always been apart of Wampanoag daily life.". Giving thanks to people is apart our daily life.

*Figure 14.* Madison's sample six.

In comparison to sample four, in sample six Madison shows vast improvement in the areas of exploring, investigating and citing. She also improves in the areas of defining and redefining. One major improvement is revealed through her use of direct quotations and then the explanation of those quotations:

There are many ways their Thanksgiving was the same and different from ours. Over time some things have changed and some have stayed the same. Some ways they are different is their Thanksgiving was a three day holiday. Our Thanksgiving is a one day holiday. In our textbook it say “cooking methods and table etiquette’s have changed as the holiday has evolved. . . ” The people in 1621 at deer for Thanksgiving, unlike us we eat turkey. Also in our textbook it says “People weren’t served their meals individually, foods were served onto the table and then people took the food from the table and ate it.” Some ways we are the same is we both have cranberries for Thanksgiving. We both serve them different ways, but they are both cranberries. We both give thanks to people. On <http://www.plimoth.org> it says “Giving thanks for the creator’s gifts have always been a part of Wampanoag daily life.” Giving thanks to people is apart our daily life.

In this entry, Madison makes clear connections between the short story and the informational text. She also makes personal connections by using the pronoun “we” to make connections to her experiences with Thanksgiving traditions. Perhaps, her success in making clear connections was her prior knowledge of the subject. She was not required to conduct as much research because of her personal experiences with Thanksgiving.

Though Madison was somewhat inconsistent throughout the microblogging process, she did remain consistent in the area of brainstorming and organizing information using the graphic organizer. As can be seen in Figures 15 and 16, Madison shows her ability to carefully complete the graphic organizer. But, based on her inconsistencies, until the last sample, she had trouble transferring the information from the graphic organizer into a coherent, whole piece of writing. From the figure below, the quotations used in her writing are clearly on her brainstorming chart for sample six. But, when comparing to the organizer from sample four, Madison has direct quotations from the text on her chart but does not include any of that information in her microblog. By sample six, Madison had gained an understanding of how to incorporate the brainstorming information into her writing.

different:  
1. Wasn't yearly  
2. Three day holiday  
3. No pumpkin pie  
4. They ate deer instead of turkey  
5. It started later in November

Same:  
1. We both have cranberries  
2. Both in the same month  
3. They both gave away food to people

Different:  
1. Yearly  
2. One day holiday  
3. We have pumpkin pie  
4. We eat turkey  
5. Earlier than before in November

Quote #1  
"... cooking methods and table etiquette's have changed as the holiday has evolved..."

Quote #2  
"People weren't served their meals individually; foods were served onto the table, and then people took the food from the table and ate it."

*Figure 15.* Madison’s sample six brainstorming chart.

Monster: Sea Monster Personality trait: Lonely Evidence from the text: "A cry so anguished and alone..." pg.: 325
Monster: Sea Monster Personality trait: Ambitious Evidence from text: "The fog horn blew the monster rawr again." pg.: 325
Monster: Sea Monster Personality trait: Disappointed Evidence from the text: "It's gone away." pg.: 328

*Figure 16.* Madison's sample four brainstorming chart.

### Growth Summary

Madison was inconsistent in the beginning with her writing in such a way that there were no consistent growth patterns with any coding category. But, she does have a consistent strength in the area of brainstorming. Therefore, beginning with sample four, Madison begins to display a growth pattern and shows her strengths and weaknesses.

Madison's greatest areas of strength occurred in brainstorming and organizing. Though not far behind those are defining, redefining, and connecting. Brainstorming and organizing remained somewhat consistent throughout the microblogging process. Until sample five, defining, redefining, and connecting were not at their greatest capacity. Madison did show improvement in these areas when writing sample six.

Madison had strengths but she also displayed a few weaknesses. Madison displayed major difficulty with the areas of research: exploring, investigating, gathering data, and citing. It was clear from her brainstorming charts that she had the ability to gather data but that information was not appropriately incorporated in her writing. At first, Madison included no direct quotes or even any evidence of conducting outside research for citing, exploring, and investigating. But, in samples five and six, she does show great improvement in these areas.

Part of this improvement may be attributed to some self-reflection upon the grading procedures. After each assignment, the teacher/researcher left comments for improvement

(Figure 17). Figure 17 provides an example of the comments for sample four. The comments were driven by the grading rubric (Appendix B). Perhaps, Madison used metacognition to reflect and improve her writing for the next assignment. The comments would be available at the time of completing the next prompt for the microblog so, it is very likely that Madison saw the comments just moments before beginning the next writing prompt. Therefore, she knew the areas where she needed to improve to earn a higher score.

**Comments**

-20 No additional research appears in writing -10 Information is organized, but paragraphs are not well-constructed. -15 Paragraphing structure was not clear and sentences were not typically related within the paragraphs.

*Figure 17.* Sample four comments for Madison.

An area of concern that was not included in the coding process, because it was not a major trend among all participants, lies in the area of grammatical errors. Madison has numerous grammatical errors through spelling, slang, subject and verb agreement, and properly citing procedures. Though this is not a major area of coding, Madison does need some improvement in this area of her writing (Figure 18). Perhaps, she will need more explicit instruction in these areas of writing.

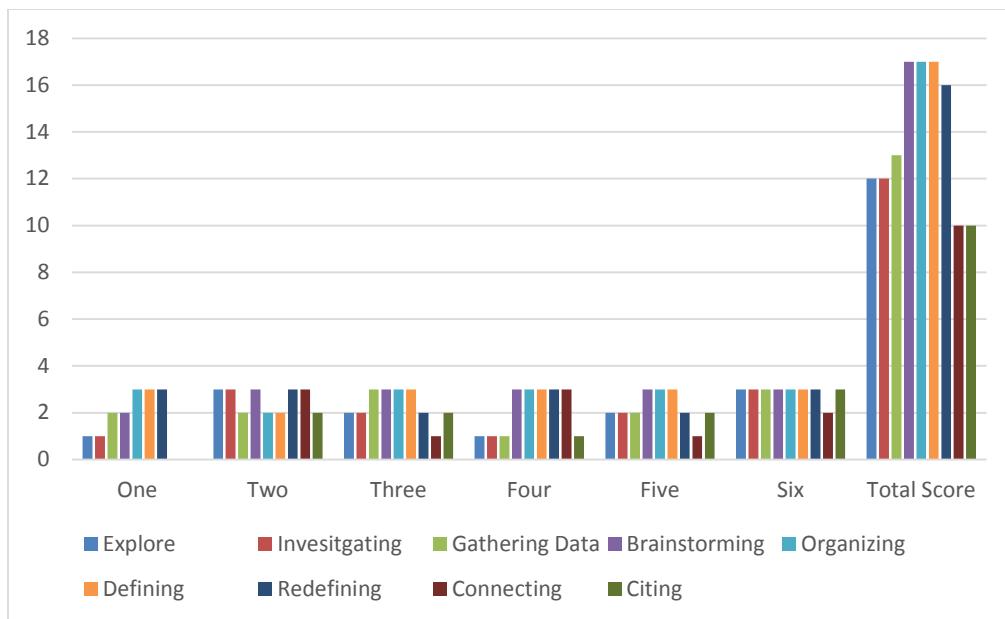
**Comments**

-5 Almost no grammatical, spelling or punctuation errors - page numbers should be included with quotes

*Figure 18.* Sample six comments for Madison.

**Carol**

Figure 19 represents Carol's degrees of success for coding within the writing microblog. From this bar graph, themes of strengths and weaknesses were determined.



*Figure 19.* Carol's degrees of success.

From the graph, Carol's greatest, overall strengths occur in the areas of brainstorming, organizing, defining, and redefining. Not far behind these strengths is the area of gathering data. Her major weaknesses overall appear to be in the areas of connecting and citing. In connection to citing, other areas of weakness occur with exploring and investigating information. Looking at the progression of the chart, Carol has weaknesses but appears to have made strides in those areas. For example, for the first sample, she did no citing and very little exploring and investigating. In contrast, she immediately improves these areas in sample two. By samples five and six, she appears to have consistent progress in her areas of weakness.

For the purpose of triangulation, it remains important to compare the grades from each microblog assignment with the progression of growth. When comparing the growth of writing categories and skills to the numeric grade, there is consistency with the degrees of skills and the grade. For example, on the grade chart (Figure 20), sample one was her lowest score, which matches with the graph because this is where she shows her greatest weakness in multiple areas. In addition, her highest scores occurred within samples three, four, and six, where she shows the

most consistency in multiple areas of the coding. Therefore, her grades help to triangulate the coding process.

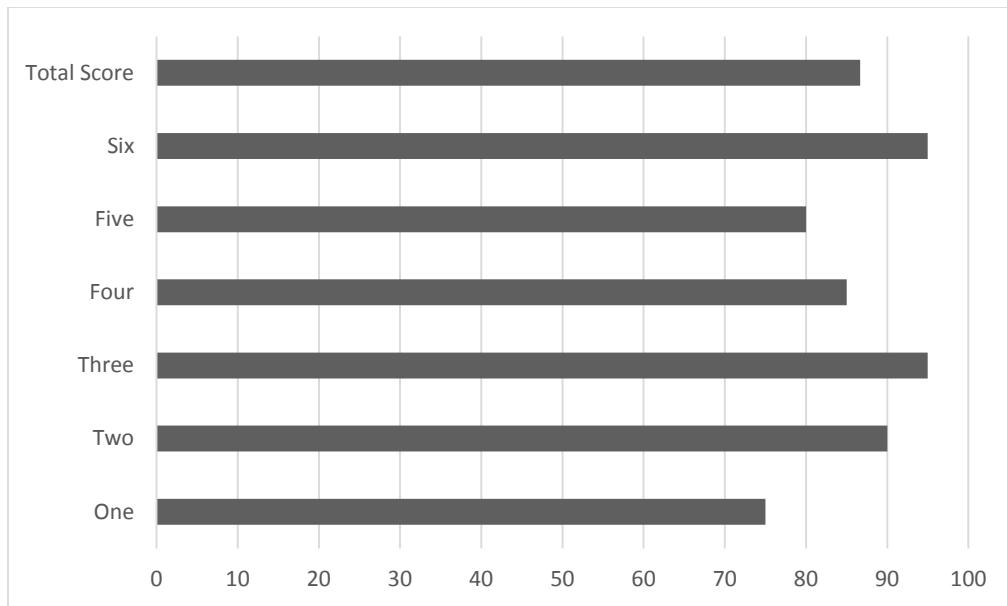


Figure 20. Carol's grades.

Comparing the first sample of microblogging to the last sample, one can clearly delineate that Carol shows improvement with informational writing. Screenshots from *Edmodo*, Figures 21 and 22, show the two samples aligned. According to the skills chart and the grades chart, sample one was Carol's weakest entry and samples three and six were among her strongest entries. In order to analyze the growth in informational writing, it is important to seek the specific details involved in the informational portions of the writing. To start, looking at Figure 21 supplies some evidence of Carol's weakest areas as well as some of her strengths. Then looking at samples three and six allows the researcher to further see how she progressed from the middle of the assignments and as they came to an end for the sample collection.

According to the bar graph of coding, Carol received zero points in the areas of citing and connecting, which showed to be among her weakest areas throughout the microblogging process.

Looking at the sample, Figure 21, it is easy to recognize that Carol used no outside resources or did any additional research. In addition, at a glance, there appears to be no direct quotations.

One person I think would have a lot of internal and external conflicts would be Martin Luther King Jr. Martin Luther King Jr. was born on January 15.1929. To this day he is remembered as a Civil Rights hero. With such a tough job I assume many internal and external conflicts would form. One internal conflict I'm sure Martin Luther King faced was decision making for his own good. While fighting for your own rights and still trying to succeed in a peaceful protest making decisions to keep yourself and others safe involves many tough decisions to make. One external conflict I'm sure he faced was when to decide enough was enough. During the protest many people were hurt, killed, and his goal was to have a peaceful protest. When he saw these people fight and get hurt he had to know what to do to prevent this. Such as keep going, call it off, use violence back. Anything like that is a external conflict.

Figure 21. Carol's sample one.

In reading the microblogging response, it can be determined that Carol presents a well-written and well-organized paragraph but lacks connection to the text. It is important to know the prompt for this response:

Read the literary selection. Using the external and internal conflict chart, identify external and internal conflicts. Using the Internet, research others in history you know of who have faced internal and external conflicts for a noble cause. Synthesize a well-developed paragraph explaining the conflicts from the selection. Provide a comparative example from your Internet search.

The participants had multiple steps to complete through reading, brainstorming, researching, and then comparing. It seems from Carol's response that she did not understand how to "Provide a comparative example." This meant that she should compare the characters' conflicts from the short story to those of the person from history. As can be seen from the writing sample below, she does not make this connection:

One person I think would have a lot of internal and external conflicts would be Martin Luther King Jr. Martin Luther King Jr. was born on January 15.1929. To this day he is

remembered as a Civil Rights hero. With such a tough job I assume many internal and external conflicts would form. One internal conflict I'm sure Martin Luther King faced was decision making for his own good. While fighting for your own rights and still trying to succeed in a peaceful protest making decisions to keep yourself and others safe involves many tough decisions to make. One external conflict I'm sure he faced was when to decide enough was enough. During the protest many people were hurt, killed, and his goal was to have a peaceful protest. When he saw these people fight and get hurt he had to know what to do to prevent this. Such as keep going, call it off, use violence back. Anything like that is an external conflict.

Carol describes the conflicts Martin Luther King may have faced but does not provide any specific examples of the conflicts. It seems that the information she provides comes only from prior knowledge and no additional research or exploration was conducted. Like Carol's weaknesses of not making connections and areas of research are evident from sample one, her strengths are also easily recognized. She has strong skills in writing organization defining and redefining by clearly showing examples of internal and external conflicts. Carol redefines by providing several examples and thoroughly explaining each example. In addition, she shows great strength in organization of ideas.

In sample three, Carol's strengths continue and her weaknesses are starting to improve. Looking at the sample (Figure 22), Carol shows improvement in the area of research based on the presence of quotation marks and page numbers have been cited from the short story.

In "There Will com Soft Rains" there are multiple examples of personification one example is in the text on page 269 it says "The sharp aroma of animal spoors". This is an example of personification because clearly the mice are robots and they cant have spoors because they cant poop. Another example is on page 271 it says "The blue lions roared...". Blue lions cant roar because they are robots they don't have any emotions. In modern day technology there are many examples of personification for example with they Dyson DC59 Motorhead cordless vacuum in the ad it says, The vacuum has a swivel meaning it has a joint at the base that enables you to turn the handle from side to side getting into hard to reach places. Since it is a vacuum and not a living thing it cant have joints. Another example is the cordless vacuum has a small waist circumference making it easier to travel around your house. The vacuum doesn't actually have a waist; it may have an area of the body that acts like the waist, but it isn't a living human so it cant have an actual waist.

*Figure 22. Carol's sample three.*

Though it is clear that Carol did use specific information and gathered data from the short story, she did not provide a website for where she obtained information about the "Dyson DC59 Motorhead." The researcher may infer that she must have done some outside research based on the information provided. Therefore, Carol did earn more points for citing, exploring, and investigating. She also showed improvement with connecting, though minimal. In comparison to the first sample, where she had no connecting information to the short story, she does attempt to make a connection between the two by writing about personification for the short story and the information:

Blue lions can't roar because they are robots they don't have any emotions. In modern day technology there are many examples of personification for example with the Dyson DC59 Motorhead cordless vacuum in the ad it says, The vacuum has a swivel meaning it has a joint at the base that enables you to turn the handle from side to side getting into hard to reach places. Since it is a vacuum and not a living thing it can't have joints.

Another example is the cordless vacuum has a small waist circumference making it easier to travel around your house.

She attempts to make a connection by stating, "In modern day technology there are many examples of personification . . ." but it is not a clear transition from the information from the

short story to the information about the vacuum. Perhaps if she had made a comparison to the objects from the short story and the product, she may have a clearer connection. Though not a strong improvement, there is some improvement in the area of connection from sample one to sample three.

As for Carol's strengths, she continues to show strength in organization of information through proper order and transitioning. She also continues to properly define through explaining and defining personification. Because of the lack of direct quotes and citation from the outside source, redefining occurred on a minimal level. Even at this minimal level, redefining did show improvement from sample one.

In sample six (Figure 23), Carol continues to show improvement in all areas of strength and weakness. As can be seen in the sample, she clearly provides quotation marks indicating direct quotes from both the short story and the information text. In addition, she provides a citation for where she investigated additional information. Along with the quotations, she provides an explanation and a clear connection between ideas in the short story and information from the articles from the Internet.

How is our Thanksgiving different from the very first Thanksgiving? The very first Thanksgiving was similar and different in many ways. One was etiquette standards have changed. Back in 1621 they only used spoons, knives, and their hands to eat. As we all know we use a variety of different things to eat with such as our hands, spoons, forks, knives, sporks, etc. Not only this but they did not eat their meals by courses. They would lay every meal that they prepared out on the table and then they would eat as they please. In our textbook it says "The pilgrims didn't eat in courses as we do today." pg. 139. Another difference is the meats they ate. Everyone knows exactly what animal comes to mind during the Thanksgiving months. For the pilgrims that animal would be the deer. In 1621 they did not eat turkey as their meat. They traditionally used deer. On history.com it says " Winslow wrote that the Wampanoag guests arrived with an offering of five deer." One last difference is what we celebrate. The pilgrims celebrated their annual harvest unlike us we celebrate thanks. "The pilgrims celebrate the annual harvest."

*Figure 23.* Carol's sample six.

Along with research related codes, Carol shows improvement in the areas of connecting and redefining within this passage. She clearly weaves information from the short story,

informational text, and explanations throughout the microblog to make clear connections between the information. The excerpt below shows how she accomplishes making this connection while redefining

Another difference is the meats they ate. Everyone knows exactly what animal comes to mind during the Thanksgiving months. For the pilgrims, that animal would be the deer. In 1621 they did not eat turkey as their meat. They traditionally used deer. On history.com it says,” Winslow wrote that the Wampanoag guests arrived with an offering of five deer.” One last difference is what we celebrate. The pilgrims celebrated their annual harvest unlike us we celebrate thanks. “The pilgrims celebrate the annual harvest.”

Carol craftily weaves the current traditions of Thanksgiving together with the traditions from 1621, which helps to create a clear connection of information. This is certainly a contrasting improvement from samples one and three. In sample one, there was no connection of information to the short story. In sample three, there was a minimal connection but seemed to be two separate pieces of information. Through the connecting of information, redefining improved by redefining the traditions of Thanksgiving. Though Carol showed great improvement with connecting, she did not score full points because she ended her entry with a direct quote. The paragraph ends abruptly without a concluding sentence to tie the set of ideas together at the end.

Like other participants, one of Carol’s greatest and most consistent strengths occurred in the area of brainstorming and organization. She accurately completed each of the brainstorming graphic organizers for each sample. The graphic organizers for sample one and sample six are shown in Figures 24 and 25. The graphic organizer from sample one did not include any page numbers from the short story, therefore, a comment was left and points taken from the grade. But, Carol corrected this in the graphic organizers that followed. Though Carol made this

elaborate brainstorming graphic, she failed to include any of this information in her microblogging response. Like Madison, Carol needed a little coaching on how to incorporate the information together into one coherent paragraph. In sample six, Carol included detailed information from the short story including direct quotes and page numbers. She also was able to effectively connect this information with her investigation of information on the Internet. She showed improvement by making the connection to include information on the graphic organizer with the information from the Internet.

Mary:  
Internal: How she couldn't tell if the mushroom was poisonous or not.  
External: How she could not hitch a ride with anyone. Another external was how she could not get Pa to except her.

Pa:  
Internal: One internal conflict was accepting Mary into the family.  
External: One external conflict was the weather conditions. Another external conflict was the struggle to maintain a stable amount of food.

Little Boy:  
Internal: One internal conflict is how he did not want to cry in front of his sister, dad, or Mary.  
External: One external conflict was how hungry he was but how he could not do anything about it. Another was how he didn't understand why Mary wouldn't give him any of the mushroom.

*Figure 24. Carol's sample one brainstorming.*

Different:  
1. In the beginning Thanksgiving wasn't an annual holiday.  
2. Turkey was not served in the beginning instead they used deer meat.  
3. Cranberries were not a jam or spread instead they were just served whole.  
4. They had Thanksgiving to celebrate their annual harvest.  
5. Cooking techniques and etiquette standards were less than they are now.

Same:  
1. It is still held on the same day.  
2. We both serve vegetables on the menu.  
3. The feelings of celebration are the same.

Different:  
1. We eat turkey and even pardon one turkey each year.  
2. We do cranberry jams, sauces, etc.  
3. We eat stuffing unlike the early peoples.  
4. We celebrate thanks instead of the annual harvest.  
5. We eat with forks.  
S  
Quote #1:  
"Pilgrims didn't use forks; they ate with spoons, knives, and their fingers. (pg. 138)"

Quote #2  
"Our modern Thanksgiving is centered around turkey..." (pg 140)

*Figure 25. Carol's sample six brainstorming.*

## Growth Summary

Carol was consistently strong in the areas of brainstorming, organizing, defining, and redefining. Throughout the samples, she completed accurate brainstorming strategies with the graphic organizer. At first she had some difficulty transferring the information from the brainstorming chart to the microblog, but she quickly corrected this problem. Organization is clearly a strength throughout her writing. Though she may not have made clear connections between the different sets of information, she has a logical order in all of her microblogs. Because of her ability to explain her thoughts, she is strong in the areas of defining and redefining. After sample one, she consistently defined the terms and then redefined those terms through the informational text.

Not only did Carol's strengths become stronger, her major weaknesses overall of connecting and citing gained strength throughout the microblogging process. She never gained full points for connecting the information but showed great strides by sample six because she was able to weave the information together to make clear connections. Citing information improved after the first sample because she did show some evidence of outside research and by sample six she included specific websites. In connection to citing, other areas of weakness occur with exploring and investigating information. After sample one, she gathered information from an outside source, therefore, showing improvement. Based on this information, overall she displayed an ability to improve in her skills with informational writing through the microblogging process.

Another trend that became evident through the microblogging process but was not considered a major code lies in the area of sentence variety and structure. Carol used a variety of different sentences in her writing. She displays the ability to use complex and compound

sentences instead of using majority simple sentences. On occasion, she even separated her compound sentences using a semi-colon. These writing conventions create strong writing. Below is an excerpt from sample one:

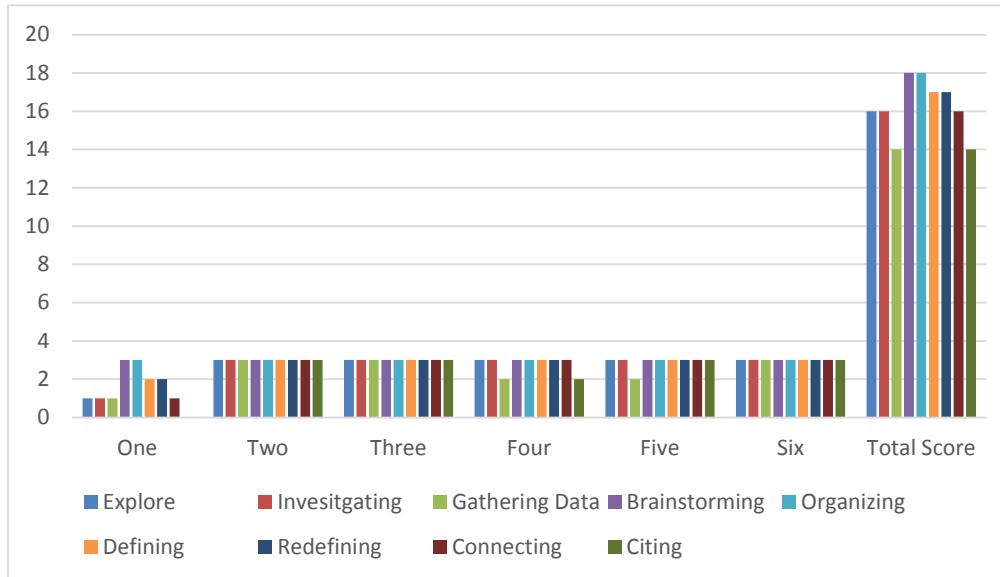
While fighting for your own rights and still trying to succeed in a peaceful protest making decisions to keep yourself and others safe involves many tough decisions to make. One external conflict I'm sure he faced was when to decide enough was enough. During the protest many people were hurt, killed, and his goal was to have a peaceful protest. When he saw these people fight and get hurt he had to know what to do to prevent this. Such as keep going, call it off, use violence back. Anything like that is a external conflict.

From this selection, it is clear that Carol understands the use of introductory phrases and clauses to create complex sentences. She also effectively uses conjunctions to create compound sentences in this sample. In sample three, she continues to show her ability in sentence variety by writing, “The vacuum doesn’t actually have a waist; it may have an area of the body that acts like the waist, but it isn’t a living human so it can’t have an actual waist. . . .” The use of the semi-colon to separate the compound sentence shows her knowledge of punctuation rules to create sentence variety. Because it did not show up as a clear pattern among all participants, this phenomenon was not included as part of the coding process, but the use of sentence variety proves to be a consistently strong area of writing for Carol.

### **John**

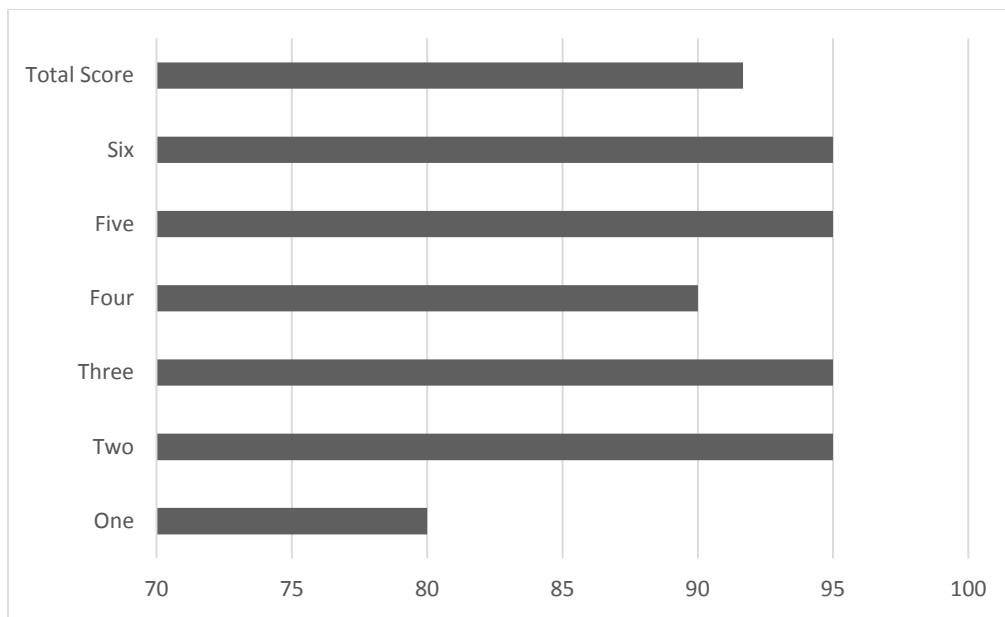
From Figure 26, it can be seen that John’s areas of greatest strength are in the areas of brainstorming, organizing, defining and redefining. Not far behind those are connecting, exploring, and investigating. John’s weaknesses throughout the writing sample occur in the areas of gathering data and citing information. From glancing at the bar graph, it can clearly be

determined that after the first sample, John learned how to correct his weaknesses and consistently kept improving his writing. In samples four and five, he displayed some difficulty with gathering data and citing, but again, quickly corrected these areas when writing for sample six.



*Figure 26. John’s degrees of success.*

For the purpose of triangulation, it remains important to compare the grades from each microblog assignment with the progression of growth. When comparing the growth of writing categories and skills to the numeric grade, there is consistency with the degrees of skills and the grade. For example, on the grade chart (Figure 27), sample one is his lowest score, which matches with the graph because this is where he showed his greatest weakness in multiple areas. In addition, his highest scores occurred within samples two, three, five, and six, where he shows the most consistency in multiple areas of the coding. Therefore, his grades help to triangulate the coding process.



*Figure 27.* John's grades.

In order to analyze the specific areas of growth in John's strengths and weaknesses, the researcher will closely explain where those areas are evident in samples one, four, and six. Because there appears to be a level of growth from sample one to two and three and then a decline to sample four, sample four may shed light on the areas of weakness and strength. Perhaps in analyzing sample four, the researcher will be able to determine the cause of decline in writing from samples two and three. Then those areas appear to show growth in samples five and six, therefore, sample six should display in what ways those areas have grown.

In samples two and three, John appears to have scored evident scores for each code showing that he was very consistent with his writing in all areas. But, in sample four, John showed a decline in two areas: gathering data and citing. For part of this assignment, participants were to compare themselves to a type of fictional monster. In order to do so, they were to research different monsters and read informational articles about the monsters to determine which one would best suit them. Although there was a decline, there was not a total loss in those areas because the bar graphs appear there. Looking at Figure 28, the researcher determined that

John showed weaknesses in the area of citing because he used the Internet to take a quiz to find out which monster best fit his personality. There is no additional evidence of research or informational articles read about this monster. Due to this action, John did receive a deduction for gathering data but not a total loss. As for citing, there are no direct quotations shown in his response, therefore, he lost some points for failing to cite information from an informational article. Additionally, John lost additional points for failing to cite page numbers and direct quotes from the short story, as well.

The monster in the selection, "The Fog Horn", is similar to the narrator in some ways, although the monster is very different from him. The monster hasn't seen any of its kind in many years and this causes this old beast to feel lonesome, and for it to desire some other members of its species. The narrator doesn't have any friends in the lighthouse with him and he spends his life by himself for most of the time. This shows that both of them could do with more attention from people they know because they feel lonely on the inside. The monster waits over a million years in order to find a friend to hang out with it. The narrator also struggles with waiting because all he does all day is wait at the lighthouse for something to occur. This shows how the narrator and the monster are both patient when it comes to waiting. Those traits make them seem similar in the way they act. I took a quiz on <http://www.zimbio.com> that says I was an abominable snowman. I am tall like the monster, and like to keep warm. Mostly only those traits I would consider similar because I wouldn't consider myself strong like the monster or that hairy. So besides that I could see why it would have matched me with it.

*Figure 28. John's sample four.*

John's weaknesses in this writing sample are somewhat minimal because his strengths truly outshine his weaknesses in writing. John proved to be equally strong in all other areas of the coding including exploring, investigating, organizing, defining, redefining, connecting and brainstorming. John shows strength in exploring and investigating through his use of the Internet to find a program to identify which monster would correlate with his personality. Then he used the information he found to compare himself to that monster. John's strengths of defining, redefining and connecting shine through in the following excerpt:

The monster waits over a million years in order to find a friend to hang out with it. The narrator also struggles with waiting because all he does all day is wait at the lighthouse

for something to occur. This shows how the narrator and the monster are both patient when it comes to waiting. Those traits make them seem similar in the way they act. I took a quiz on <http://www.zimbio.com> that says I was an abominable snowman. I am tall like the monster, and like to keep warm. Mostly only those traits I would consider similar because I wouldn't consider myself strong like the monster or that hairy. So besides that I could see why it would have matched me with it.

John demonstrates the ability to connect the monster from the short story with the narrator. John is the monster's characteristics and then redefines those characteristics within the narrator's character. Additionally, though the transition of subjects is quite weak, John's ability to make a connection to the theme of the narrator carrying characteristics of the monster proves to be present. John shows how his personality and characteristics could be closely linked to those of a fictional monster.

In sample five, John corrects his flaws in citing but continues to have some difficulty with gathering data. But, for his strengths, he continues to steadily and consistently write with confidence. Looking at Figure 29, it remains clear that, once again, John failed to provide direct quotes from any text. He does provide two websites to cite his information and provides a summary of information from those texts, but his investigation lacks specific quotes from those sources. In addition, he does not provide any direct quotes or page numbers from the short story. An important component to informational writing lies in displaying the ability to use direct quotations within writing.

I researched Chinese culture and customs, and have found out some information that seems that it can tell me more about the characters a little bit. First off, I discovered on livescience.com that people in China didn't seem to have ballet or known of anything like that back then. This shows how Grandma was likely to be confused by the ribbons because she had probably never heard of ballet before. Also on the website daydaycook.com I discovered that not many Chinese desserts include ice cream today. So by prediction I believe when Grandma gave the boy the ice cream she thought it would please him because there wasn't much around in China probably back then, and she thought it was better suited for the boy of the house to enjoy because men were more important in China. On acc6.its.brooklyn.cuny.edu, the website said that women were extremely mistreated and that families mostly wanted men to be proud of. This is probably the reason why Grandma carried Mom across China. She probably wanted the best for her daughter and therefore sent her to somewhere else where she wouldn't be mistreated. After reading those articles and webpages I believe I can understand more of how Grandma felt throughout the story.

*Figure 29. John's sample five.*

John showed improvement in the area of citing by providing a citation for an informational article or website to delineate information. Again, he continues to prove consistent in the areas of the coding including exploring, investigating, organizing, defining, redefining, connecting and brainstorming. In the excerpt below, it can clearly be seen that John investigated and explored to find articles that would help explain the character actions occurring in the short story.

I researched Chinese culture and customs, and have found out some information that seems that it can tell me more about the characters a little bit. First off, I discovered on livescience.com that people in China didn't seem to have ballet or known of anything like that back then. This shows how Grandma was likely to be confused by the ribbons because she had probably never heard of ballet before. Also on the website daydaycook.com I discovered that not many Chinese desserts include ice cream today. So by prediction I believe when Grandma gave the boy the ice cream she thought it would please him because there wasn't much around in China probably back then, and she thought it was better suited for the boy of the house to enjoy because men were more important in China. On acc6.its.brooklyn.cuny.edu, the website said that women were

extremely mistreated and that families mostly wanted men to be proud of. This is probably the reason why Grandma carried Mom across China. She probably wanted the best for her daughter and therefore sent her to somewhere else where she wouldn't be mistreated. After reading those articles and webpages I believe I can understand more of how Grandma felt throughout the story.

John successfully organized and made connections with the short story and the information he researched. John carefully states the facts he investigated about Chinese culture and customs and then relates that information back to the short story. He orders the information in such a way that he seems to weave the facts and the story events together, which makes for a well-connected paragraph. In addition, he further shows connection through stating, "After reading those articles and webpages, I believe I can understand more of how Grandma felt throughout the story." His statement shows that through the informational text, he can now better understand the actions of the characters, which allows him to make a personal connection to the literature.

John remained consistently strong in the area of brainstorming for all writing assignments. But, looking at his brainstorming graphic organizers for samples four and five, there seems to be a disconnect of information. In the samples (Figures 30 and 31), it can be clearly noted that the graphic organizers included direct quotes and page numbers from the stories. Therefore, John did gather the information needed but did not make the connection that the information in the graphic organizer should be included within the microblog to provide specific evidence.

<p>Monster: Sea Monster          Personality trait: Lonely          Evidence from the text: "A cry so anguished and alone..."          pg. 325</p> <p>Monster: Sea Monster          Personality trait: Ambitious          Evidence from the text: "The Fog Horn blew. The monster roared again."          pg. 325</p> <p>Monster: Sea Monster          Personality trait: Angry          Evidence from the text: "It reared up, threshed the water, and rushed at the tower, its eyes filled with angry torment."          pg. 327</p>
--

*Figure 30.* John's sample four brainstorming.

<p>Character: PAWPAW (Grandmother)          Character trait: Protective          Evidence from the text: "Give those to me." She held out her hand."          Pg. 717          Explain: She (Grandma) was being protective by trying to take the ballet ribbons because she thought they were the same ones used to bond her feet.</p> <p>Character trait: Strong-willed          Evidence from the text: "Once the ribbons were gone, her feet ached"; "That's how tough she is," Mom said."          Pg. 719          Explain: Although it was very painful, she puts up with her feet everyday.</p> <p>Character trait: Stubborn          Evidence from the text: "Take them away. Burn them. Bury them."          Pg. 717          Explain: She refused to believe that the ribbons were for good use.</p>
--

*Figure 31.* John's sample five brainstorming.

In sample six (Figure 32), John continued to make strides of improvement by improving the area of gathering data. He finally made the connection between the brainstorming graphic organizer and his writing for the microblog.

<p>Our Thanksgiving traditions would appear strange and different from the original ones at the first Thanksgiving. First of all, we have a turkey now instead of the venison and wild fowl that our ancestors ate. In the selection the text states, "Our modern Thanksgiving repast is centered around the turkey, but that certainly wasn't the case at the pilgrims' feasts." The first Thanksgiving had no signs of cooked turkey anywhere on the table. As well as that, the old thanksgiving feast didn't have mashed potatoes or pumpkin pie either. On page 138 it says, "...but it's safe to say the pilgrims weren't gobbling up pumpkin pie or playing with their mashed potatoes." Pilgrims probably didn't even consider baking pumpkin pie or mashing potatoes into a soft substance with a side of butter. Finally the pilgrims had Thanksgiving as a three-day feast to celebrate the Indians relationship with the pilgrims. On the website <a href="http://www.eyewitnesstohistory.com/thanksgiving.htm">http://www.eyewitnesstohistory.com/thanksgiving.htm</a>, paragraph three, it said, "The celebration lasted for three days." This is a lot longer than our one day only that we use to symbolize this event. These differences really show how we altered this famous holiday.</p>
---

*Figure 32.* John's sample six.

Along with making the connection between the brainstorming chart and the writing blog, John showed improvement in being able to accurately explain the importance of the information as it is related to the prompt. He made emotional and informational relationships with the information:

“[W]hen their labors were rewarded with a bountiful harvest after a year of sickness and scarcity, the Pilgrims gave thanks to God and celebrated His bounty . . .”

(<http://www.plimoth.org>). Of course we all give thanks for many things that occur in the year, but the Pilgrims and Wampanoag were often underfed, and they finally have a chance to pig out on the food they've gathered. Nowadays, we eat healthier meals and a more varied range of foods. The Pilgrims mainly had to eat meats for this holiday and wouldn't even have turkey! In the textbook, it says, “Pilgrims weren't gobbling up pumpkin pie or playing with their mashed potatoes” (pg. 138). Pilgrims had to eat what they have for the season; they didn't have ingredients to make many sweets or serve simple vegetable dishes that are common today. Even if we don't eat the same meals or celebrate for the same reason, we both have the same great attitude during the season. In the passage, it states, “the meal is still consumed today with the same spirit of celebration and overindulgence. . . ” (pg.137). We are still equally happy to celebrate this holiday with the few traditions that have been passed down, but the most important one is that we give thanks for the family and friends we have and the great year we've shared together.

John was able to use the quotations from his brainstorming chart to support his ideas of comparing and contrasting the two different eras of Thanksgiving celebrations. He used the substance of the food to contrast and used great emotional appeal to compare the emotional similarities associated with the holiday.

## **Growth Summary**

For John, the data show that John had strengths and weaknesses, but his major area of strength surfaced in his ability to self-correct. John seemed to correct areas of weakness after any slip or perceived failure. For the coding, John's areas of strength occurred with brainstorming, organizing, defining and redefining. He also had high scores in the areas of connecting, exploring, and investigating.

Though minimal, his areas of weakness occurred in the areas of gathering data and citing. Like many of the participants, John had a rocky start with sample one but he quickly corrected those mistakes in samples two and three. He showed evidence of his areas of weakness in sample four. He did make amends for his lack of gathering data in sample five but failed to cite properly. By sample six, John had consistently maintained all of his strengths as well as made improvements in his areas of weakness.

John reveals his ability to self-correct throughout the six samples of work but most of all, he reveals his ability to use information to gain insight and then communicate that insight through his writing. As a teacher/researcher, insight and understanding of character motivations and actions can be a very difficult part of the content to teach, but it is more difficult to help participants learn to transfer and clearly convey those insights into their writing. This aspect of the writing was not a major theme for the coding but remains an important and key component to writing. For example, when John wrote about the grandmother's actions in sample five, he uses inferences to explain his ideas about the characters based on his new knowledge:

I believe when Grandma gave the boy the ice cream she thought it would please him because there wasn't much around in China probably back then, and she thought it was

better suited for the boy of the house to enjoy because men were more important in China.

John clearly tries to reason with the grandmother's actions based on his knowledge of the articles he read about China. He was able to express his insights about the character in a clear way. Through his intuitive ability to make those connections, through writing, John is able to communicate that he made a connection between the informational reading and the fictional story. These connections are important to the learning process for informational writing. John also makes personal kinds of insights while ending his writing about Thanksgiving in sample six:

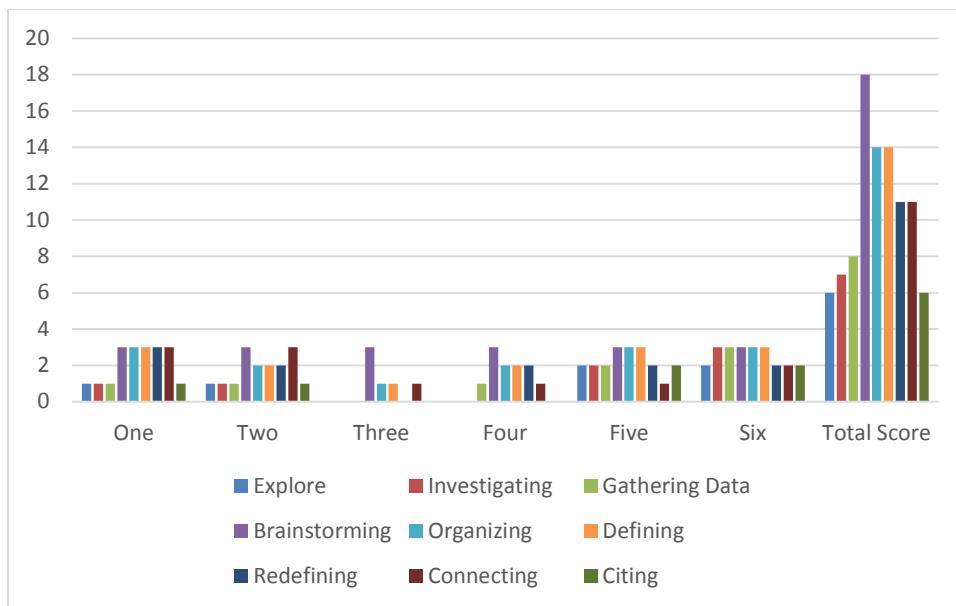
We are still equally happy to celebrate this holiday with the few traditions that have been passed down, but the most important one is that we give thanks for the family and friends we have and the great year we've shared together.

John shows his ability to successfully gain insight, not only about the article he read, but also about himself. In the above statement, he understands the major differences in the old and new traditions but also expresses the one major, important similarity.

Overall, John is a considerably conscientious student, which kept his writing very consistent. He also not only improved his weaknesses in informational writing but gained great strength in making connections. Connecting the information was an area of strength for John throughout the microblogging process, but he really reached an advanced level of making connections when he was able to insightfully writing about the characters and his personal connections to the information.

### **Clint**

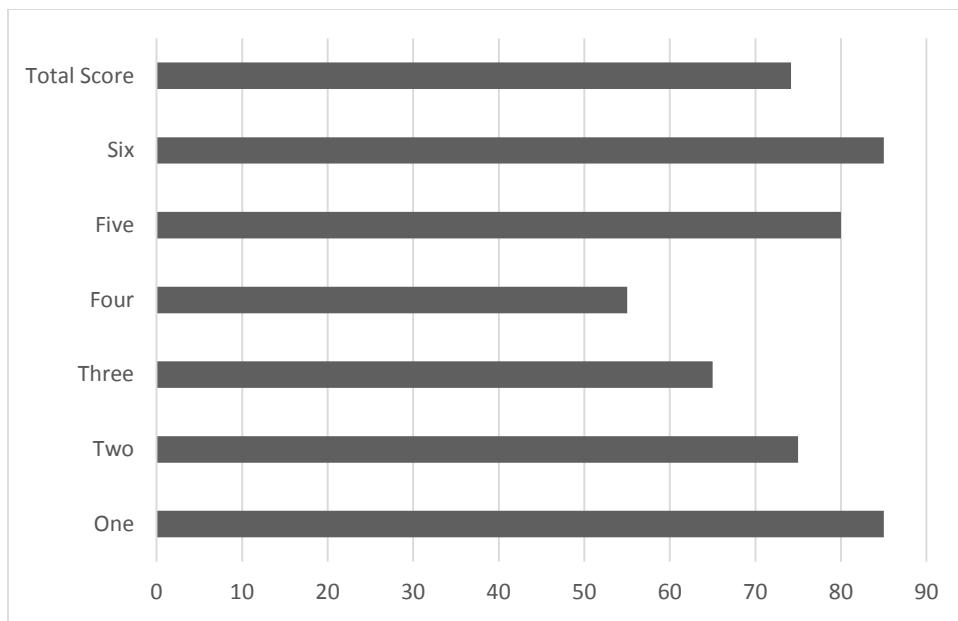
Figure 33 below shows Clint's progress with microblog and informational writing. Based on the coding the coding chart below, his greatest strengths and weaknesses were determined.



*Figure 33.* Clint's degrees of success.

Clint's coding scores were quite inconsistent until he reaches sample four and begins to show consistent progress. As can be seen from the graphs, Clint did not gain full proficiency in all areas at any time, but he did consistently make progress in some areas of the coding. Looking at the "Total Score" bars, it can be determined that Clint proved to be strongest in the areas of brainstorming, organizing, and defining. His weakest areas occurred in exploring, investigating, and citing. His weakest areas may all be correlated with the area of research and informational writing. Though he shows these weaknesses, looking at the progression of the six exercises, Clint did make progress in those areas.

In order to properly triangulate the coding, the progression of Clint's grades for each of the microblog assignments is shown in Figure 34.



*Figure 34.* Clint's grades.

By comparing the coding scores with the grades, one can see the grades did remain consistent with the coding process except for a couple of areas. By looking at the coding for weeks three and four, the grade for week four should be somewhat higher than the grade for week three, but this is not the case. In week four on the coding chart, Clint shows improvement in areas that were not evident in his writing from week three. Before diving into his strengths and weaknesses, the researcher will compare these two writing blogs to determine why the teacher/researcher may have scored the fourth assignment lower than the third. Perhaps, one reason for doing this was to motivate Clint to push himself into further improvement by grading the work a little more strictly, but a closer look at the writing samples (Figures 35 and 36) may reveal the purpose for this inconsistency.

While reading "There Will Come Soft Rains," I observed numerous examples of personification. One example of personification is when the house tried to save itself. An example of personification using technology is siri. Siri is a robotic voice that is given human characteristics. Another personification in the selection is when the house shuddered.

Correct Answer

**Comments**

-15 Use of Internet has been evident but the information provided remains too vague to discern general facts from research. -5 Information is organized with well-constructed paragraphs. The investigation information connected but not as clearly -15 Paragraphing structure was not clear and sentences were not typically related within the paragraphs. 65

*Figure 35. Clint's sample three.*

In The story " Fog Horn", the monster is lonely. The narrator is lonely as well. The narrator is lonely because he lives in a light house by himself. He never gets to go somewhere with someone and have a good life. The monster is lonely because he had no one to be around. He also had no one to play with like him. The mythical creature i'm best related to is probably a dragon. I can be mean if someone is mean to me, but i can show a good side as well.

Correct Answer

**Comments**

20 No additional research appears in writing -10 Information is organized, but paragraphs are not well-constructed. -15 Paragraphing structure was not clear and sentences were not typically related within the paragraphs.

*Figure 36. Clint's sample four.*

When comparing the numeric scores, Clint scored a 65 for sample three and a 55 for sample four. Based on the coding chart, there are fewer coding skills met in sample three, which would indicate that Clint should have a lesser score. But, when studying the scoring process, it becomes clear why the grade was scored lower for sample four. The discrepancy occurred in the area of gathering data. In both entries, Clint does not appear to have done much outside research, if any. For sample three, the teacher gave Clint partial credit for citing an outside component. The sample below shows that component:

While reading "There Will Come Soft Rains," I observed numerous examples of personification. One example of personification is when the house tried to save itself. An example of personification using technology is Siri; Siri is a robotic voice that is given

human characteristics. Another personification in the selection is when the house shuddered.

As can be seen from the sample, Clint does reference “Siri” as an outside research comparison but is not given full credit because as part of modern, popular technology for the iPhone, Clint did not need to conduct any additional or outside research to provide this example. The teacher gave Clint some credit for this, but when the researcher coded she did not give Clint any coding credit for gathering data because this was viewed as common knowledge. There was no need to gather data. There is also little to no data gathered from the short story selection. The statements made in reference to the short story are vague.

In sample four, Clint continues to display his inability to communicate the act of outside research. He briefly references a “dragon” as a “mythical creature,” which could indicate that some data were gathered from an outside source but nothing can be fully confirmed because the information remains too vague:

In The story “Fog Horn”, the monster is lonely. The narrator is lonely as well. The narrator is lonely because he lives in a light house by himself. He never gets to go somewhere with someone and have a good life. The monster is lonely because he had no one to be around. He also had no one to play with like him. The mythical creature i”m best related to is probably a dragon. I can be mean if someone is mean to me, but i can show a good side as well.

The teacher gave no credit for outside research or gathering data in this sample because there appears to be no outside research, which explains the lower grade for this selection. The researcher gave credit in coding for gathering data due to the greater amount of details and explanation included from the short story and the defining of the dragon as a “mythical creature.”

The researcher only gave minimal credit for gathering data in this selection. Additionally, the researcher gave coding credit for redefining in selection four because Clint displayed a better ability to redefine the terms by explaining the comparison of the dragon to himself.

Though there was some discrepancy in the grading process and the coding process, Clint was able to make progress from sample four to samples five and six. Perhaps, the lower grade helped to push Clint to add the necessary elements to his responses to score a higher grade.

Figure 37 shows sample five. From a glance, one can clearly see that Clint has made improvements in the areas of citing, exploring, and gathering data because he has included a website for his citation and there are quotation marks. Also, from looking at the sample, the researcher can clearly discriminate that this entry appears to have more explanation and more depth in explanation.

The story Ribbons is a very interesting story. Some of the things in the story were hard to understand like why the foot binding was reasonable back then. I did a little research on it and i found this: "Foot-binding is said to have been inspired by a tenth-century court dancer named Yao Niang who bound her feet into the shape of a new moon." I found this on <http://www.smithsonianmag.com/> I have found this to be very interesting. Then I did a little more research and found that they wanted to be beautiful. By doing this, they believed they were going to become beautiful. I now know what the tradition was for and why they did it.

*Figure 37. Clint's sample five.*

In the sample, Clint starts by explaining foot binding and even states that he did some research, which was not present in his previous samples:

The story Ribbons is a very interesting story. Some of the things in the story were hard to understand like why the foot binding was reasonable back then. I did a little research on it and I found this: "Foot-binding is said to have been inspired by a tenth-century court dancer named Yao Niang who bound her feet into the shape of a new moon." I found this on <http://www.smithsonianmag.com/> I have found this to be very interesting. Then I did a

little more research and found that they wanted to be beautiful. By doing this, they believed they were going to become beautiful. I now know what the tradition was for and why they did it.

Clint's major strengths for this entry were organizing and defining. He was able to organize his paragraph in a way that readers are able to understand that he is reporting and defining about foot binding and explaining its history. He showed minimal ability to explore, investigate, gather data and redefine. Although his progress was small, Clint did make progress in these areas by performing the tasks of researching on the Internet and including citations and direct quotations from his research. His ability to redefine was minimal because he failed to properly explain his redefinition, but again, this is also an improvement because in past entries, he displayed no redefinition. Clint's weakest area for this entry was connecting. He seems to be unsure of how to explain how the information relates to the short story because his explanation of the facts is somewhat vague because he describes them as "interesting." To make a proper connection, he would need to display an ability to explain with detail.

From sample five to sample six, Clint does not gain proficiency in every coding area, but he does continue to make progress in all areas. His specific areas of growth were with investigating, gathering data, and connecting. From Figure 38, it is clear that citing has been done and multiple direct quotations have been provided. Just at glance, one can clearly see that Clint has made strides in developing his writing because there appears to be good organization with the use of transitions and more explanation of ideas.

There are many similarities and differences to Thanksgiving now and what Thanksgiving was like in 1612. These are some similarities. First, the main similarity would be that the holidays were both celebrations and they were times of feast. Another similarity would be that they both served cranberries. Here are some differences. First, back then, they didn't celebrate it annually, or yearly. Another difference would be that now we eat turkey, and in 1612 they ate venison. One quote from the article would be "It is hard to know exactly what was eaten during the first Thanksgiving, but we do know that having meat on your table in 1621 meant hunting for it yourself." which was found on <http://www.strong4life.com/pages/EatMoveLiv...> Two quotes would be that "In 1612 the Plymouth colonists and the Wampanoag share an Autumn harvest feast which is now known as Thanksgiving." Page 137, and another would be "Historians aren't completely certain about the full bounty but it is safe to say that the pilgrims weren't gobbling up pumpkin pie or playing with their mashed potatoes." Page 138.

*Figure 38. Clint's sample six.*

Clint made numerous strides and improvements in sample six. The excerpt below shows his efforts to include quotations from the outside source and the short story. He even includes page numbers from the short story to solidify his improvements with gathering data and citing information.

There are many similarities and differences to Thanksgiving now and what Thanksgiving was like in 1612. These are some similarities. First, the main similarity would be that the holidays were both celebrations and they were times of feast. Another similarity would be that they both served cranberries. Here are some differences. First, back then, they didn't celebrate it annually, or yearly. Another difference would be that now we eat turkey, and in 1612 they ate venison. One quote from the article would be "It is hard to know exactly what was eaten during the first Thanksgiving, but we do know that having meat on your table in 1621 meant hunting for it yourself." which was found on <http://www.strong4life.com/pages/EatMoveLiv...> Two quotes would be that "In 1612 the Plymouth colonists and the Wampanoag share an Autumn harvest feast which is now known as Thanksgiving." Page 137, and another would be "Historians aren't completely certain about the full bounty but it is safe to say that the pilgrims weren't gobbling up pumpkin pie or playing with their mashed potatoes." Page 138.

He is able to clearly organize and explain ideas and connect the information from the short story directly to the information he gained from his research. Though he included transition words and was able to properly weave the information together, he did not earn full coding credit for connecting because there was no personal information provided from his experience with Thanksgiving. To make a complete connection, he should include some personal thoughts or feelings about the topic.

## Growth Summary

When analyzing and comparing the coding charts and the grade charts, they reveal that Clint started out fairly strong with the informational writing process with microblogging. Comparing sample one (Figure 36) to sample six (Figure 38), they are somewhat similar:

Dwayne Johnson (The Rock) has both internal and external conflicts in his life. He was a football player for Miami dolphins then moved to a Canadian football program. Then he became a professional wrestler for the WWF and WWE while following his grandfathers footsteps in the wrestling organization. John Cena, a WWE wrestler, described him as the most successful wrestler that has ever been in the WWE wrestling association. His external conflict would be that he wrestled and fought, so that would be his physical (external) conflict. His internal conflict was probably when his grandma's husband died. This character is similar to the characters in "Too Soon A Women" because they all have internal and external conflicts. Their internal conflicts are the same because in both stories somebody dies so that probably is very emotional and that would be an internal conflict. The external conflicts are the same because they both argue and fight in both articles. Pa and Mary have an argument with each other and Dwayne fights in WWE. That is how the conflicts from "Too Soon a Women" are relevant to Dwayne Johnson's life.

*Figure 39.* Clint's sample one.

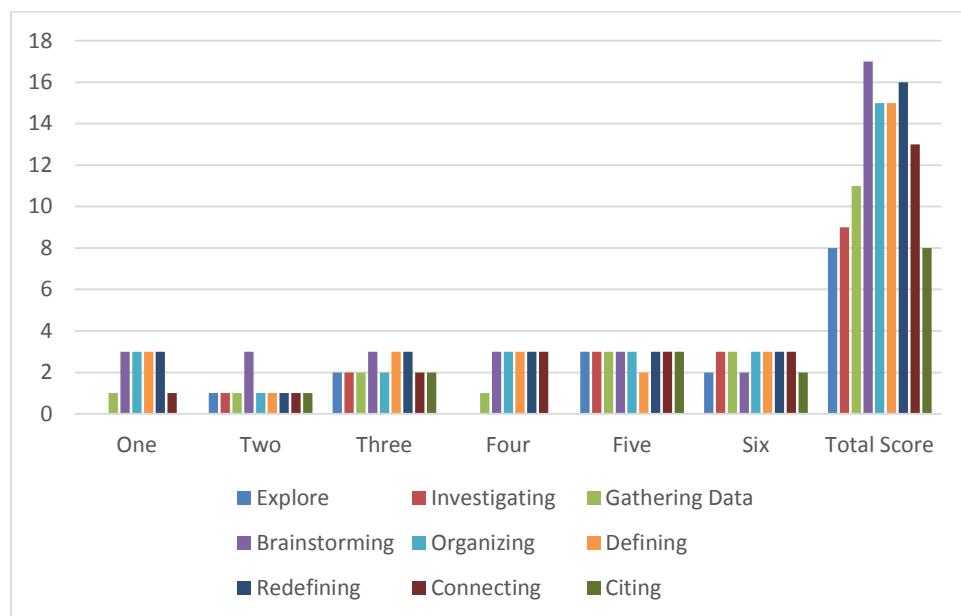
The cause of Clint's decline from sample one to sample four remains a phenomenon that would be difficult to discern without some metacognition from Clint to determine why he had such a decrease in success. Though Clint did experience some inconsistency in the writing, he also showed growth in the areas of exploring, citing, gathering data, redefining and connecting. He does not reach full scores in all areas but the evidence of growth remains clear.

The researcher determined a difference in grades and coding with samples three and four. Perhaps, the reason for this lies in the area of student motivation. Since the teacher knows the

participants well, the grading process may have been a way to motivate Clint to go back to what the teacher knew he was capable of writing. From sample one, the teacher knew he could write with many strengths, but was not displaying that ability in the later samples. The teacher's method seemed to make some impact as Clint did make improvements in the samples after sample four, where his grade score was 55, which would be a failing grade on the grading scale.

### **Brad**

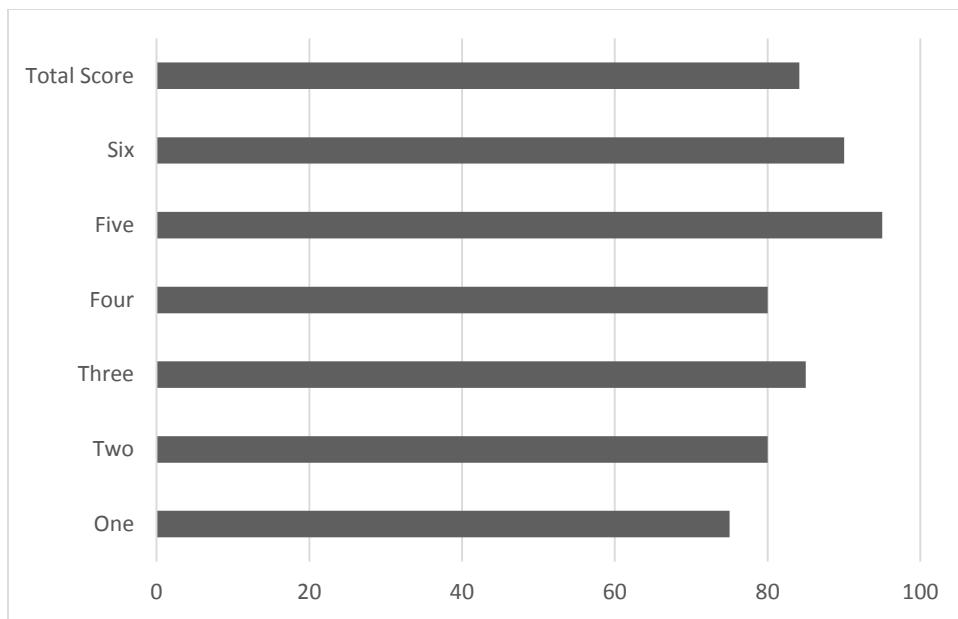
Based on the coding chart (Figure 40), Brad made improvements in numerous areas of the coding but his overall strengths are brainstorming, redefining, organizing, and defining. Brad appears to be somewhat consistent but also shows growth from the first sample to samples five and six. His weakest areas of coding occur with exploring, citing, and investigating. Consequently, all of these areas of coding relate to the informational writing process of gathering and reading information from an outside source. Since the coding areas of weakness are all correlated, the logical recourse lies in that they will all fall into weaker areas of the writing.



*Figure 40. Brad's degrees of coding.*

According to the coding diagram, it seems that Brad appears somewhat inconsistent with his skills. In sample one, he shows proficiency in numerous coding areas, then in sample two shows all categories in his writing but those are minimal. In sample three, he improves a little more in each area, but then in sample four, he leaves some coding areas out of his writing. By sample five he has made strong improvements in every area except defining. Then he drops some areas back down in sample six. Although somewhat inconsistent, Brad does show improvement in his writing. In order to analyze his areas of growth, the researcher will compare samples two, three and five. These areas appear to be the most consistent in each of the coding categories.

Triangulation of the data occurred with the teacher/researcher using a rubric based on the Inside Writing Frame, where the codes derived, to grade the writing microblogs. Therefore, the grades for each microblog sample have been placed into a graph (Figure 41) to show how the grades compare with the coding. Samples two, three, and five show a progression of scores just as the coding shows a progression of writing skills. The coding chart also shows Brad's least use of the coding skills in sample one and his greatest use of the skills in sample five. The grades match this trend by having sample one with the lowest grade and sample five with the highest grade.



*Figure 41.* Brad's grades.

Because sample two shows some evidence in every area of coding, it gives a good starting point for analyzing Brad's progress with informational writing. As can be seen in Figure 42, Brad shows his ability to gather data by providing direct quotations from the Internet. He also provides data from the short story by outlining the inferences he made about the snake. He also shows his strengths from the beginning by presenting his writing in an organized way while also defining the terms well.

In the story "The Green Mamba" I made an inference that the snake was lethal. I found online that "Bites that produce severe envenomation can be rapidly fatal." Another inference I made was that the snake was in a warm and humid place. I found on the internet that "... the snake lives mainly in the coastal regions of Africa...". one more inference I made was that the snake can sense vibrations. I found online that "the snake detects their prey by feeling the vibrations of the prey".

*Figure 42.* Brad's sample two.

Not only do Brad's strengths show early in sample two but so do his weaknesses. He provides quotations to show he gathered data but he does not cite where he retrieved his data. Brad merely states that the information came from the "Internet." Since he does include that his information came from the Internet, he does receive some credit in the coding area of citing. His

other areas of weakness were in the areas of exploring and investigating. With such little citing, it remained difficult to determine how much exploring and investigating of the topic he conducted. He could have visited one site or several to get the information he provided. He did receive credit for conducting some exploration and investigation, but there needed to be more evidence of his process:

In the story “The Green Mamba” I made an inference that the snake was lethal. I found online that “Bites that produce severe envenomation can be rapidly fatal.” Another inference I made was that the snake was in a warm and humid place. I found on the internet that “the snake lives mainly in the coastal regions of Africa. . . .” One more inference I made was that the snake can sense vibrations. I found online that “the snake detects their prey by feeling the vibrations of the prey.”

Though Brad showed areas of weakness, he does have an effective organization to his writing. He began with a topic sentence and proceeded to weave his inferences about the snake with his research from the Internet, which helped to prove his inferences to be true. Through this process, he showed his ability to define and redefine the terms, but he failed to make a proper connection between ideas because he needed more explanation of the snake and facts to make the connection. He also could have included how the new information helped him to understand the short story better.

In sample three (Figure 43), Brad makes improvements in all coding areas, especially in the areas of defining and redefining. At a glance, the researcher can determine that citing has improved because Brad has included page numbers from the short story but he did not receive full credit for citing because he did not include the website where he conducted his outside

research. By analyzing the sample below, it remains clear that Brad did conduct outside research because he gives specific quotes and facts from an outside source.

There are plenty of examples of modern personification. One example is a robot that performs surgery on a human brain. “In 1985 a robot, The PUMA 560, was used to place a needle for a brain biopsy using CT guidance,” read on the internet. This is personification because the robot cannot actually do this on its own it has to be programmed first. An example from the text is robots pooping. I read from the text, “the sharp aroma of animal spoors” (269). This is personification because robots cannot poop. Another example from the text is robotic mice being angry. I read from the text, “whirred angry mice . . .” (268). This is personification because robotic mice cannot be angry. Another example of modern day personification is Siri knowing the answers to all the questions you ask her. This is personification because she does not know the answers by herself she is programmed to say the things she says.

Because Brad provided evidence of gathering data from an outside source and the short story, his scores for exploring and investigating improved in this sample. He does not receive full credit because he did not provide a direct source for his information. Though not reaching full potential in all areas, Brad did improve in the areas of defining and redefining. His organization of the information contributed to his ability to clearly communicate the defining and redefining of personification. He provides examples of personification from the short story and then redefines those examples by providing modern examples of personification. He provides more than one example while defining and redefining. Although his organization was acceptable, he did not earn full points for this coding area because his order of defining and redefining could be more consistent. For example, where he gives the example from the short story of a programmed

response from a robot, he should also provide the modern example of Siri, where he mentions that she operates based on a program. He writes about Siri at the end of his response, where it should be woven in under the first example from the short story. Overall, Brad did make improvements from sample two to sample three.

There are plenty of examples of modern personification. One example is a robot that performs surgery on a human brain."In 1985 a robot, The PUMA 560, was used to place a needle for a brain biopsy using CT guidance," read on the internet. This is personification because the robot cannot actually do this on its own it has to be programmed first. An example from the text is robots pooping. I read from the text,"...the sharp aroma of animal spoors"(269). This is personification because robots cannot poop. Another example from the text is robotic mice being angry. I read from the text, "...whirred angry mice..."(268). This is personification because robotic mice cannot be angry. Another example of modern day personification is siri knowing the answers to all the questions you ask her. This is personification because she does not know the answers by herself she is programmed to say the things she says.

*Figure 43.* Brad's sample three.

In sample five (Figure 44), Brad made improvements in every coding area except defining. He experienced a decline in the area of defining, which overall proved to be one of his greatest strengths. In this microblog entry, Brad failed to define the problem or conflict. As can be seen early in his writing below, he mentions the "ribbons" but fails to define what problem is associated with the ribbons, therefore, defining was given a lower coding score for this entry.

I could understand why the grandmother got so protective when her grandchild had the ribbons. The grandmother had known what the pain feels like basically her whole life. I was searching online and at <http://www.theatlantic.com> it said "Four to six was the ideal age to do this because you could reason with the girls and help them deal with the pain." This proves that the grandmother had known what the pain feels like almost her whole life. This also helps me understand why she was so over-protective when she saw her grandchild with the ribbons. I could also understand why grandmother took her daughter and carried her to another part of the country. Chinese communism was terrible. It forces

you to do things that you do not want to do and you do not have any rights. In my research at <http://www.listverse.com> it states “They are forced to join the new communist government, whether they like it or not.” This proves that the people living in this area were forced to do things even if they did not want to. All of this research helps me understand more about the character traits of the grandmother.

Though Brad had trouble with defining for this entry, he was able to show improvements in every other area. Immediately, glancing at the sample (Figure 44), one can see that he included specific citations of where he retrieved his information. Not only did he provide the sites, he used more than one site to gather his data. He also included direct quotations from his sources. In addition, he effectively organized his information by quoting and then explaining the importance of the information as it is related to his topic. Through his explaining, he showed his abilities to redefine and connect to the information. He redefined the information through writing about the history of the “ribbons” and cultural background of the characters. Connections were made from a personal perspective because he explains how the new information helps him to understand the character in the short story better. For example, he stated, “This also helps me understand why she was so over-protective when she saw her grandchild with the ribbons.” This statement demonstrates the connection he made with his research and the actions of the character in the short story.

I could understand why the grandmother got so protective when her grandchild had the ribbons. The grandmother had known what the pain feels like basically her whole life. I was searching online and at <http://www.theatlantic.com> it said " Four to six was the ideal age to do this because you could reason with the girls and help them deal with the pain." This proves that the grandmother had known what the pain feels like almost her whole life. This also helps me understand why she was so over-protective when she saw her grandchild with the ribbons. I could also understand why grandmother took her daughter and carried her to another part of the country. Chinese communism was terrible. It forces you to do things that you do not want to do and you do not have any rights. In my research at <http://www.listverse.com> it states " They are forced to join the new communist government, whether they like it or not." This proves that the people living in this area were forced to do things even if they did not want to. All of this research helps me understand more about the character traits of the grandmother.

*Figure 44. Brad's sample five.*

### **Growth Summary**

Brad showed strengths and weaknesses with his microblog writing. Brad started by having particular difficulty with specific aspects of informational writing including citing, exploring and investigating. Though he started with these weaknesses, by sample five, he had gained an understanding of the processes of writing using new information through exploring and investigating. By sample five, Brad provided citations for the information he researched on the Internet and showed his ability to combine multiple sources of information into a writing prompt.

From the beginning, Brad started with some strengths in the areas of organizing, defining and redefining. He showed a natural ability for writing with organization and an ability to explain his ideas effectively. Sample two, below, demonstrated a minimal ability to show these areas of strength but by sample five, Brad was reaching maximum heights for explaining his ideas.

In the story “The Green Mamba” I made an inference that the snake was lethal. I found online that “Bites that produce severe envenomation can be rapidly fatal.” Another inference I made was that the snake was in a warm and humid place. I found on the internet that “the snake lives mainly in the coastal regions of Africa. . . .” One more

inference I made was that the snake can sense vibrations. I found online that “the snake detects their prey by feeling the vibrations of the prey.”

Brad was also able to make a personal connection to the information, which added to his ability to define and redefine the information. The excerpt from sample five demonstrates his growth in his strengths and weaknesses by covering all areas of coding effectively:

The grandmother had known what the pain feels like basically her whole life. I was searching online and at <http://www.theatlantic.com> it said “Four to six was the ideal age to do this because you could reason with the girls and help them deal with the pain.” This proves that the grandmother had known what the pain feels like almost her whole life. This also helps me understand why she was so over-protective when she saw her grandchild with the ribbons. . . .

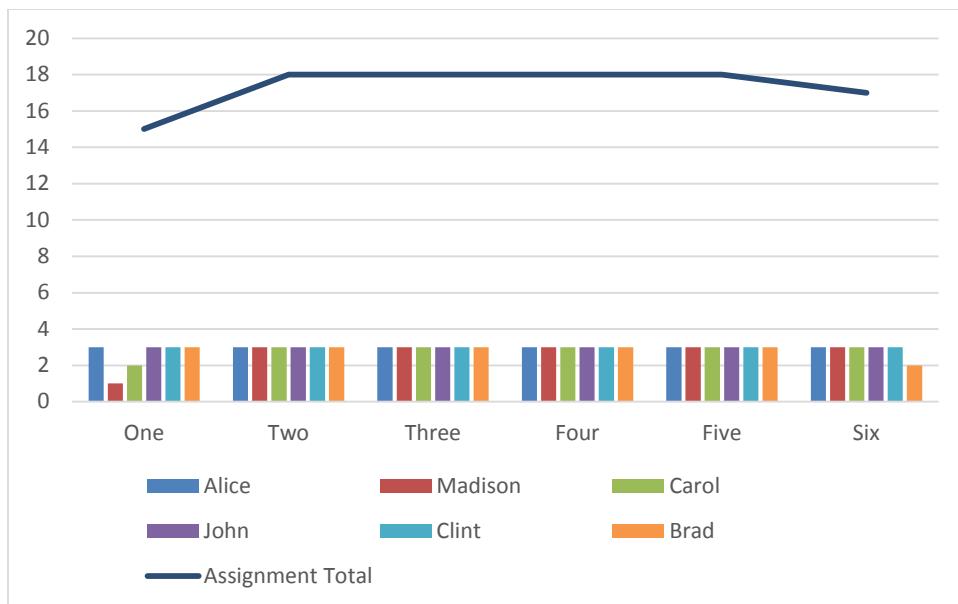
Though Brad was somewhat inconsistent in his growth, he did make strides in all areas of coding. Overall, he maintained a pattern of growth with informational writing in the microblogging process.

### **Participants’ Overall Strengths and Weaknesses**

In order to identify the participants’ overall strengths and weaknesses as a group, the data for each coding skill were placed into a graph to show the skill level for each participant for each microblogging assignment. The graph also demonstrates the overall growth pattern for that skill for the duration of the study.

The most consistent strengths for all participants occurred in the areas of brainstorming and organizing. For each of the microblogging entries, the teacher/researcher provided a brainstorming chart for the participants to complete before they began their writing process for the Inside Writing framework. For the framework, brainstorming is the first step because

Stephens and Ballast (2011) believe that “...prior knowledge provides a mental framework that we use to make sense of new information” (p. 28). The participants were consistently successful with completing the brainstorming charts. However, the participants had some difficulty transferring the brainstorming information into their writing. Figure 45 shows the results of all participants for all six assignments:

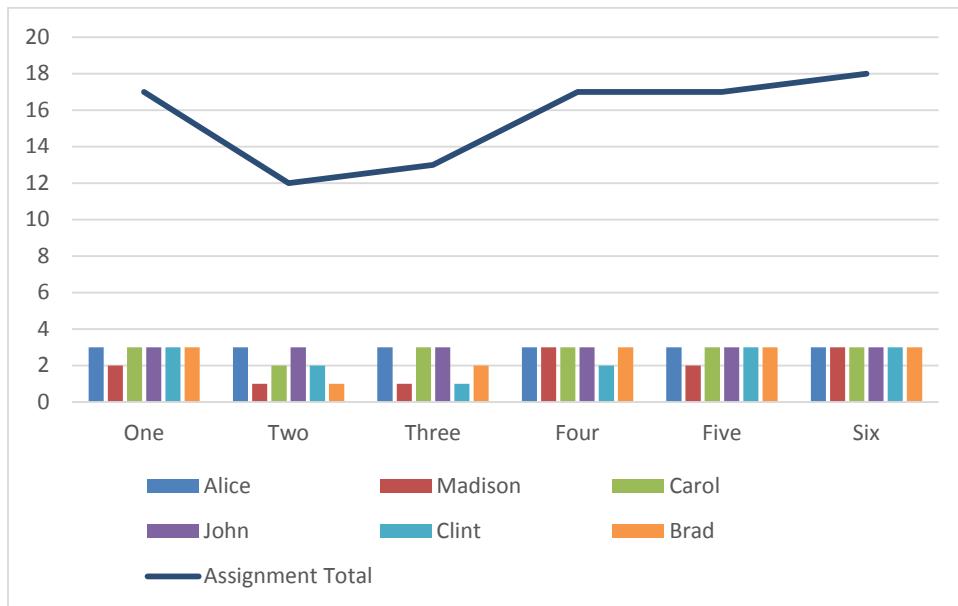


*Figure 45. Brainstorming trends for all participants.*

As can be seen from the graph, the participants consistently completed the brainstorming activity and even showed some improvement. One student experienced some difficulty in the last sample, but otherwise, all participants showed this to be an overall strength.

The other most consistent strength the participants displayed occurred in the area of organizing the information. Stephens and Ballast assert that organization remains an important part of the writing process, but it should not be part of a strict code or order like “process writing” where there are specific orders to how the information should be presented. The researchers share that the teacher’s role is “Rather than being a facilitator who organizes information and guides learning . . . more likely the captain of a crew on a learning journey” (p.

36). Participants have the freedom to organize the information using their own design but the microblog must reveal some sort of organization process. The participants were consistent with designing their own form of organization. Figure 46 shows their progress throughout the study.



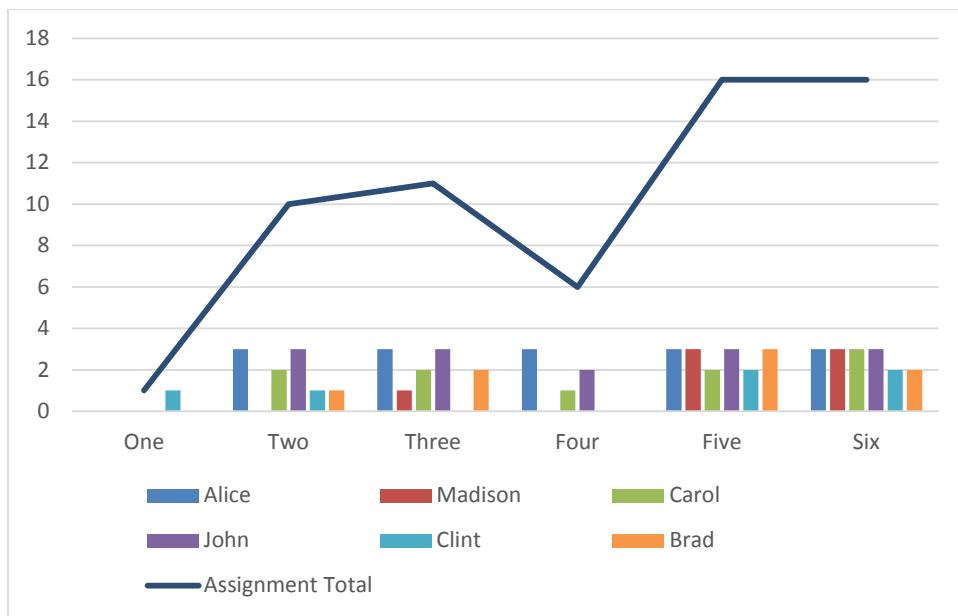
*Figure 46. Organizing trends for all participants.*

Based on the graph, Madison and Brad had the most trouble with organizing, but by sample six they were proficient in this area. The overall trend with organization shows that by sample four, most of the participants had developed a way to organize their information in an effective way so that the reader could understand their purposes for writing.

Areas that were of the greatest weaknesses to the participants were all interconnected because they all involved finding new information and writing about that information. Those areas were investigating, exploring, gathering data, and citing. Citing may have proven to be the greatest weakness overall, but this area also proved to be the area of most growth.

Stephens and Ballast (2011) do not refer to citing as a major part of inside writing, therefore, this was a code that developed *in vivo*, through the coding process. Although not a major part of inside writing, the authors do stress the importance of teaching students to cite their

resources: “copyright law and fair use guidelines for the classroom . . . teachers understand the importance of properly citing sources and giving credit to the originators/creators of text . . .” (p. 44). Citing remains an important part of the writing process when using outside sources, therefore, it is presented as a part of the assignment. Figure 47 represents the pattern of struggle the participants had with the citing process, but in the end they showed great improvement.

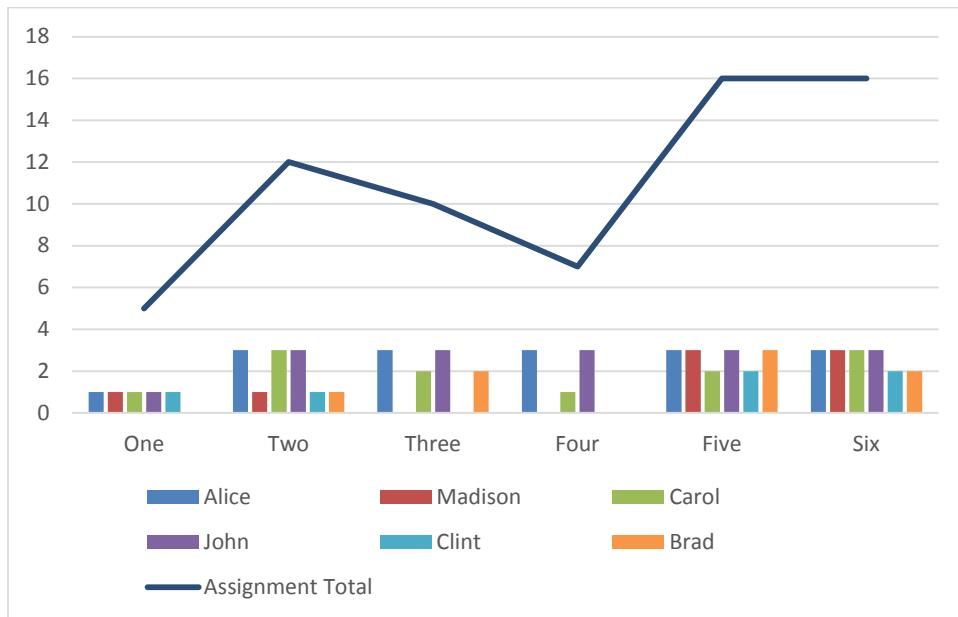


*Figure 47.* Citing trends for all participants.

Clint and Brad appear to have had the most trouble with citing but they did improve from sample one to sample six. In sample one, Clint was the only participant to provide any evidence from an outside source. All participants showed citations of some kind in samples five and six. This area of citing proved to be the most one of the weakest areas for the participants, but it also had the greatest growth.

Another area that was directly related to citing lay in exploring information. Exploring was an area that was strong at first, became weak in the middle assignments and then gained momentum in the end. Stephens and Ballast hold that exploring information associated with the topics for learning remains key to participants learning the information. They write that

“exploring the Web for information triggers prior knowledge based on the experience of connecting to the world in meaningful ways” (p. 41). With triggering that prior knowledge, participants are able to remember the information and make important connections. Figure 48 shows some difficulty with exploring but does prove to have some improvement.

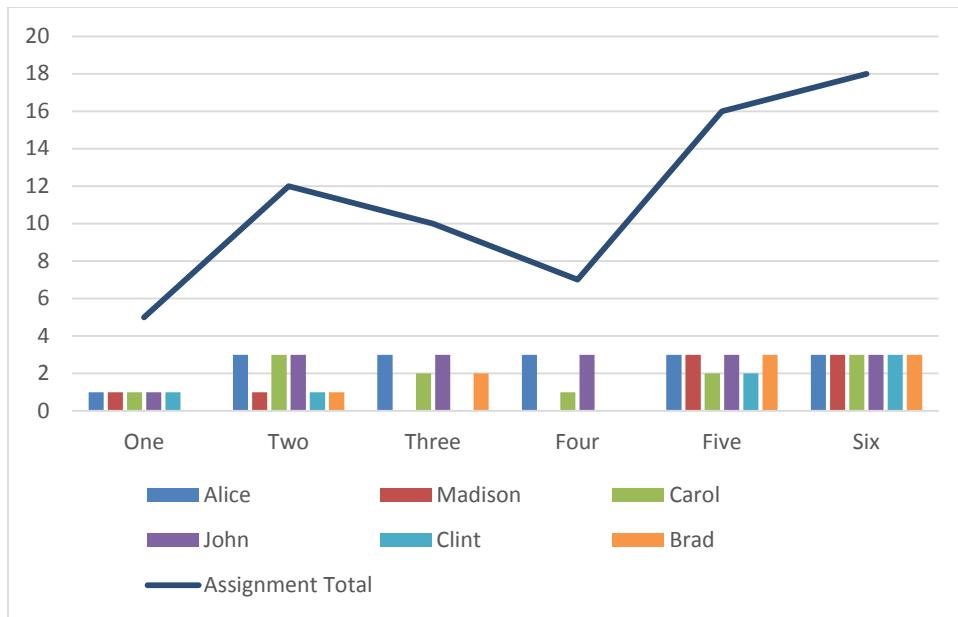


*Figure 48. Exploring trends for all participants.*

Exploring could be made evident in numerous ways in the participants’ writing through making reference to something they had seen or directly citing something. For example, in sample four, many of the participants wrote that he or she took a quiz online to determine what monster he or she could compare themselves to in their writing. This was considered a form of exploring. As can be seen in Figure 48, the participants showed overall improvement in the area of exploring. Since exploring is correlated to citing, it may have been difficult for the researcher to discern if the information provided was prior knowledge or true exploration without the proper citation.

Closely related to exploring is investigating. First, the participants must have shown evidence of some exploration and then the participants should have moved to investigating by

writing about their exploration and explaining how the new information directly related to the topic. Stephens and Ballast describe this process as moving beyond “random clicking” and into a world of information to where “the work takes on a whole new meaning” (p. 43). Investigating is not simply having an idea and the briefly describing that idea. It involves obtaining specific facts that directly relate to the curriculum. Figure 49 shows the participants’ progress for investigating.

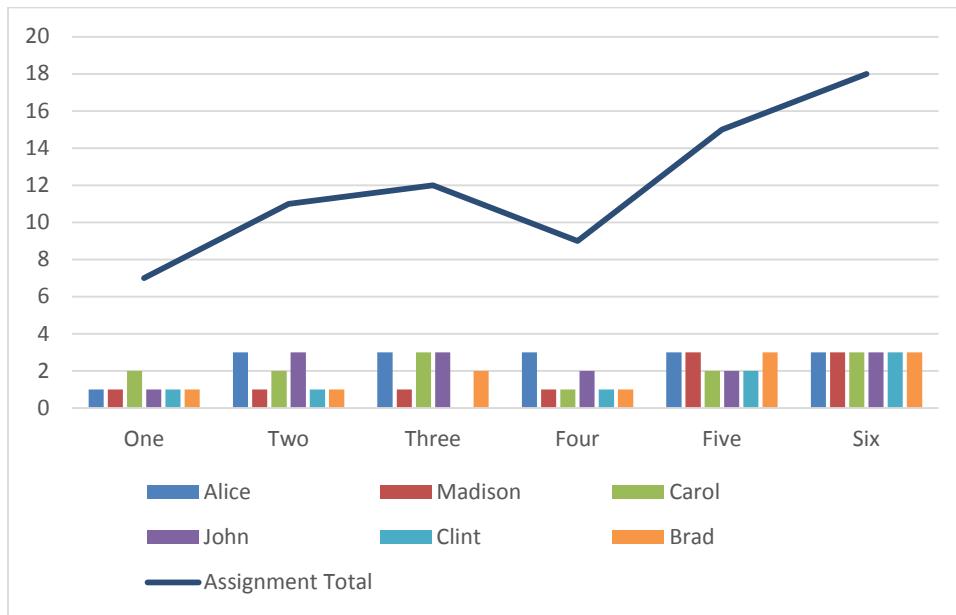


*Figure 49.* Investigating trends for all participants.

The overall total line for investigating looks very similar to the line for exploring, which remains important because they are closely related. The participants had minimal investigation at first, but by samples five and six, they became strong in this area. Clint appears to be the one participant who had the most difficulty in this area, but as can be seen, by samples five and six, he was able to show his investigation in his writing.

Closely correlated to both exploring and investigating is gathering data. Participants may explore and investigate but if they cannot show to have gathered data, there would be no way for the teacher/researcher to determine their success in these areas. Additionally, for these microblogging assignments, gathering data falls into two categories. One category lies in

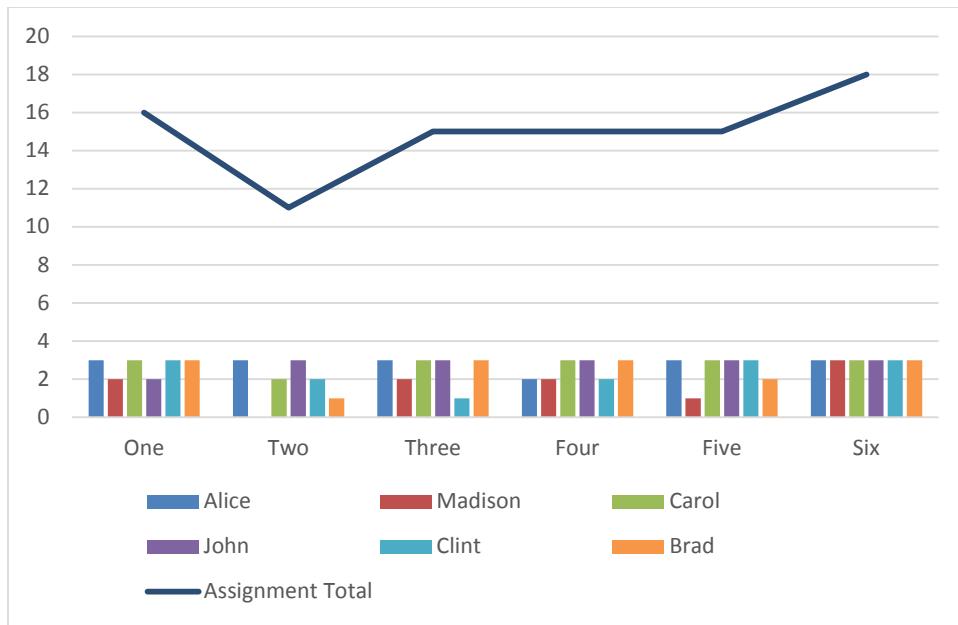
gathering data from the short story the participants read and the other category originates from the participants' exploration and investigation of topics. Therefore, participants may have earned some credit in the area of gathering data even if they did not have any evidence of outside research of topics. Figure 50 shows the trend throughout the study for gathering data.



*Figure 50.* Gathering data trends for all participants.

Stephens and Ballast state, "It is an interesting phenomenon that the digital natives, in addition to their streamlined, personalized ways of gathering information, have a natural tendency to deposit the information they have gathered into some form of personal text" (p. 43). For gathering data, the participants received some credit for this area as long as they showed some evidence of having investigated or explored either the short story or informational texts from the Internet, even if not properly cited. It appears, from the chart, that all participants gathered some data, related to the topic, for every microblog entry except for assignment three. Clint appears to have gathered no data for this submission. Overall, the participants showed progress in this area of their writing. By sample six, all participants proved proficient in showing their ability to gather data.

Other closely correlated codes were defining and redefining. Both codes showed improvement overall. Defining involves identifying the basic concepts that were associated with the short story. For example, personification was an element related to one short story. The participants were to identify examples of personification within the short story. This aspect of the assignment was defining. The results of defining are shown in Figure 51.



*Figure 51.* Defining trends for all participants.

After the initial assignments, the participants proved to consistently possess the ability to define the terms from the short story. It appears that Madison displayed no use of defining in sample two. In the excerpt below, it can be determined that Madison did not define but simply identified facts from her exploration:

Green Mambas live in all of East Africa. They usually stay in tropical or wooded areas. The green mambas are not threatened. The green mambas usually feed on birds, rodents, frogs, and lizards. Even though the green mambas usually feed on those four things they are very dangerous. Green mambas move at speeds up to 7 mph. The females lay up to 10-15 eggs. Green mambas are the smallest of the mambas. Their length is 3.7 meters.

Madison was able to correct this mistake for future microblogging assignments because she shows evidence of gathering data for every other microblogging assignment. All of the participants proved to be successful in this area by sample six.

After the participants have defined the content area, such as personification, the participants were asked to use the Internet to identify a real-world example of personification. The real-life example would be redefining. Stephens and Ballast state that in order to redefine the information, students were required to “sift through enormous reserves of good and bad information to find what is most meaningful and true to them” (p. 44). The participants use the knowledge they know from brainstorming to redefine the information. The skills of defining and redefining are quite concerted because without a proper understanding of the defining, the participant may have had difficulty with the redefining process. Figure 52 shows the participants’ progress with redefining:

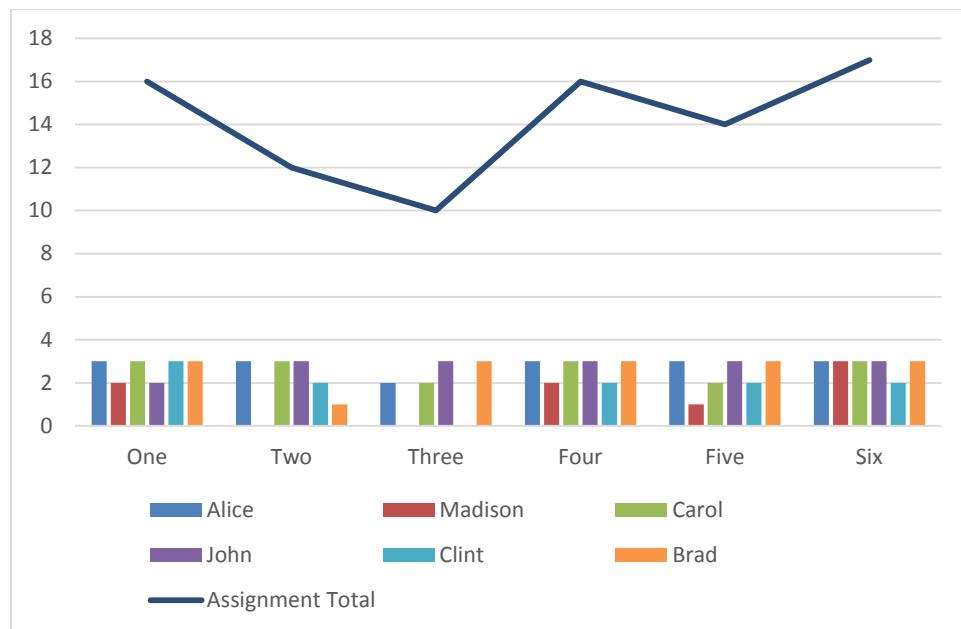
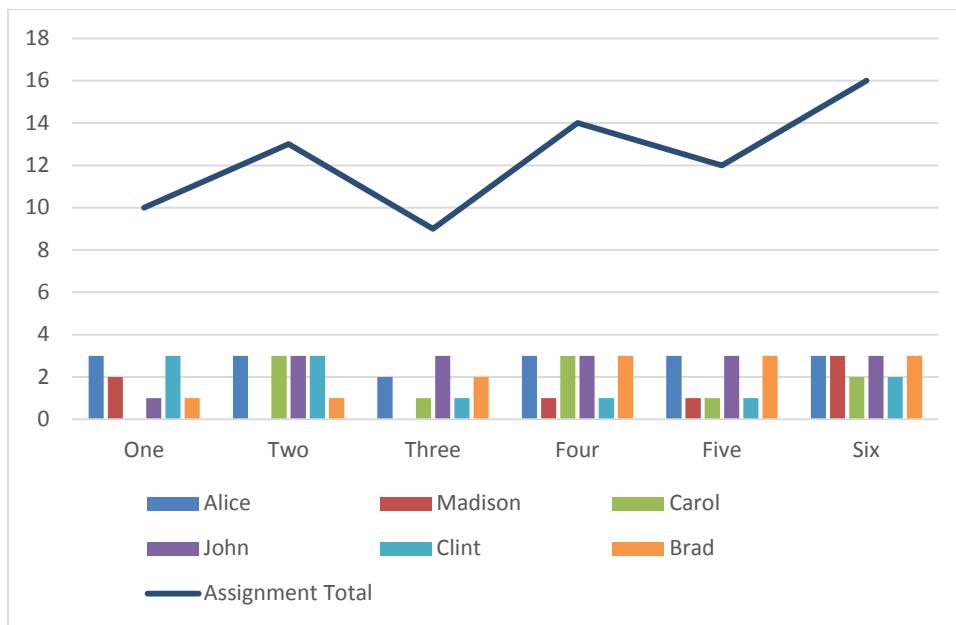


Figure 52. Redefining trends for all participants.

Redefining appears to have been a more difficult task than defining. Perhaps, many participants were like Madison with sample two. Madison was able to report the information she found but was unsuccessful in defining and redefining how the information correlates with the short story. There needed to be some connection of the facts to the content from the story. Though the participants experienced some struggle in this area, they did show improvement in this area for samples four, five, and six. Clint was the only participant who did not show overall proficiency in this area, but he did make overall progress.

The final area of coding lies in connecting. Connecting was not an original code as part of inside writing but was a trend in the samples, therefore, becoming an *in vivo* code. Though connecting does not appear as Stephens and Ballast's (2011) major part of inside writing, it does play a major part in the writing process. The inside writing process provides participants a way of "connecting to the world in meaningful ways. One of these meaningful ways may be viewing and capturing photos and reading text from websites that can help students understand . . ." (p. 41). Based on Stephens and Ballast's research, the students use their personal research to connect to the new information. Then the information becomes transformed; it's not just a word or concept written on the board. The new information brings the opportunity for the information to become more than just data but something of personal importance to the participants. The overall results for connecting appear in Figure 53.



*Figure 53.* Connecting trends for all participants.

The graph shows that some participants had trouble with the first three microblogging samples but with samples four, five, and six, all participants were able to form some connections to the content.

Connecting of information may have occurred in two forms. The participants may have demonstrated the ability to connect the information from the short story to the information texts from the Internet. They also may have displayed and expressed an ability to make a personal connection with the concepts. There is, however, the possibility that the students made connections but were not versed in communicating those connections. Alice provides an example of connecting information in her microblog for sample two:

While reading “Green Mamba” by Ronald Dalph in class, I could make three accurate inferences about the green mamba. The first inference I made was that this snake, the green mamba, lived in tropical climates; this inference was proved by WhoZoo.com, which stated, “Found usually in tropical or wooded areas.” The second inference I gathered about this snake from the passage is that it is extremely dangerous and

poisonous. Reptiles Magazine proves this when stating “This snake is dangerously venomous” in its article about the green mamba. The third and final inference I made about the green mamba based on the short story was that this snake can sense where prey is based on vibrations it feels through its surroundings. This was proved by tlcafrica.com which states, “vibrations can also be picked up from the ground through the mamba’s body. Those are three inferences I made about the green mamba based on “Green Mamba” by Ronald Dalph.

Alice weaves together her inferences about the snake to the information she found through her exploration of the Internet. In the excerpt below, sample four, Alice displays an example of the second type of connection by explaining how the new information helped her to better understand the character actions in the short story:

In the story, Paw Paw is afraid of Stacy’s dancing ribbons because when she was young her feet were bound to make them smaller, a process that is very painful; however the story didn’t offer much detail on why this was so awful. So i researched it, and found at Smithsonian.com that in the process of foot binding “all the toes, except the big toes, were broken and bound flat against the sole, making a triangle shape. Next, her arch was strained as the foot was bent double.” This finding shows how painful foot binding is, making it even more understandable as to why Paw Paw was so against doing this to her granddaughter. She didn’t want her granddaughter to go through the pain footbinding causes. Another thing my researched helped me understand is why Paw Paw was so intent on leaving China’s communism. According to Stanford.edu “many Chinese starved to death.” and “millions of people were killed or persecuted.” because of communism in China. This shows how dire Paw Paw’s need to leave China with her daughter was,

because if they didn't leave they could've been killed. The other thing research explained, was why Paw Paw treated Stacy has less important than her little brother. Skwirk.com states "Women in ancient China were considered inferior to men." This meant that men were seen as better and more important than women, and therefore women should give everything up for the comfort of a man.

Alice displays an ability to explain how the information helped her to understand the character's better. Through this, she made a personal connection to the short story and the new information.

Overall, the participants showed successful improvement in every area of the coding for informational writing. This reveals that the inside writing process made a positive impact on the participants' writing. In addition, reflecting lays deeply rooted in the evaluation level and through microblogging, students were essentially reflecting on the content (Lightle, 2011). On Revised Bloom's Taxonomy, these participants would reach the second highest level of cognitive thinking. Figure 54 reveals each code in a side-by-side view to determine where participants appeared to be the strongest overall.

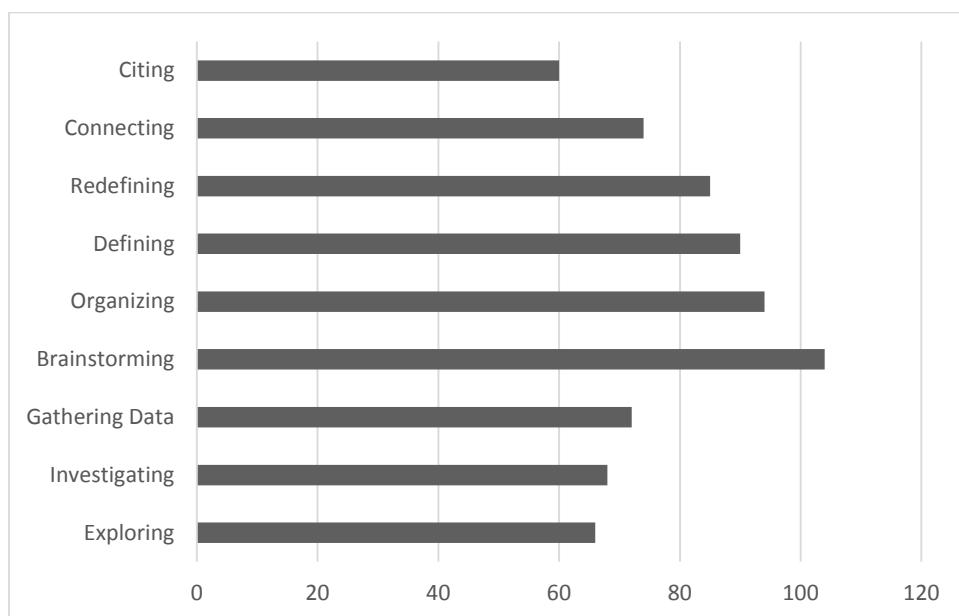


Figure 54. Total score comparisons for informational writing coding.

Based on the bar graph, as stated before, the participants were strongest in the areas of brainstorming and organizing. Although the participants appeared to be weakest in citing, this was the area in which the participants revealed the most growth.

### **Focus Group**

In order to triangulate the coding and grades, a focus group was conducted to discern if the participants were able to express any of the same findings from the data. The researcher obtained an outside faculty member to conduct one focus group session with the 16 participants. The session was recorded and the participants were made aware of the recording. The researcher allowed the participants to opt out of participation in the focus group. The researcher assured the participants that no harm or bias would be developed based on their honesty during the focus group. All data were coded and pseudonyms were used for the participants' names.

The participants showed their knowledge of the process when they were able to verbalize their awareness of the process they experienced while microblogging. The coding showed that brainstorming and organizing were among the strengths throughout the microblogging process. The participants confirmed the coding that there was a certain process they were following:

**Boy:** For some assignments, we use a chart to start, and we write down from our chart what we did. Then from that we summarize it into a paragraph. From that, we use the Internet to find more information. Like from "Thanksgiving" we did a whole chart for that and then we summarize that. Then we went online and went on a website and find differences and summarize that and cite it. Then our process is to take what we have, cite it, go on the Internet, cite it.

Through this response, the boy recognizes that the brainstorming process was directly related to the assignment. The participant also voices that they are to "go on the Internet," which would fall

into the category of exploring in the coding and also states that they should “cite” which is another one of the coding categories. The participants confirm that they actually did complete these steps in the microblogging process. In other responses, the participants appreciate the microblogging processes because it assisted them with being organized:

**Boy:** It stimulates organization. *Edmodo* is on the Internet, helps me to cite things in my writing. Teachers assign stuff with a rubric and a way to write it. It allows you to have an example for every essay. For every essay I need to use this and remember how to write it this way.

**Boy:** It improves organization but the teacher can also print rubrics out on paper.

**Girl:** Also, on *Edmodo*. I like that I can go back and check my essay to retype it and read it again and again to make sure it is right. On paper essays, that is harder to do.

Which is helpful.

All three of these responses indicate that the participants appreciated the organization processes offered through the microblogging and inside writing process. The girl participant expresses her use of metacognition by stating, “I like that I can go back and check my essay to retype it and read it again and again to make sure it is right.” Metacognition falls into the evaluation level of the Revised Bloom’s Taxonomy, which shows a higher level of thinking was applied for this participant. The response shows the participant’s enjoyment of using a microblogging tool for writing.

The areas of research involving gathering data, exploring, and investigating were the participants’ most difficult areas to be successful, but the participants did confess to enjoying the effect the new information had when they were writing. In the following statements, the participants explain the ways that using the informational texts on the Internet affected their

writing. The participants' answers were consistent with the coding results that exploring, investigating, defining, and redefining were evident in their writing. The students analyzed the process and recognized that adding these components to their writing was enhanced. One student even expressed that he would like to use the process in another class. One girl declared that adding the informational component "transforms" writing.

**Boy:** Umm... I believe you have more sources while you are on *Edmodo*. You have the whole World Wide Web. When you are in the classroom. You are in a setting where you are relying on books. Sometimes books don't have the information you need. When you are in the computer lab you have those extra sources like Britannica or stuff like that. When I'm online, I feel more focused. I know I have everything I need to fully answer the questions. When I don't have that, I feel less prepared.

**Girl:** When you are on *Edmodo*, it's easier to pull up another tab to find the answer, especially with stating facts. But, if you are writing on paper, you would be less apt to grab a tablet or computer to look it up because you would just be too lazy to. Well, I just hope it's right.

**Boy:** For me, it's easier if I run out of ideas. I can look up more sources to help me find information to make my writing better.

The participants expressed that the use of microblogs would be helpful in other subjects such as history class. For the students to think about the writing process and mentally apply the processes in another subject not only shows the validity of the tool but also shows the students' ability to create something new from microblogging, which would be among the highest levels of the Revised Bloom's Taxonomy.

**Boy:** *Edmodo* would be very useful in history, not just English. *Edmodo* would be so much better for the paragraphs in there because we include research in our writing but have no Internet source, only the book. I think the process we use with our English assignments would make it less stressful. We do everything on paper in history.

**Boy:** *Edmodo* should be used in all the classrooms. It's very helpful in everything we do. I appreciate *Edmodo* for helping me to organize my writing.

**Boy:** Yes, I could look up words, like I said before, so you begin to use them more often. Then they become part of your vocabulary and you don't have to go back and look at those sites anymore.

**Girl:** Yes, because umm, you could use information from a link a teacher gives you or information from an Internet article. There's only so much you can use from a textbook. There's so much more you can learn.

**Girl:** There's many different views that you can see.

**Girl:** It transforms your writing.

**Boy:** Gives you different views and opinions.

**Boy:** Yes, it does by allowing you to learn more about vocabulary and sentences of how the word is used.

**Boy:** The assignments on *Edmodo*, test on writing and how we can use the Internet in writing. It tests what we learn in class and then use the Internet as another source to add to our learning. It really makes my writing more organized and interesting. It's not just restating what the teacher has told us. It's more than that.

Since the focus group took place after all samples had been collected, clearly the participants recognized that they experienced growth in their writing and use of information

through using the Internet. The participants expressed that the use of the Internet, which would include coding of exploring, investigating, defining and redefining, for their writing not only helped them to expand their ideas and thinking but also helped them to use new vocabulary. As discovered in previous examples, the students' answers show their ability to apply metacognition, which climbs high into the evaluation level of the Revised Bloom's Taxonomy. In these responses, there is also some evidence of personal connection to the writing. The last boy stated: "It's not just restating what the teacher has told us. It's more than that." This student clearly made a connection to the information by realizing that it has made his learning more personal.

As for connecting the content, the participants expressed that they were able to make connections. Making connections involves having a personal connection with the topic or even finding a similar scenario in modern day events. This skill shows that the students were able to combine what they read in class to a current event or new information from an article. This skill involves analysis, which is high on the taxonomy of learning. The coding showed that connecting was difficult for the participants at first, but in the end they proved to be able to show some connection in their writing. They were asked if they made any personal connections to the content through using the microblog with *Edmodo*.

**Boy:** So, when I'm online, and when I see things, like videos, like history.com. It's colorful. It helps me feel like the information is more alive. For the process, yes, definitely.

**Girl:** This process does. When we are reading a story about a sea monster. Part of the assignment was to find a monster that would represent you. The teacher finds ways to make it personal to us. And so, we wrote about which monster we were like. Another

example, in “Ribbons” we researched about foot binding in China. You research and it forces a personal connection because you think “Look what these people had to go through?” “Did my ancestors do this?”

**Girl:** In the story “Thanksgiving” we did a paragraph on the differences and similarities. We wrote about differences in history and differences in our personal traditions for Thanksgiving. That gave my writing some personality. I could relate to the information.

**Boy:** I once wrote about personal experiences with family members. That really helped me to remember what I read.

The participants explained how the content of the Internet helped them to make their writing more personal and how the Internet search helped them to personally relate to the characters. One student goes so far as to say “The really helped me to remember what I read.” The evidence of personal connection was revealed through their answers. Another important factor to consider lies in that these participants have not interacted with some of these stories and texts for weeks before the focus group meeting. The reality that they are able to recall the facts and titles of the short stories reveals that they had a personal connection to the information. Their memory of the topics proves that they made a true connection to the text and shows the coding to be accurate.

Not only do the participants show that the process used in the study improved their writing but also the tool. The tool was a microblog space in *Edmodo*. The participants were asked about their general thoughts about *Edmodo*. Most of the participants expressed positive experiences with *Edmodo*. They particularly highlighted the feedback they received from their teacher through using *Edmodo*. The feedback helped them to improve their writing because they

were able to correct mistakes from the previous writing assignment. Revising serves as a level of analysis from the Revised Bloom's Taxonomy and shows they have gained strength through microblogging. They also discuss that *Edmodo* gave them a sense of change of setting and environment from the normal, classroom activity. Also, they discuss that the tool helped them to connect with their teacher and other participants.

**Boy:** I think *Edmodo* is easier, faster, and more productive for teachers and students in many different ways.

**Girl:** We have to consider that teachers have over 100 students, they don't have time to write a paragraph on each paper we write about how we can improve. But, with *Edmodo*, there are always comments from the teacher about what I can improve and what I did well. So, the next time I wrote an *Edmodo* assignment, I made a 100 because I was able to fix my mistakes. All the information was in the same place, so the next time I had an assignment, I could just remind myself of what to do.

**Girl:** It gives teachers and students a chance to get out of the classroom. It also makes it where I don't have to write on paper all the time.

**Boy:** I like *Edmodo* more than writing on paper. We had an assignment to write a paragraph of 7-9 sentences. Well, I went above and beyond and wrote like 30 sentences. Like five or six paragraphs and so, I still didn't finish. So, I was able to finish at home. The great part is that I didn't have to wait until the next day to finish at school, during class. I would have lost my train thought. You can't study for an essay. I can finish it and work on it.

**Boy:** I believe, overall, that *Edmodo* is an efficient, organized source that allows the teacher to really connect with the student. Especially, outside the classroom. Say a

student is out for like a week. If the assignment is on *Edmodo*, there's no reason why I can't do that while I'm home sick. You don't have to worry about your parents collecting the work for you. It's fun and gets people in a new environment. I think we should use it in all of our classes. In science there's a lot of essay questions. Even in math, there's like . . . there are some math essay questions. I wish we could like use *Edmodo* to be like an extra classroom. Kind of like a virtual classroom.

**Girl:** I love *Edmodo*. I learned about *Edmodo* last year but we didn't really use it much. This year I love it and I love having quizzes and writing assignments on the computer. And umm . . . how you are able to research. I especially love the one on one communication I get with my teacher with the writing assignments.

**Girl:** I like *Edmodo* because I can quickly edit. That's a problem with me. I always think of something else I can write or add. With *Edmodo*, I can read through there and it's so easy to add in what I want. I can add a sentence or change a sentence too. Also, it connects you with students in your class. So, if you have a question in your class, you can ask other students so easily and from anywhere. They can help you understand the questions too.

**Girl:** *Edmodo* helps things to go faster. I can write so much faster on *Edmodo*.

**Girl:** I really like *Edmodo*. It's so easy to communicate with my teacher and other students. You can put the app on our phone. It's great because it's a change of scenery other than being in the classroom all day, every day. You get to type instead of writing everything on paper. It helps your hands. And it gets your creative juices flowing to type on *Edmodo*.

**Girl:** I like it because it's a good way to learn from your mistakes. Like if you didn't do something right on the first assignment, you can learn to do it better on the next assignment.

**Boy:** It's good feedback. *Edmodo* is a good resource for teachers to connect with their students. You know umm . . . Questions are immediately answered. Using the Internet makes writing better. Overall, it seems using *Edmodo* is the more appropriate thing for writing in general.

**Boy:** I prefer using *Edmodo* over regular writing. It's just different I guess. I just don't like sitting in the classroom 7 or 8 hours a day writing on paper. It's just boring. I like the computer lab.

The participants' answers to the questions from the focus group certainly add to the evidence that the participants showed improvement in the areas of informational writing including brainstorming and organizing. The participants recognized that the process helped them to improve their writing. The participants commented that the exploring, investigating, and gathering data process not only improved their writing but made it more personal and helped them to remember the content. The participants also express that the tool, *Edmodo* and microblogging, helped them to improve their writing through metacognition, and they enjoy using the tool. They also were able to form more personal relationships with teachers and other participants.

### **Summary**

The data collected from the six microblogging samples using *Edmodo* and the grades from each assignment were coded based on the inside writing framework: brainstorming, exploring, investigating, gathering data, organizing, defining, and redefining. While conducting

the coding, two *in vivo* codes were formulated: connecting and citing. The analysis of each participant's progress showed growth and improvement in areas of weakness. The information was triangulated using grades from each microblogging entry. In addition, each coding category was charted in order to determine if there was growth in each area of coding. Though some inconsistencies occurred in the writing, in every area, there showed to be growth. For further triangulation, these results were compared to the responses of the participants in a focus group. The testimonies from the participants further supported the evidence that the participants experienced growth with their informational writing through *Edmodo* and the inside writing process. The participants verbalized their connection to the coding themes, perhaps in different language, and showed that they truly understand that the process of microblogging has a positive impact on their writing. The next chapter will include further discussion of the research results and their implications.

## CHAPTER 5

### DISCUSSIONS AND IMPLICATIONS

#### **Introduction**

This chapter discusses the implications and findings from the research. First, there is summary of the study purpose, rationale, why the study contributes to literature concerning technology and writing, and the focus of study. Next, there is a discussion of how the research applies to the research questions, implications for practice, and suggestions for future research. Finally, there is a discussion of the context of the research and a conclusion.

#### **Purpose of the Study**

The purpose of this study was to explore how adolescent participants used classroom blogs and microblogging in their writing practices in an English class. More specifically, the goal of the study sought to explore participants':

1. Use of an interactive technology tool to develop their self-assurance in informational writing assignments.
2. Overall involvement in an interactive technology tool as a means to reveal their growth as writers and improving the writing process when incorporating informational writing.

#### **Rationale for the Study**

Today's adolescents are influenced by numerous multimedia technologies and are forced into a new kind of literacy with technology tools (Adams, 2013). They are expected to flourish with technology while also maintaining the ability to multitask with those technologies. (Svensson et al., 2012) In order to incorporate this new literacy into the learning environment,

participants must learn how to effectively use these technologies in a productive way (Kist, 2013). Today's adolescents participate in numerous forms of reading and writing through social media and online writing tools. But, in order to improve writing for formal settings, students must receive appropriate instruction for using those tools (Lenhart et al., 2008).

In addition to the technology students are faced with each day, students are expected to incorporate new technology tools into their learning environment. With the new studies of students and how they learn, leaders have introduced the new Common Core Reading Standards (CCRS) adopted by the Alabama State Board of Education, which include technology components. For example, in the writing and production category for ninth grade students in the *Alabama Learning Exchange* (ALEX), CCRS 10, students are required to:

Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information, and to display information flexibly and dynamically. [W.9-10.6]

Additionally, in 2008 the National Council for Teaching English (NCTE) developed standards for assessing writing and reading for literacy (NCTE, 2013). Among those standards is an assessment that requires the integration of technology tools. The use of *Edmodo* microblogging combined with the Inside Writing framework (Stephens & Ballast, 2011), students may learn one tool and one process for reaching these learning standards.

## **Discussion and Findings**

Chapter 4 contains a comprehensive report of the findings from data of samples collected including the coding and themes. This section addresses how the findings answer each of the research questions and articulate with previous research.

## **Research Sub-Question 1**

1. How does adolescent students' informational writing change when writing using an interactive technology format?

The participants completed six writing prompts using informational texts through the Internet and then microblogging in response to a prompt through *Edmodo*. From the sample, the data show that the participants showed positive change in every area of coding: citing, connecting, defining, redefining, exploring, investigating, organizing, brainstorming, and gathering data. The areas that show greatest strength indicate that the participants remained consistent in those areas.

From the first prompt, participants showed some immediate strengths that persisted throughout the study. Those strengths occurred in the areas of organizing, gathering data, brainstorming, defining, and redefining. Most of these skills would fall in the remembering category of the Revised Bloom's Taxonomy because organizing, gathering data, and brainstorming only require lower levels of thinking. But, redefining falls in the categories of understanding and applying because the participants were expected to use information they knew and present it in a different form. Through the focus group, the participants voiced that these aspects in their writing changed as a result of the microblogging. These areas of their writing showed little change but indeed showed some positive growth change throughout the study. Therefore, the participants entered the study with these skills, but they did improve even those skills as the study progressed. The participants came into the study with some skillset in these areas, and they remained somewhat consistent with those skills throughout. Every participant showed evidence of the abilities of brainstorming, organizing, gathering data, defining and redefining in their composition from the first prompt. There were some participants that did not

show evidence in all prompts but quickly regained confidence in those areas. Additionally, each of the categories shows some growth and change in the writing.

From the data, it would appear that citing occurred as the major weakness for the participants. Though citing would occur in a low level thinking category, it remains important to recognize that citing proves that the information came from a different source and the fact that the participants showed improvement shows that they moved from remembering to understanding. They had begun to understand the importance of citing within their writing. This assumption would be correct, but from the first microblogging entry to the last, the participants showed great growth in this area as well as others. Other areas where participants showed improvement and change occurred in the areas of citing, connecting, exploring and investigating.

Citing experienced the greatest amount of change and growth. Only one participant showed any citing at all in the first microblogging prompt and even then the citing was minimal. As the study progressed, the participants changed their writing to provide citations from the informational text. By the fifth assignment, every participant showed some form of citing in their writing, thus adding depth and support to their composition and changing and transforming their informational writing ability.

Another area of writing that showed change occurred with making connections. Not every student began with the ability to make connections and other participants showed minimal skill in this area. This area did not flourish, but by the fourth prompt, each participant consistently made some type of connection between the literature, informational texts or personal experiences. Making those connections helps in transforming the writing and creating more evidence for the topic.

Exploring and investigating show similar trends in growth. These two categories are closely connected. Exploring involved showing evidence in the writing of “exploring” the topic through personal thoughts or Internet searches. Investigation is the ability to take that exploration a step further by using the exploration to investigate the topic and add further information to the writing. In both categories, five of six participants showed some evidence of each in the first writing microblog. The two categories remained somewhat inconsistent among the participants. By the fifth microblog, every student showed evidence of both exploring and investigating in their writing samples. With this addition to the writing, the participants showed change in their writing by having the ability to explore and investigate more information about each of the topics for the writing microblogs.

This study showed similar results to those found in other studies using technology and writing. In the areas of connecting, citing, gathering data, and organizing that data, Mills and Chandra (2011) found that students would incorporate “Weaving intertextual references to popular iconic figures from movies, songs, and the media, the participants made connections to their existing knowledge and experiences” (p. 40). Through the use of microblogging, the participants added new knowledge and weaved that information together with current knowledge, thus making connections. The use of the informational texts from the Internet provided more new knowledge allowing participants to add more depth to their writing. Along with these categories for writing, exploring and investigating directly relate.

Like the current study, Boas (2011) found that students add to their writing based on what they read outside of the course content. In this study, the participants explored the Internet and investigated online articles to add to their writing. Boas conducted a study incorporating writing with the use of blogs and a common social networking site and concluded that “...it is important

to structure a writing curriculum around the discourse genres that correspond to those situations where students will use English communicatively in their personal, academic, and professional endeavors” (p. 26). Through the instruction, participants understood that the writing prompts would be graded using a rubric, therefore, causing them to think about the writing in an academic manner. This aspect also encouraged participants not to simply explore and investigate but to organize their writing in a way that would be effectively communicated.

An additional change in writing occurred through metacognition. The participants defined the subject and then through investigating and exploring, redefined the content. Through Stephens and Ballast’s (2011) inside writing frame, blogs can serve as a medium for producing metacognitive objectives to help participants organize and process information as they explain why they think what they think and know what they know about the content.

Along with the ability to use metacognition, the participants in this study showed the ability to self-reflect on how to improve their writing. They viewed results from previous microblogging entries and were able to improve areas of writing where they may have experienced difficulty. The aspect of maintaining that responsibility was found as an important factor in Hawks’ (2014) study: “Because students become involved in and responsible for their own learning, the driving force for learning becomes intrinsic rather than extrinsic” (p. 268).

By assigning the microblogs through *Edmodo*, participants became responsible for their learning and engagement with the content. Participants intrinsically took charge of their writing processes. The participants echoed the findings of the data through the focus group. The participants’ answers to the questions from the focus group add to the evidence that the participants showed improvement in the areas of informational writing including brainstorming and organizing. The participants recognized that the process helped them to improve their

writing. The participants commented that the exploring, investigating, and gathering data process not only improved their writing but made it more personal and helped them to remember the content. The participants also expressed that *Edmodo* and microblogging helped them to improve their writing through metacognition, and they enjoy using the tool. They also were able to form more personal relationships with teachers and other participants.

This research was conducted to determine how the participants' informational writing changed through the microblogging process. Many of the participants began with little knowledge of how to incorporate citing and outside data within their writing. The inside writing frame was incorporated to provide a framework for informational writing. The framework improved the participants' writing by incorporating the codes provided. Every area of the writing showed improvement.

Further research could be conducted with methods of helping participants to learn to complete multiple steps in one microblogging assignment. From the research and this study, there appears to be a consistent pattern that the participants may complete part of the necessary components for each prompt but not all. For example, one participant might have summarized the details of the content without gathering any additional data or another may have included data but no source for citing data. These are clearly missteps. A method of helping participants to rectify this margin of error may improve their informational writing with more consistency and clarity.

### **Research Sub-Question 2**

2. How do students view their experience while writing employing the interactive technology format?

The participants' views of their experiences with using *Edmodo* were gained solely from a focus group session. The participants were asked a series of questions and discussed those answers and gave their views about writing using *Edmodo* as well as general views of the tool and the writing process of inside writing frame.

During the focus group, the participants were asked about their general thoughts about *Edmodo*. Most of the participants expressed positive experiences with *Edmodo*. They particularly highlighted the feedback they received from their teacher through using *Edmodo*. The feedback helped them to improve their writing because they were able to correct mistakes from the previous writing assignment. Revising falls under the levels of evaluation and analysis for the Revised Bloom's Taxonomy further showing the positive impact that microblogging had on their writing. The participants commented on how using *Edmodo* or having the ability to type their assignments made it easier for them to edit and re-edit their work as opposed to using pencil and paper methods: "Also, on *Edmodo*. I like that I can go back and check my essay to retype it and read it again and again to make sure it is right. On paper essays, that is harder to do. Which is helpful" (Focus group participant). This statement complies with Mills and Chandra's (2011) findings as the researchers "observed that microblogging threads are not static, discrete units, but are dynamic and malleable, open to reauthoring multiple times" (p. 39).

The participants also discussed that *Edmodo* gave them a sense of change of setting and environment form the normal, classroom activity. The participants experienced content through a different medium than just lecture or routine class discussion; they were able to experience the content through numerous modes of technology "dialogue that extends beyond the boundary of classroom walls" (Mills & Chandra, 2011, p. 42). Also, the participants discussed that the tool

helped them to connect with their teacher and other participants. In addition, the participants recognized the importance of learning to write using an electronic mode:

I prefer *Edmodo* because it's easier on my hands and environmentally better. If you think about your future, in a lot of jobs, people are going to be doing office jobs and typing a lot. You are going to need to know how to properly type and this allows us to learn those skills. (Focus group participant)

Other research studies showed that technology was a force that was steadily shifting the needs of society (Marzano & Arredondo, 1986). Schools and teachers could no longer focus on just teaching students facts and knowledge. Students must be equipped with skills of reasoning. In order to maintain a place in the workforce, students must be able to access, organize, and use the information around them to be effective (Marzano & Arredondo, 1986).

The coding did not display that the areas of writing involving gathering data, exploring, and investigating were among the overall strengths for this study, but the participants did say they enjoyed the effect the new information gave to their writing. The participants utilized metacognition to analyze and evaluate their writing, writing tool, and writing process. This displays that the participants truly understand that microblogging had a positive impact on their writing. One student even expressed that he would like to use the process in another class. One girl declared that adding the informational component “transforms” writing. The transformation occurred as a result of the components of the writing being enhanced. The coding results show that the writing moved from basic levels of thinking involving only remembering and applying to higher levels of thinking in analysis and evaluation. Analysis and evaluation occurred in the application of investigating, redefining, and connecting. Many of the participants did not start the study with these components within their writing but by the end showed evidence of them in

their microblog. This student experienced a type of motivation to want to improve her writing by noting that the microblog “transforms.” Other studies have also shown that students will become more motivated while using technology. Lightle (2011) states, “Teachers who are integrating technology report that students are more motivated to learn, apply their knowledge to practical problems, and take ownership of their learning” (p. 6). Using the Internet to find new information to add to their writing helped the participants of the current study to add more features and supplement their writing and this motivated the students to want to improve.

Since the focus group took place after all samples had been collected, the students recognized that they experienced growth in their writing and use of information through using the Internet. The participants expressed that the use of the Internet for their writing not only helped them to expand their ideas and thinking but also helped them to use new vocabulary. These responses also reveal some evidence of personal connection to the writing.

One boy stated: “It’s not just restating what the teacher has told us. It’s more than that.” This student clearly made a connection to the information by realizing that it made his learning more personal. The participant grasped that his writing was no longer just remembering but had moved up on the taxonomy to applying, analysis, and evaluation through the application of new information.

As for connecting the content, the participants expressed that they were able to make connections. The coding showed that connecting was difficult for the participants at first but in the end, they were able to show some connection in their writing. They were asked if they made any personal connections to the content through using the microblog with *Edmodo*.

The participants explained how the content of the Internet helped them to make their writing more personal and how the Internet search helped them to personally relate to the

characters. The evidence of personal connection was revealed through their answers. The idea of adding the microblog component was not to replace the content but to enhance it. Mills and Candra (2011) confirm that incorporation of digital texts serves the purpose of adding to the content: “Literacy educators are increasingly aware of the need to harness authentic digital communication tools in educational settings, to extend but not replace literacy practices” (p. 36). The students recognized this aspect of the tool. Another important factor to consider is that these participants have not interacted with some of these stories and texts in weeks. The reality that they are able to recall the facts and titles of the short stories reveals that they had a personal connection to the information.

Not only did the participants recognize that they enjoyed using *Edmodo*, they also commented on how the use of microblogs helped to enhance their writing. The participants were asked how the microblogging format affected their writing. Their responses were as follows:

**Boy:** My spelling is awful. It automatically corrects my spelling. It also helps improve vocabulary because you can use the thesaurus right there to find a different word.

**Girl:** I think that it is good because you can see right there what mistakes you made immediately. It helps you to learn more about correct writing.

**Boy:** It helps me to learn to use new words and not be repetitive.

**Boy:** It makes it easier to make your writing to improve your writing because you can copy and paste evidence from articles online, while citing, of course. It's efficient.

**Boy:** Careful with copyright.

**Boy:** Typing makes it easier because it helps me remember to fix all of those little mistakes I make when writing on paper. The computer gives me a red or green line to help me. My teacher can't do it that fast.

**Boy:** It stimulates organization. *Edmodo* is on the Internet, helps me to cite things in my writing. Teachers assign stuff with a rubric and a way to write it. It allows you to have an example for every essay. For every essay I need to use this and remember how to write it this way.

**Girl:** You can get feedback on your essays immediately. That is great because it is hard for teachers to tell each student one on one what they need to improve on in their writing at school.

**Boy:** It improves organization but the teacher can also print rubrics out on paper.

Overall, the participants verbalized that their experience with the microblogging tool was positive and helped them to enhance and improve their writing. They recognized that their writing moved upward from simple remembering and understanding to analysis and evaluation on the Revised Bloom's Taxonomy. The findings showed the same type of positive change in their writing. This aspect of the study can add to the current research in that it contributes to the fact that participants do recognize and verbalize the influence and importance of technology as part of their learning and future.

### **Significance of the Study**

Exploring the use of interactive technology to transform answering open-ended questions from pencil and paper to a digital screen can prove to be a valuable tool for improving and honing adolescent writing skills as well as digital literacy. In a literacy study, Merisuo-Storm (2006) found that students are more motivated to write when the nature of the writing is more communicative in nature. Microblogging is generally used for social purposes but for this study, the tool was incorporated into a learning environment so the writing was educationally focused.

This study used writing through *Edmodo* to provide an avenue for creating communication by allowing participants to give a more direct purpose for writing. Moreover, employing microblog writing accommodated the NCTE standards and the emerging Common Core Standards as well as assisted students in their everyday encounters with the digital world.

Not only did the study employ *Edmodo* as a digital tool for writing but also employed a framework using Inside Writing. Through the framework, the researcher/teacher was able to create a grading rubric and expectations for writing. Inside Writing helped to guide the students' writing purpose for improving informational writing (Stephens & Ballast, 2011).

This study contributes to the knowledge base of the educational realm by providing evidence of the effectiveness of employing blogs to meet the standards of technology. The study also contributes to the knowledge of students' reactions to incorporating microblogging within the classroom curriculum. The findings may be published in pedagogical or technology education journals to add to the research of incorporating technology tools in the curriculum.

### **Implications for Practice**

As students evolve and change, like the GenM generation, so education must move with those changes. In these changes, literacy becomes more than simple reading and writing; literacy involves technology. For educators, this study carries implications for practice that are currently and will continue to mold teaching standards and practices. Students are expected to graduate with a certain skill set to be successful in the workplace (Rycik & Irvin, 2001). Casey (2009) stresses, today's graduates are expected to be literate in technology and be equipped to appropriately use technology before arriving at the workplace and not to be trained to become literate. In business, the employees are expected to use multiple web tools to communicate and do it effectively (Buechler, 2010). Therefore, the practice of microblogging gives students the

ability to become literate with writing that goes beyond the scope of text messaging and social media posts.

Because of this transformation of expectations in the workplace, teachers are given the task of meeting those needs, therefore the standards for teaching and learning have changed to accommodate the need for technology literacy. These standards are important for the future of today's adolescents because it directly affects their careers (Beers, Boshuizen, Kirschner, Gijeselaers, & Westendorp, 2006). Simply having a standard does not offer enough and pencil and paper assignments are no longer enough to validate true literacy. Teachers must implement those CCRS technology standards in unique ways. Teachers search ways to accommodate their teaching practices in order to meet those standards. Microblogging through *Edmodo* offers a tool for teachers to accomplish the task of helping students become more literate in technology and use it appropriately for the workplace.

### **Conclusions**

This study examined eighth grade participants' use of microblogs through *Edmodo* while employing the Inside Writing Frame process. The emphasis was placed on developing the writing as the participants interacted with the tool and process. Additional emphasis was placed on obtaining the participants' perspectives of the tool, *Edmodo*, and the process, Inside Writing Frame. Research questions allowed focus on using an interactive technology tool for writing to discern the influence of that technology on informational writing.

The results of this study show how the participants' writing changed for all coding areas throughout the research period. The participants began with strengths in brainstorming, organizing, defining, redefining and gathering data. Although the participants showed prior knowledge for these areas of writing, they also showed growth and change in their writing in

each of these areas. Areas of weakness from the beginning of the research were exploring, investigating, citing, and connecting. These codes involve levels of the Revised Bloom's Taxonomy ranging from application to analyzing and evaluating. The students must apply what they understand about the text to explore and then they must analyze the information from the Internet to determine if they are able to connect the ideas. Citing falls under the category of remembering because it only requires the participants to copy from a website, but also the participants must understand the importance and purpose of citing. Some participants showed no evidence of these codes within their writing at the start of the research. But, by the fourth or fifth microblogging assignment, all participants showed evidence of each of these codes within their writing. Therefore, participants experienced a move in upward thinking by moving from remembering in their writing to analysis and evaluation, which denotes a positive change in their writing through the use of microblogging through *Edmodo*.

In today's generation, GenM or the multitasking generation, participants are bombarded with new facets of technology every day, many of which incorporate writing. With these new technologies comes an ever-changing world of curriculum in digital literacy. These literacies have infiltrated into education and become an important part of learning and the learning process. *Edmodo* provides a platform for contributing to the development of using technology to improve student learning. There can be no greater achievement than a teacher knowing a student has succeeded--until the moment the student verbalizes he or she has accomplished success--that is true achievement. Not only must teachers internalize the importance of integrating technology tools within writing, but the participants must comprehend the significance as well. This significance of the change in the writing is shown from the Revised Bloom's Taxonomy. The coding shows that the students moved from simple remembering to enhancing their thinking and

writing to analysis and evaluation. The impact of technology on learning and writing was most profoundly stated from the words of an adolescent in this study's focus group: "It transforms your writing."

### **Recommendations for Future Studies**

This study could serve as a springboard for multiple other studies to be conducted through microblogging. One of the factors that could have influenced the participants' lack of citing, explaining and connection could have resulted in the fact that the writing prompts were multi-modal. Did the participants leave out parts because they forgot to add them in? If the participants had the prompts broken into several different steps, would they experience more success? This was not a major part of this study but could be considered. Much insight may be gained from studying how multimodal questions affect the participants' writing.

Another study that could spring from this study would be to implement Inside Writing Frame and *Edmodo* into a different content area. For example, would the participants experience growth while microblogging in their history or science classes? How would implementing the Inside Writing Frame affect their writing? Would the students be able to find a concrete connection to the facts they learn in class to real world experiences? Just as the participants made real world connections to the literature stories in the English class from this study, it would be an enlightening study to determine if the participants were able to carry that skill over into another subject.

To study the follow-up data to this study, a researcher may want to compare the scores from the 2015-2016 ACT *Aspire* (<http://www.discoveractaspire.org/>), the mandated standardized test for eighth grade students, to determine if the participants improved from seventh grade to eighth grade and how using microblogs and Inside Writing Frame may have contributed to these

scores. In order to make this comparison, the researcher would need to obtain the test scores from 2014-2015 testing year and the scores from the current year. In order to analyze writing, the researcher would use the reading section of the test. On this part of the test, the participants would be required to read a passage and write a hand-written response. Though not the same mode of writing, the same writing skills would be required. The researcher may use results from this study and the ACT *Aspire* reading scores for both years to compare and contrast the trends. The researcher may not have access to actual ACT *Aspire* writing samples for the participants for a detailed analysis, but the researcher may compare the coding themes to the breakdown of scores.

Another study that may result from this study would be to take the assignments from a microblog to a continuous, longer blog. This study used microblogs and moving to a blog that required more writing and was continuous might lead to different results. If the students were able to see each entry side-by-side, would they write differently or would they more readily correct their mistakes from the previous entry? From this study, some of the participants showed self-correction by showing they could improve from one microblog entry to the next. Were the participants cognizant of the mistakes made in the previous assignment in order to improve the next? This study would not be accomplished using *Edmodo* because it does not offer a longer, continuous blogging component. The researcher would need to use a blogging tool outside of *Edmodo*.

From a writing standpoint, a researcher might study the different modes of writing by creating two groups of participants. One group might complete the same type of assignments from this study by writing the responses by hand writing, and the second group of participants might complete the assignments using a microblog. The researcher would require both groups to

complete the assignments using all of the same requirements. Then the researcher could compare the two different groups' work samples to determine if there are any major differences in vocabulary, sentence structure, citing, length of the response, and grammar. What major variances exist between writing by hand and typing a microblog? Then the researcher could host a focus group combining both groups to have them both discuss their different experiences with the two different modes. The groups would be able to compare the two different experiences, and the researcher could document any themes that may occur.

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## APPENDIX A

### BRAINSTORMING CHARTS FOR MICROBLOGGING ASSIGNMENTS

## **Brainstorming Charts**

September 1, 2015 – Internal and External Conflicts

Character	Internal Conflict	pg.	External Conflict	pg.
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September 15, 2015—Inference Chart

Information about Snakes

Inference/Characteristic	Evidence from the text	pg.
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September 29, 2015—Personification Chart

Personification Example                      Explain                      pg.


October 13, 2015—Monster Chart

Monster                      Personality traits                      Evidence from text                      pg.


October 27, 2015—Character Chart

Main Character \_\_\_\_\_

Character Trait                      Evidence from text                      pg.                      Explain


November 10, 2015—Compare and Contrast Chart

Thanksgiving 1961

Different

Same

Current Thanksgiving

Different

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**APPENDIX B**  
**INSIDE WRITING FRAME RUBRIC**

## Inside Writing Frame Rubric

This rubric will be used to score the students' microblog responses posted on *Edmodo*. Each major category is worth 20 points with a total of 100 points per response.

<b><i>Inside Frame Category</i></b>	<b>20 Points</b>	<b>15 Points</b>	<b>10 Points</b>	<b>5 Points</b>	<b>0 Points</b>
<b>Brainstorming using Graphic Organizer</b>	Graphic organizer <b><u>completed</u></b> and shows clear, logical relationships between <b><u>all</u></b> information. Page numbers included.	Graphic organizer completed and shows logical relationships between <b><u>most</u></b> information. Page numbers included.	Graphic organizer started and includes some information. Page numbers have been excluded.	Graphic organizer has been attempted but entire categories have been left incomplete. Page numbers have been excluded.	Graphic Organizer not attempted.
<b>Exploring and Investigating with Internet Use</b>	Successfully uses suggested topics to find information and provides specific examples of evidence in writing.	Able to use suggested topics to find information and provides general evidence of topics in writing.	Able to use suggested topics to find information and provides vague evidence of topics in writing.	Use of Internet has been evident but the information provided remains too vague to discern general facts from research.	No additional research appears in writing.
<b>Synthesis Paragraph Organization</b>	Information is very organized with well-constructed paragraphs and information from reading and investigation are clearly connected.	Information is organized with well-constructed paragraphs. The investigation information connected but not as clearly.	Information is organized, but paragraphs are not well-constructed.	The information appears to be disorganized.	Not enough information provided.
<b>Paragraph Construction</b>	All paragraphs include introductory sentence, explanations or details, and concluding sentence.	Most paragraphs include introductory sentence, explanations or details, and concluding sentence.	Paragraphs included related information but were typically not constructed well.	Paragraphing structure was not clear and sentences were not typically related within the paragraphs.	Not enough information to construct a full paragraph.
<b>Mechanics</b>	No grammatical, spelling or punctuation errors.	Almost no grammatical, spelling or punctuation errors	A few grammatical, spelling, or punctuation errors.	Many grammatical, spelling, or punctuation error	Not enough information provided to be scored.

**APPENDIX C**  
**IRB APPROVAL**

Office for Research  
Institutional Review Board for the  
Protection of Human Subjects



June 15, 2015

Janie Jones  
Instructional Technology  
College of Education  
Box 870302

Re: IRB#; 15-OR-194 "An Exploratory Study of the Use of Microblogs to Improve Student Writing"

Dear Ms. Jones:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

Your application will expire on June 14, 2016. If your research will continue beyond this date, complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the IRB Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent/assent forms to obtain consent from your participants.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.



358 Rose Administration Building  
Box 870127  
Tuscaloosa, Alabama 35487-0127  
(205) 348-8461  
(800) (205) 348-7189  
FAX: (205) 348-3066

## Request for Permission (Assent)

### An Exploratory Study of the Use of Microblogs to Improve Student Writing (ages 11-15).

Dear Student:

I am from the University of Alabama. I am doing a study of how kids use Edmodo when completing writing assignments. Maybe we can learn some new ways to help kids make use of technology with writing assignments.

If you decide to be in the study, you will complete classroom assignments on Edmodo as you normally would in class. There will be six writing assignments that will be completed for the use of studying. These writing assignments will be studied to decide what types of new information is gained from writing using Edmodo. If you are chosen, then no one will know that you wrote the assignments because your name will not be revealed.

We will also have one focus group, which is where a group of you will talk and answer questions about your experience and opinions while using Edmodo to complete writing assignments. This meeting will be recorded but again, no one will know who is talking and your names will not be revealed.

I will not tell anyone outside the study what you or any other particular person said. I will write a report on the study that just talks about what the group said or didn't say, but no one will be able to recognize you. I will ask kids in the groups not to talk about what was said outside of the meetings (to keep the discussion confidential) but I cannot promise this. You can control this by not saying something you would not want to have repeated. I will not tell your parents or teachers what you said.

You are a volunteer. You are helping me but you do not have to unless you want to. This is your free choice. If you start the study and decide you don't want to continue, just let me know. No one will be mad at you. Although the assignments that are part of this study are a part of regular classroom grades, your grade will not be affected by if you choose to participate in this study or not.

I do not think there are any risks or harm to you in this study. You may find the assignments helpful to you or it may make you feel good to know you are helping me to help kids with writing in the future.

If you have any questions about this study, please ask me now. If you have questions later, you can e-mail Dr. Margaret Rice at the University of Alabama at [mrice@bamaed.ua.edu](mailto:mrice@bamaed.ua.edu). You can also ask your parents questions if you wish. If you have questions or concerns about your rights in a research study, please contact Ms. Tanta Myles, the University of Alabama Research Compliance Officer, at (205) 348-6461.

If you agree to be in this study, please sign your name on this letter below. You can have a copy of the letter to keep.

Thank you very much for your interest.

Sincerely,

Mrs. Jones

---

Name of Participant

Date

---

Person Obtaining Consent

Date

## Appendix C

### PARENTAL PERMISSION FORM (under age 19)

Dear Parent/Guardian:

It is requested that your child participate in a research study that will examine the use of technology in your child's English class, and attitudes toward writing and technology. The study is being conducted by Janie S. Jones, a doctoral student from The University of Alabama and your child's English teacher.

Participating students will complete a series of blog entries as part of regular classroom routine using *Edmodo*. The blog posts will be analyzed for writing improvement and motivation. The students' identities will be kept anonymous. They will not be penalized in any way for not participating. Student grades for class activities and final grades will also be collected. The researchers will also be conducting one focus group, where will a group of students will answer questions to discuss their experience with using Edmodo. This helps the teacher/researcher to understand their experience with using a blog. The students' identities will not be revealed.

Participants are not subject to any health related or psychological risks. There will be benefits to the academic community from the data collected in this study.

All information provided by you and your child will be confidential. Confidentiality will be maintained through several methods. The primary researcher is an employee of the Autauga County Schools. For the research project, the researcher is considered an outside observer. In addition, students and parents will not be asked to put their names on any other documents collected in the study. Pseudonyms will be used throughout the study to protect the identity of all students. During the focus groups, comments will be written on paper by the researchers, but the only identification will be as Child A, Child B, etc.

Your child's participation in the study is voluntary. Furthermore, no incentives will be provided for participation. Your child may withdraw from the study at any time. Participation or non-participation will not affect your child's grades or you or your child's relationship with the school.

There are no direct benefits to your child from this study, however, this study may benefit the school system by providing information on the use of technology in chemistry classes. This information may also help other school systems. If you or your child have any questions about this study, please feel free to contact Janie Jones at [janie.Jones@achoe.net](mailto:janie.Jones@achoe.net) or (334) 313-4345.

If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066. You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at [http://osp.ua.edu/site/PRCO\\_Welcome.html](http://osp.ua.edu/site/PRCO_Welcome.html) or email us at [participantoutreach@bama.ua.edu](mailto:participantoutreach@bama.ua.edu). After you participate, you are encouraged to complete the survey for research participants that is online at the outreach website or you may ask the investigator for a copy of it and mail it to the University Office for Research Compliance, Box # 870127, Room 358 in Rose Administration Building, Tuscaloosa, AL 35487-0104.

I have read this permission form. I have had a chance to ask questions. I agree to allow my child to take part in it. I understand that I will receive a copy of this permission form to keep.

Signature of parents/guardians

Printed Parent / Guardian Name

Signature of parents/guardians

Printed Parent / Guardian Name

1

UNIVERSITY OF ALABAMA IRB  
CONSENT FORM APPROVED: 4/15/15  
EXPIRATION DATE: 6/14/2016

Printed Name of Child \_\_\_\_\_ Date \_\_\_\_\_

Signature of Investigator \_\_\_\_\_ Date \_\_\_\_\_

**APPENDIX D**  
**FOCUS GROUP QUESTIONS**

### **Focus Group Questions**

1. How would you describe your experience with microblog writing?
2. What specific elements about microblog writing did you prefer?
3. What specific elements about microblog writing using *Edmodo* did you not prefer?
4. How would you say your writing was affected by using a microblog format?
5. What process did you use to gain information before completing your microblogging assignment?
6. How did you incorporate this information into your writing?
7. Did you include information in your writing that was new or not discussed in your textbook or in class? If so, can you give an example?
8. Did you use any other Web 2.0 or Internet tools such as videos or links on your blog site to enhance the writing content? If so, what did you use? Give specific examples.
9. Did finding new information help your writing process? If so, how?
10. Did you ever find yourself wanting to incorporate *Edmodo* writing assignments into another content area? If so, why?
11. Do you have suggestions or recommendations for how to improve the assignments? Is so, what?
12. How and where did you complete your assignments? Was the experience different? How?
13. How do you think differently using blogs vs paper and pencil?
14. Would you say that the process of brainstorming, researching on the Internet, and then writing about the information helped you to make a personal connection to the content or stories read? Explain. Give an example.

## APPENDIX E

### CODING

## Microblog Analysis

Degrees of Codes in samples:	None	Some	Moderate	Evident
Degree of Usage	Explanation			
None	No evidence of this code in the sample			
Some	There is little evidence of this code and any evidence had to be inferred by the researcher			
Moderate	There is evidence of this code in the sample but not a clear pattern of intention			
Evident	This code appears multiple times throughout the sample and clearly a pattern of intentional use.			

### *Edmodo Microblog Assignment # 1*

Prompt #1:

**Read the literary selection. Using the external and internal conflict chart, identify external and internal conflicts. Using the Internet, research others in history you know of who have faced internal and external conflicts for a noble cause. Synthesize a well-developed paragraph explaining the conflicts from the selection. Provide a comparative example from your Internet search.**

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
Alice	Some	Some	Some	Evident	Evident	Evident	Evident
Madison	Some	Some	Some	Some	Moderate	Moderate	Moderate
Carol	Some	Some	Moderate	Moderate	Evident	Evident	Evident
John	Some	Some	Some	Evident	Evident	Moderate	Moderate
Clint	Some	Some	Some	Evident	Evident	Evident	Evident
Brad	None	None	Some	Evident	Evident	Evident	Evident

*In vivo* Coding Notes:

**Alice- Citing-** Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.

**Madison- Connecting-** There was a relationship described in the microblog between a modern day event and the short story, but the evidence was lacking and not specific enough to make a clear connection to the short story.

**Citing-** Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.

**Carol – Connecting-** There was no direct connection or correlation made between the short story and the real-life event other than that they both have internal and external conflicts. The connection is not apparent in the microblog.

**Citing-** Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.

**John- Connecting-** There was a relationship described in the microblog between a modern day event and the short story, but the evidence was lacking and not specific enough to make a clear connection to the short story. **Citing-** Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.

**Clint- Connecting-** Clear connections between the short story and the real life event were made and clearly stated.

**Citing-** Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.

**Brad- Connecting-** A connection was made but the participant connected the information to his own personal experiences, which was not the assignment. The assignment prompted the students to research an event that could relate. **Citing –** No additional research was conducted.

***In vivo Coding Chart Assignment #1***

	<b>Connecting</b>	<b>Explanation</b>	<b>Citing</b>	<b>Explanation</b>
<b>Alice</b>	Evident	Clear connections between the short story and the real life event were made and clearly stated	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
<b>Madison</b>	Moderate	There was a relationship described in the microblog between a modern day event and the short story, but the evidence was lacking and not specific enough to make a clear connection to the short story.	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
<b>Carol</b>	None	There was no direct connection or correlation made between the short story and the real-life event other than that they both have internal and external conflicts. The connection is not apparent in the microblog.	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
<b>John</b>	Some	There was a relationship described in the microblog between a modern day event and the short story, but the evidence was lacking and not specific enough to make a clear connection to the short story.	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
<b>Clint</b>	Evident	Clear connections between the short story and the real life event were made and clearly stated	Some	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
<b>Brad</b>	Some	A connection was made but the participant connected the information to his own personal experiences, which was not the assignment. The assignment prompted the students to researcher an event that could relate.	None	No additional research was conducted

### **Grading Rubric Assignment # 1**

	<b>Graphic Organizer</b>	<b>Points</b>	<b>Notes</b>	<b>Microblog</b>	<b>Points</b>	<b>Notes</b>	<b>Total Score</b>
<b>Alice</b>	Complete	20/20		Complete	70/80	-10 Clear connections/no citations	90/100
<b>Madison</b>	Complete	20/20	Brief descriptions	Complete	65/80	-5 Explanation of details -10 vague connections through research	85/100
<b>Carol</b>	Complete	10/20	No page Numbers	Partially Complete	65/80	-15 No relation made	75/100
<b>John</b>	Partially Complete	10/20	Missing info./ no page numbers	Complete	70/80	-10 Vague topics	80/100
<b>Clint</b>	Complete	20/20		Complete	65/80	-5 explanations and details -10 vague connections through research	85/100
<b>Brad</b>	Complete	20/20		Partially Complete	60/80	-20 no outside research -5 grammatical errors	75/100

## Edmodo Microblog Assignment #2

Prompt #2:

**Read the literary selection. Complete the inference chart as you read. Using the Internet, research information about the green mamba and snake safety. Synthesize a well-developed paragraph to identify three inferences you made while reading that are now confirmed by your research.**

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
<b>Alice</b>	Evident	Evident	Evident	Evident	Evident	Evident	Evident
<b>Madison</b>	Some	Some	Some	Evident	Some	None	None
<b>Carol</b>	Evident	Evident	Moderate	Evident	Evident	Evident	Evident
<b>John</b>	Evident	Evident	Evident	Evident	Evident	Evident	Evident
<b>Clint</b>	Some	Some	Some	Evident	Moderate	Moderate	Moderate
<b>Brad</b>	Some	Some	Some	Evident	Some	Some	Some

*In vivo* Coding Notes:

No additional codes noted

## In vivo Coding Chart Assignment #2

	Connecting	Explanation	Citing	Explanation
<b>Alice</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
<b>Madison</b>	None	There was no direct connection or correlation made between the short story and the informational texts. The connection is not apparent in the microblog.	None	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
<b>Carol</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated. Superb use of examples from the short story.	Moderate	Evidence of exploration and investigating information is evident but only one site is named as gaining information. Clearly, more than one site has been explored.
<b>John</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
<b>Clint</b>	Moderate	Clear connections between the short story and the informational passage were made but lacked some explanation.	Some	Reference to the “Internet” was made but no direct citation has been provided
<b>Brad</b>	Some	A brief connection was made but not enough explanation of ideas to make a clear connection.	Some	Reference to the “Internet” was made but no direct citation has been provided

### **Grading Rubric Assignment #2**

	<b>Graphic Organizer</b>	<b>Points</b>	<b>Notes</b>	<b>Microblog</b>	<b>Points</b>	<b>Notes</b>	<b>Total Score</b>
<b>Alice</b>	Complete	20/20		Complete	80/80	All requirements met	100/100
<b>Madison</b>	Complete	20/20		Partially Complete	45/80	-15 Use of Internet evident but information too vague -5 the investigation of information connected but not clearly -15 sentences typically not related	65/100
<b>Carol</b>	Complete	20/20		Complete	70/80	-10 Able to find information but too vague	90/100
<b>John</b>	Complete	15/20	Somewhat unorganized	Complete	80/80	All requirements met	95/100
<b>Clint</b>	Complete	20/20		Partially Complete	55/80	-10 Able to find information on topics but provides vague evidence in writing -5 The investigation of information connected but not as clearly -10 a few grammatical and	75/100

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<b>Brad</b>	Complete	20/20	Partially Complete	65/80	punctuation errors -10 Able to find information on topics but provides vague evidence in writing -5 The investigation of information connected but not as clearly	80/100
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### ***Edmodo Microblog Assignment #3***

Prompt #3:

**Read the literary selection. Complete the personification chart. Using the Internet, identify a form of technology that exhibits “personification”. Synthesize a well-developed paragraph that highlights your research and sights two other examples of personification from the selection.**

	<b>Explore</b>	<b>Investigating</b>	<b>Gather data</b>	<b>Brainstorm</b>	<b>Organizing</b>	<b>Defining</b>	<b>Redefining</b>
<b>Alice</b>	Evident	Evident	Evident	Evident	Evident	Evident	Moderate
<b>Madison</b>	None	None	Some	Evident	Some	Moderate	None
<b>Carol</b>	Moderate	Moderate	Evident	Evident	Evident	Evident	Moderate
<b>John</b>	Evident	Evident	Evident	Evident	Evident	Evident	Evident
<b>Clint</b>	None	None	None	Evident	Some	Some	None
<b>Brad</b>	Moderate	Moderate	Moderate	Evident	Moderate	Evident	Evident

*In vivo* Coding Notes:

**No additional codes, but it is important to note that for this assignment, all students but one improved in the area of citing. All but one of the participants cited from the text and/or the Internet.**

### ***In vivo Coding Chart Assignment #3***

	<b>Connecting</b>	<b>Explanation</b>	<b>Citing</b>	<b>Explanation</b>
<b>Alice</b>	Moderate	Clear connections between the short story and the Internet investigation of topics were clearly stated. But, part of the evidence to be connected was not accurate.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
				There is evidence of citing directly from the text of the short story with direct quotations and page numbers provided.
<b>Madison</b>	None	There was no direct connection or correlation made between the short story and the informational texts. The connection is not apparent in the microblog.	Some	There was no evidence of outside, Internet research. However, there is evidence of citing directly from the text of the short story with direct
<b>Carol</b>	Some	A comparison was made but that comparison was not clearly connected to the examples of personification within the story.	Moderate	Evidence of exploration and investigating information is evident but the reference to an advertisement is made and not a direct website for the product.

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					There is evidence of citing directly from the text of the short story with direct quotations and page numbers provided.
<b>John</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.	
<b>Clint</b>	Some	A brief connection was made but not enough explanation of ideas to make a clear connection.	None		There is evidence of citing directly from the text of the short story with direct quotations and page numbers provided.
<b>Brad</b>	Moderate	A brief connection was made between ideas but not connected and explained clearly and in an organized manner.	Moderate		No citations from the Internet were made and there appears to be no research conducted beyond common knowledge.
					Reference to the “Internet” was made but no direct citation has been provided. Direct quotes have been made from an Internet source.
					There is evidence of citing directly from the text of the short story with direct quotations and page numbers provided.

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### Grading Rubric Assignment #3

	<b>Graphic Organizer</b>	<b>Points</b>	<b>Notes</b>	<b>Microblog</b>	<b>Points</b>	<b>Notes</b>	<b>Total Score</b>
<b>Alice</b>	Complete	20/20		Complete	75/80	-5 Information is organized with well-constructed paragraphs. The investigation of information connected but not as clearly. (Inaccurate: Personification vs. anthropomorphism.	95/80
<b>Madison</b>	Complete	20/20		Partially Complete	50/80	-20 In additional research conducted -10 Paragraphs included related	70/100

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						information but not constructed well.
<b>Carol</b>	Complete	20/20	Complete	75/80	-5 information is organized into a well-constructed paragraph but connected not as clearly.	95/100
<b>John</b>	Complete	20/20	Complete	75/80	-5 Almost no grammatical or punctuation errors	95/100
<b>Clint</b>	Complete	20/20	Partially Complete	45/80	-15 Use of Internet may be evident but too vague to discern general facts from research -5 investigation of information is connected but not as clearly -15 Paragraph structure not clear and sentences were not typically related.	65/100
<b>Brad</b>	Complete	20/20	Complete	65/80	-5 able to use suggested topics to find information but vague evidence in writing -10 information is organized but paragraphs are not well-constructed	85/100

#### ***Edmodo Microblog Assignment #4***

Prompt #4:

**Read the literary selection. Complete the monster chart. Using the Internet, research historic and movie monsters. Determine which monster would fit your personality. Synthesize a well-developed paragraph describing how the monster in the selection “is” the monster in the narrator and then how the monster you researched represents you.**

	<b>Explore</b>	<b>Investigating</b>	<b>Gather data</b>	<b>Brainstorm</b>	<b>Organizing</b>	<b>Defining</b>	<b>Redefining</b>
<b>Alice</b>	Evident	Evident	Evident	Evident	Evident	Moderate	Evident
<b>Madison</b>	None	None	Some	Evident	Evident	Moderate	Moderate
<b>Carol</b>	Some	Some	Some	Evident	Evident	Evident	Evident
<b>John</b>	Evident	Evident	Moderate	Evident	Evident	Evident	Evident
<b>Clint</b>	None	None	Some	Evident	Moderate	Moderate	Moderate
<b>Brad</b>	None	None	Some	Evident	Evident	Evident	Evident

*In vivo* Coding Notes:

No additional codes noted but it should be noted that all but two participants for this assignment provided citation of the connecting information provided. It should also be noted that all students did make at least some degree of connection to the short story.

#### ***In vivo Coding Chart Assignment #4***

	<b>Connecting</b>	<b>Explanation</b>	<b>Citing</b>	<b>Explanation</b>
<b>Alice</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated. There was only a moderate connection from the short story to the personal connection component.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
<b>Madison</b>	Some	Somewhat clear connections between the short story and the information for personal connection were made but the connection appears to be based solely on prior knowledge.	None	Specific quotations have been made from the short story, without page numbers. Specific quotations from the Internet sources have been provided.
<b>Carol</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated. Superb use of examples from the short story.	Some	Evidence of exploration and investigating information is evident but cannot be proven because no citations of outside sources have been included.
<b>John</b>	Evident	Clear connections between the short story and the Internet	Moderate	Evidence of exploration and investigating information is evident

		investigation of topics were clearly stated.			and specific sites have been cited within the writing. No specific quotations from the sources were provided.
<b>Clint</b>	Some	Somewhat clear connections between the short story and the information for personal connection were made but the connection appears to be based solely on prior knowledge.		None	No reference to the Internet was made and no direct quotations or citations have been provided
<b>Brad</b>	Evident	Clear connections between the short story and the information for personal were made but the connection appears to be based solely on prior knowledge.		None	No reference to the Internet was made and no direct quotations or citations have been provided

#### Grading Rubric Assignment #4

	Graphic Organizer	Points	Notes	Microblog	Points	Notes	Total Score
<b>Alice</b>	Complete	20/20		Complete	80/80	-5 information is organized with well-constructed paragraphs. The investigation of information connected but not as clearly.	95/100
<b>Madison</b>	Complete	20/20		Complete	75/80	-20 No additional research appears in writing -10 information is organized but paragraphs are not well constructed -15 sentences	55/100

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<b>Carol</b>	Complete	20/20	Complete	65/80	were not typically related within paragraphs -15 use of the Internet is evident but the information provided remains too vague to discern general facts from research	85/100
<b>John</b>	Complete	20/20	Complete	70/80	-5 able to suggests topics to provide evidence and provides general evidence in writing -5 The investigation of information connected but not clearly.	90/100
<b>Clint</b>	Complete	20/20	Partially Complete	35/80	-20 No additional research appears in writing -10 information is organized but paragraphs are not well constructed -15 sentences were not	55/100

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<b>Brad</b>	Complete	20/20	Partially Complete	60/80	-20 No additional research appears in writing.	80/100
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### Edmodo Microblog Assignment #5

Prompt #5:

**Read the literary selection. Complete the character chart. Using the Internet, research ancient Chinese customs. Synthesize a well-developed paragraph explaining how understanding ancient Chinese custom for girls helps you better characterize the main character.**

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
<b>Alice</b>	Evident	Evident	Evident	Evident	Evident	Evident	Evident
<b>Madison</b>	Evident	Evident	Evident	Evident	Moderate	Some	Some
<b>Carol</b>	Moderate	Moderate	Moderate	Evident	Evident	Evident	Moderate
<b>John</b>	Evident	Evident	Moderate	Evident	Evident	Evident	Evident
<b>Clint</b>	Moderate	Moderate	Moderate	Evident	Evident	Evident	Moderate
<b>Brad</b>	Evident	Evident	Evident	Evident	Evident	Moderate	Evident

*In vivo* Coding Notes:

No additional codes noted but it is important to note that all students made a connection between the characters and the research on some degree. Also, all students cited outside sources to some degree.

### ***In vivo* Coding Chart Assignment #5**

	Connecting	Explanation	Citing	Explanation
<b>Alice</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
<b>Madison</b>	Some	The participant clearly stated that the research helped her to understand the character in the story better.  Mostly clear connections between the short story and the Internet investigation of topics were vaguely stated.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
<b>Carol</b>	Some	No connection to understanding the character because of the research was stated.  Mostly clear connections between the short story and the Internet investigation of topics were vaguely stated.  No connection to understanding the character because of the research was stated.	Moderate	Evidence of exploration and investigating information is evident but only one research site is named as gaining information. No direct quotations have been made.

<b>John</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
		There was a clear connection that the research helped the participant understand the character from the short story better.		Citing is clear but there are not direct quotes used.
<b>Clint</b>	Some	Mostly clear connections between the short story and the informational passage were made but lacked some explanation.	Moderate	One reference and quotation was given as a citation of outside research.
<b>Brad</b>	Evident	No connection to understanding the character because of the research was stated.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing
		Clear connections between the short story and the Internet investigation of topics were clearly stated		There was a clear connection that the research helped the participant understand the character from the short story better.

#### Grading Rubric Assignment #5

	<b>Graphic Organizer</b>	<b>Points</b> <b>20/20</b>	<b>Notes</b>	<b>Microblog</b>	<b>Points</b> <b>80/80</b>	<b>Notes</b>	<b>Total Score</b>
<b>Alice</b>	Complete	20/20		Complete	80/80	Superb work	100/100
<b>Madison</b>	Complete	20/20		Partially Complete	60/80	-5 information is well organized but not connected clearly. -15 information was not typically related within paragraphs	80/100

					(you didn't explain how this helps you understand the character)
<b>Carol</b>	Complete	20/20	Partially Complete	60/80	-5 information is well organized but not connected clearly. -15 information was not typically related within paragraphs (you didn't explain how this helps you understand the character)
<b>John</b>	Complete	20/20	Complete	75/80	-5 information is well-organized but investigation of information not connected as clearly. (no direct quotes)
<b>Clint</b>	Complete	20/20	Partially Complete	60/80	-5 information is well-organized but investigation of

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information  
not  
connected as  
clearly.  
-15

Paragraphing  
structure was  
not clear and  
sentences  
were not  
typically  
related  
within the  
paragraphs.

<b>Brad</b>	Complete	20/20	-5 No direct quotations from the text on graphic (but were included in paragraph)	Complete	75/80	-5	95/100
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### Edmodo Microblog Assignment #6

Prompt #6:

**Read the literary selection. Using the Internet, find an article about Thanksgiving in 1621. Use a compare and contrast chart to organize the differences and likes between Thanksgiving in 1621 and the Thanksgiving traditions you experience. Synthesize a well-developed paragraph comparing and contrasting pilgrims' Thanksgiving to yours.**

	Explore	Investigating	Gather data	Brainstorm	Organizing	Defining	Redefining
<b>Alice</b>	Evident	Evident	Evident	Evident	Evident	Evident	Evident
<b>Madison</b>	Evident	Evident	Evident	Evident	Evident	Evident	Evident
<b>Carol</b>	Evident	Evident	Evident	Evident	Evident	Evident	Moderate
<b>John</b>	Evident	Evident	Evident	Evident	Evident	Evident	Evident
<b>Clint</b>	Moderate	Evident	Evident	Evident	Evident	Evident	Some
<b>Brad</b>	Moderate	Evident	Evident	Moderate	Evident	Evident	Evident

*In vivo* Coding Notes:

No additional codes noted

### In vivo Coding Chart Assignment #6

	Connecting	Explanation	Citing	Explanation
<b>Alice</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	Evident	Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
<b>Madison</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated.	Evident	Clear quotations and page numbers were provided from the short story Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
<b>Carol</b>	Moderate	Clear connections between the short story and the most Internet investigation of topics were clearly stated.  The paragraph is ended with a quote and no explanation of its relevance to the writing.	Evident	Clear quotations and page numbers were provided from the short story Evidence of exploration and investigating information is evident and specific sites have been cited within the writing.
<b>John</b>	Evident	Clear connections between the short story and the Internet	Evident	Clear quotations and page numbers were provided from the short story Evidence of exploration and investigating information is evident

		investigation of topics were clearly stated		and specific sites have been cited within the writing.
<b>Clint</b>	Moderate	Clear connections between the short story and the informational passage were made but lacked some explanation.	Moderate	Clear quotations and page numbers were provided from the short story Evidence of exploration and investigating information is evident and only one site has been cited within the writing.
<b>Brad</b>	Evident	Clear connections between the short story and the Internet investigation of topics were clearly stated	Moderate	Clear quotations and page numbers were provided from the short story Evidence of exploration and investigating information is evident and only one site has been cited within the writing.

#### Grading Rubric Assignment #6

	<b>Graphic Organizer</b>	<b>Points 20/20</b>	<b>Notes</b>	<b>Microblog</b>	<b>Points 80/80</b>	<b>Notes</b>	<b>Total Score</b>
<b>Alice</b>	Complete	20/20		Complete	80/80		100/100
<b>Madison</b>	Complete	20/20		Complete	75/80	-5 grammatical errors	95/100
<b>Carol</b>	Complete	20/20		Complete	75/80	-5 Information is organized and well-constructed. Investigation of information is connected but not as clearly. Need to explain specific details.	95/100
<b>John</b>	Complete	20/20		Complete	75/80	-5 some grammatical error	95/100

<b>Clint</b>	Complete	20/20		Complete	65/80	-5 -	85/100
						Information is organized and well- constructed. Investigation of information is connected but not as clearly. Need to explain specific details.  -10 paragraphs contained related information but not constructed well	
<b>Brad</b>	Partially complete	15/20	-5 no direct quotes from text and no page numbers(but included in writing)	Complete	75/80	-5 -	90/100
						Information is organized and well- constructed. Investigation of information is connected but not as clearly. Need to explain specific details.	

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