INVESTIGATING TRANSMEDICATION
IN THE REVISION PROCESS
OF SEVENTH GRADE WRITERS

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The purpose of this naturalistic inquiry study was to investigate seventh grade students’ possible changes in both writing and attitudes and perceptions regarding revision when paired with transmediation (movement between and among sign systems, such as drawing, music, drama) in the writing process. Specifically, this research focuses on students’ thinking concerning why and how they revise when transmediation is part of the writing process. Participants in this study were 27 seventh grade students enrolled in a language arts class in a public middle school. Multiple data were collected: writing journals, questionnaires, transmediated objects, technology artifacts, interviews, videos, and reflections. The constant comparative method was used to analyze and triangulate the data. Results revealed that students selected sign systems based on comfort and availability. In addition, students focused on macro-structural changes rather than centered on superficial changes that are more specific to the traditional editing process. Students attributed these revisions to transmediation, which enabled them to view their writing in a new way. Student attitudes and perceptions demonstrated that while they initially believed revision to be more editing-specific, at the end of the study students shared that revision should be more holistic, centering on transforming content and ideas in an effort to produce stronger writing.
DEDICATION

To my father, Jerry Roda.

Absence

This morning as low clouds skidded over the spires of the city

I found next to a bench in a park an ivory chess piece—

the white knight as it turned out— and in the pigeon-ruffling wind

I wondered where all the others were, lined up somewhere

on their red and black squares, many of them feeling uneasy

about the salt shaker that was taking his place,

and all of them secretly longing for the moment

when the white horse would reappear out of nowhere

and advance toward the board with his distinctive motion,

stepping forward, then sideways before advancing again,

the same moves I was making him do over and over in the sunny field of my palm.

- Billy Collins (2013, pp. 11-12)
ACKNOWLEDGMENTS

One of my fondest childhood memories is when I played “school” with my two younger brothers, John and David. After kisses goodnight from my parents, I would sneak into their shared bedroom, nudge them out of their cozy beds, and have them sit “criss-cross applesauce” on the carpeted floor while I assumed the role of teacher at the foot of their beds. My Fisher-Price School Days Desk® (complete with chalkboard and alphabet magnets), used-up workbook pages (with the answers crossed out), rainbow stickers, Harold and the Purple Crayon for read-aloud time, and a flashlight were all I needed. They were my captive audience at 10:00 p.m. That was my first taste of teaching, and I loved it! So thank you, John and David, for being my first “students.” It was because of this feeling that I decided to make teaching my second career choice, which should have been my first career all along.

To my Mom, thank you for listening to my ideas throughout this process and encouraging my creativity. I appreciate the advice you have given me. You have played an integral part in my success, and for that, I am grateful!

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To my friends, for forgiving me when I’ve holed myself up for the last four years. Kristine and Tom, you are the bestest friends, math teachers, and travel companions anyone could ever have. Jean, without your interest in my flash fiction work, this entire
dissertation would not have happened. Heather, for our early morning bus stop talks and Euchre games. Chad, Rachel, and Karen, a dynamic friendship trio, I will always cherish your support and humor. I am so lucky to have met such intelligent, creative, and generous colleagues. My doctoral experience would not have been the same without you three.

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To Dr. Bintz, you may not be aware of your influence on me during our time together, but it is you who saw something in me when I was a Master’s student. You invited me into the academic writing world, and because of that I wanted to write and write some more. I will always cherish our coffee talks about literacy and life.

To Dr. Morgan, your class paved the way for me to research flash fiction. I have gained valuable ways to conduct research from your guidance as your graduate assistant. Thank you for your encouragement and assistance!

To my cooperating teacher and her students, all of whom became my students for fifteen weeks, thank you for opening your classroom to writing and risk-taking. I loved every minute of it! A special thanks to the students, for your willingness and eagerness to write, revise, transmediate, and learn from each other.

To my former students, I miss you and wish you much happiness in life.

Most importantly, to my daughter, Kassandra Dylan, and my husband, Bob. I love the laughter and love that fills our home.

Kassie, you were my inspiration. You may not have understood those moments when I had to write on the weekends or in the mornings, but I continue to strive to be the best role model in the world for you. Thank you for keeping our nightly picturebook reading time. It is and will continue to be the highlight of my day.

Bob, you have always dedicated your books to me. Now it’s time I return the favor. I love you.

Finally, to my heart ... keep going!
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CHAPTER I

INTRODUCTION

“Revision is looking over your writing for grammar, spelling, capitalization, and punctuation in school for corrections” – Amy, 7th Grade Participant.

“Revision is checking your writing for grammar, capitalization, punctuation, misspellings” – Jason, 7th Grade Participant.

Amy’s and Jason’s initial thinking about revision as “looking over” or “checking” one’s writing for grammatical errors is representative of many student writers in schools today. Numerous studies reveal students often view revising and editing interchangeably during the writing process (Beach, 1979; Beason, 1993; Bridwell, 1980; Chanquoy, 2001; Crawford, Lloyd, & Knoth, 2008; Faigley & Witte, 1981; Fitzgerald & Markham, 1987; Graves, 1979; Humphris, 2010; Monahan, 1984; Sommers, 1980). Fitzgerald (1987) noted that revision definitions in research rarely exist. Therefore, Fitzgerald developed a working definition of revision that builds upon the work of researchers like Beach (1979), Bridwell (1980), Faigley and Witte (1981), Flower and Hayes (1981), and Scardamalia and Bereiter (1983). For the purpose of this study, I have adopted her definition of revision shown below:

Revision means making any changes at any point in the writing process. It involves identifying discrepancies between intended and instantiated text, deciding what could or should be changed in the text and how to make desired changes, and operating, that is, making the desired changes. Changes may or may
not affect meaning of the text, and may be major or minor. Also, changes may be made in the writer’s mind before being instantiated in written text, at the time text is first written, and/or after text is first written. (Fitzgerald, 1987, p. 484)

Fitzgerald’s definition positions revision as what drives the writing. It clearly distinguishes revision as something a writer can do both mentally and physically. Furthermore, changes in revision can be major or minor and is a process that identifies discrepancies between what the writer meant to say versus what was actually written.

Compared to revision, experienced writers regard editing as an important element in writing that happens at the end stage of the writing process, prior to publication, when grammatical errors, such as punctuation and spelling are eradicated in order to provide fluidity for the reader (Murray, 2004; Smith, 1994; Zinsser, 1976). Sommers (1980) noted that the reason inexperienced writers confuse editing with revising, is that they concentrate on surface-level changes, while experienced writers make revision decisions at all levels. Flower et al. (1986) stated that for many students, “Revision is not a generative practice, but appears to be a set of rule-governed actions for proofreading and correcting” (p. 16).

With this thinking, it is no wonder that when asked when they revise, students reply, “when I’m done” or “at the end” (Humphris, 2010). However, Murray (2004) suggests that revision is not something that should occur at the end of the writing process but is something that should happen from the start. Murray believed that writing divulges what the author knows and does not know; what the author thinks and feels, and is essentially, a vulnerable act. There is a feeling of being revealed … exposed. This is
especially true for inexperienced writers. Editing, when perceived as a placeholder for revision, creates no surprise why students view it as a means to an end (e.g., a practice that could increase their score), or even worse, as punishment – one that is tedious, mechanical, and boring (Chanquoy, 2001; Hillocks, 1982; Humphris, 2010; Smede, 2000) rather than a creative and recursive act.

Rationale for Study

There is a lack of revision instruction in schools (Fitzgerald, 1987; Fitzgerald & Stamm, 1990; Hillocks, 1982; McCutchen, Francis, & Kerr, 1997; Patthey-Chavez, Matsumura, & Valdes, 2004; Sunflower & Crawford, 1986) even though experienced writers view revision as fundamental to the writing process (Goldberg, 1986; Lamott, 1994; King, 2000; Murray, 1978, 2004; Zinsser, 1976). Furthermore, revision research is one of the most underrepresented and understudied aspects of writing in schools (Butterfield, Hacker, & Albertson, 1996; Fitzgerald, 1987; Fitzgerald & Stamm, 1990; Haar & Horning, 2006; Harper, 1997; van Gelderen, 1997). In 1978, Donald Murray identified revision as, “one of the writing skills least researched, least examined, least understood, and – usually – least taught. The vast majority of students, even those who take writing courses, get away with first-draft copy. They are never introduced to the opportunities of serious revision” (p. 85). Unfortunately, almost forty years later, Murray’s statement is still accurate.

A lack of revision instruction in schools may stem from less time devoted to writing instruction overall (Applebee & Langer, 2006; Cutler & Graham, 2008; Fitzgerald & Markham, 1987; Gilbert & Graham, 2010; Graham, Harris, MacArthur, &
Fink-Chorzempa, 2003; Graham & Perin, 2007; Harper, 1997; Nagin, 2003). According to a recent study conducted by Applebee and Langer (2011) across the four core subject areas in school, only 7.7% of instructional time was devoted to extended writing, which is identified as writing that consists of at least one paragraph. When there is little time devoted to writing, quick fixes in grammatical errors (editing) may take less instructional time than the time needed for students to think deeply about their writing. This could also be attributed to the inauthentic forms of writing students have become accustomed to completing in class (Applebee & Langer, 2009, 2011). For example, worksheets and short answer responses may not require the restructuring of ideas and expansion of thinking needed when deep revision takes place.

For these reasons, students may develop an inability to understand how revision contributes to better writing, and more importantly, how to achieve better writing through revision strategies (Baer, 2008; Bridwell, 1980; Fitzgerald & Markham, 1987; Flower, Hayes, Carey, Schriver, & Stratman, 1986; Hillocks, 1982; Keen, 2010; Kindzierski, 2009; Yagelski, 1995). When revision is taught successfully (through reflection, conferencing, positive teacher feedback, specific instruction linked to reading strategies, including the expectation of multiple drafts in writing), students not only revise more, but at a deeper level (Baer, 2008; Bardine & Fulton, 2008; Keen, 2010; Muldoon, 2009; Peterson, 2003). Moreover, students benefit from learning how to revise; these benefits include an increased level of confidence (Beach, 1979; Fitzgerald & Markham, 1987; Flower et al., 1986; Freppon, 1999; Keen, 2010; Peterson, 2003) and a gain in critical reflection opportunities (Baer, 2008; Muldoon, 2009).
Noting that research on revision was at a pivotal point in 1987, due to an increased number of cognitive models of revision, Fitzgerald stated that a “factor in the productiveness of new research is the degree to which researchers can invent new methodologies and research designs, or better utilize existing ones” (1987, p. 497). This point is still relevant today.

One way to help students rethink revision as an afterthought in the writing process and remove misconceptions that revising is no more than an error hunt for mistakes is for students to engage in the revision process in a new way. Teaching revision does not need to be confined to a language-dominated point-of-view, but rather, it could include other modes of communication (also known as sign systems). Incorporating multiple sign systems (e.g., art, drama, music) in the writing process stems from the notion that learning can be powerful in many modalities. Moreover, including transmediation, the process of taking understanding from one sign system and moving it into another in order to generate meaning (Suhor, 1984), may change the conversation regarding revision to allow learners to “re-see” their writing, thus providing students accessibility and meaningfulness that they might have lacked in previous revision experiences.

Transmediation paired with revision could allow students to re-see what they have written and acquire new possibilities in learning how to revise that are based on the intuitiveness, feeling, and aesthetics of their thinking. Sommers (1980) stated that inexperienced writers are unable to look at their work again with a different mindset. Therefore, if students are better able to see their writing in a different sign system, transmediation could encourage students to delve more deeply into content-level changes
rather than focus on grammatical concerns, which can also alter their overall perceptions of revision. This means that transmediation could provide opportunities for students to look at the *generativeness* of their writing rather than center revision on superficial, detectible changes. Furthermore, tapping into multiple sign systems could further enhance student thinking and motivation for deeper revision. Graves (1983/2003) wrote, “If teachers are to help children control their writing, they need to know what children see, and the process and order of their seeing” (p. 151). Transmediation integrated with the revision process could allow teachers and students to potentially “re-see” their writing.

**Purpose Statement**

The purpose of this naturalistic inquiry study was to investigate seventh grade students’ possible changes in both writing and attitudes and perceptions regarding revision when paired with transmediation (movement between and among sign systems, such as drawing, music, drama) in the writing process. Specifically, this research focuses on students’ thinking concerning why and how they revise when transmediation is part of the writing process. Currently, little research addresses revision paired with transmediation. This study aims to fill a gap in revision research that promotes the inclusion of multimodality in writing that may offer a new direction in how revision is taught and learned.

**Research Questions**

The following three questions guided this study:
1. What particular sign systems do seventh grade students choose during revision, and why do they select these sign systems?

2. How does seventh grade students’ writing change based on revision strategies after engaging in transmediation?

3. In what ways, if any, does transmediation enhance seventh grade students’ thinking about revision, specifically, regarding their attitudes and perceptions of revision?

These three research questions examine how various sign systems might be potential tools for students during the writing process, specifically during revision, and center on three topics for investigation during this study. First, I investigated which particular sign systems students used when given the opportunity to engage in transmediation and why students selected these sign systems. Second, I investigated changes that occurred in student writing over the course of this study. This includes macro-level changes, such as inserting, rearranging, or deleting text and micro-level changes, which include word substitutions or sentence restructuring. Third, I investigated students’ perceptions and attitudes of revision, including how they think about revision both pre- and post-study, and whether transmediation changed their thinking regarding why and how they revised.

Theoretical Framework

The theoretical framework for this study consisted of components from semiotics and new literacies. Semiotics is the study of signs. A semiotic framework includes a focus on the social nature of learning and specifically includes multiple sign systems,
which is central to transmediation. In semiotics, the learner is an active participant in the
culture that surrounds him/her in order to reconstruct knowledge within his/her own
framework of understanding (Danesi, 2007; Halliday, 1978). This occurs through
mediation and is specific to the culture surrounding this reconstruction of knowledge
(Eco, 1976; Gee, 2012; Street, 2003). Coker and Lewis (2008) noted that writing is not
only a complicated process but is situated in the social context of the writer’s
surroundings.

In new literacies, text can be considered both print and nonprint, including various
characteristics associated within each text’s mode. For example, text can now mean a
drawing, play, song, dance, or mathematical equation. New literacies integrate, “print,
visual, and audio texts of cultural and linguistic diversity and includes communicative
skills of speaking, listening, writing and reading” (Hagood, 2000, p. 312). Additionally,
new literacies include studying new dimensions to text formats, such as layout and design
features, which create new reader expectations (Barone & Wright, 2008).

Both semiotics and new literacies place text as more than written form. The
foundation for both also ascertains that meaning can be derived from both linguistic and
nonlinguistic representation, such as music, dance, and art. Furthermore, semiotics and
new literacies are grounded in a sociocultural approach to literacy. As Hagood (2000)
noted, “Those who support a sociocultural approach to literacy learning oppose a
monolithic and self-contained definition of literacy and, instead, claim that literacies are
political, in that, they are dynamic and inextricably linked to social, cultural, and
historical factors” (p. 312). Overall, this framework allows me to base this study’s
premise on the principle that other semiotic modes (sign systems) are central to meaning making within a writing curriculum (Ranker, 2006).

**Sign Systems and Transmediation: Significance to the Theoretical Framework**

Students have several outlets to communicate, whether it is through writing or other sign systems. However, while at school, students are usually limited in their use of sign systems other than language and math (Albers, 2001; Bustle, 2004; Leland & Harste, 1994; Semali & Fueyo, 2001; Smagorinsky & Coppock, 1994). Short, Kauffman, and Kahn (2000) refer to this dichotomy between in-school and out-of-school sign system potentials, explaining:

> In their lives outside school, learners naturally move between art, music, movement, mathematics, drama, and language as ways to think about the world. They talk and write, but they also sketch, sing, play, solve problems, and dance their way to new insights. It is only in schools that students are restricted to using one sign system at a time to think. (p. 160)

Sign systems are defined as modes of communication (e.g., music, drawing, movement, and math) to convey meaning. In fact, humans naturally manipulate these forms of communication, weaving in and out of them, and using them symbiotically in order to make sense of the world. Also referred to as multiple ways of knowing (Leland & Harste, 1994), multiple sign systems have great importance in the way humans communicate; studying how these modes are used to create meaning can transform literacy learning by connecting students’ out-of-school communication with in-school communication as noted in the quote above.
Charles Suher (1984), who coined the term transmediation, defined it as the “translation of content from one sign system into another” (p. 250). For example, if I wrote a short story and then recast my thinking about the short story, translating it into a drawing, transmediation has occurred. Transmediation provides students with opportunities to engage in generative and reflective thinking since they must create their own connection between sign systems (Hoyt, 1992; Siegel, 1995). Thus, transmediation will not only assist connections for the learner, but it will also make links for the learner’s peers since students can also learn from one another.

Transmediation also opens up possibilities for abductive thinking, a form of logic that is built on intuitiveness and insight rather than on logical conclusions stemming from facts and information as in deductive and inductive thinking (Deely, 1990). According to Harste (in press), abductive thinking invites students to delve more deeply into imagination and creativity. He argues that the arts and other “vehicles to support abduction are in short supply in a discipline-based school curriculum” (p. 19). With standardization claiming much of the instructional time in schools, abductive thinking may be less emphasized, especially since standardized testing places emphasis on logic that can be pulled from facts rather than feelings and hunches.

Instead, transmediation encourages abduction by using a range of texts and generating knowledge between and among these modes since this movement, or mode switching, can allow students to transform the meaning and original intent of a sign to create new signs. Cope and Kalantzis (2009) agree that “Conscious mode switching makes for more powerful learning” (p. 181). Transmediation using multiple modes
assists learners who can better represent their intended meaning in a generative way, and it provides choices in how to represent this meaning (Albers, 2001). Situating this study in transmediation also provides a way to navigate a language-based sign system without privileging it over other sign systems (Eco, 1976; Siegel, 1984, 1995).

**Significance of the Study**

This study is essential for three reasons. First, in a review of writing instruction, McQuitty (2011) specifically noted that more research was needed on how to successfully integrate multiple sign systems into the writing process. Moreover, little research exists in the field of writing in education that examines multiple sign systems with a specific emphasis on revision. For example, only two studies have briefly touched upon revision paired with multiple sign systems. Ernst (1994) examined students’ drawing and the relationship journal writing had to their artwork. She found that many students used writing as a way to take down notes of what they envisioned for their art, as a way to plan ahead, and as a way to reflect on their art experience overall. The writing in this study generated revision in students’ artwork. Clark (2012) examined middle school students’ collaboration during the writing process when they employed dramatic performance. Clark found that when students wrote and then performed their shared piece of narrative writing, students were better able to brainstorm, draft, revise, and edit, promoting “tellability” in their writing. However, the study did not investigate the revision process in great depth, nor did it examine students’ independent writing.

The existing writing research paired with multiple sign systems has previously centered on the general product of writing, but has underrepresented revision as part of
the conversation. These studies mostly examine a writing-drawing connection (e.g., Bustle, 2004; Dyson, 1986; Sidelnick & Svoboda, 2000; Smagorinsky & O’Donnell-Allen, 1998) or employ famous pieces of artwork as writing prompts to inspire and motivate students to produce writing (e.g., Ehrenworth, 2003). Other sign systems, such as painting, music, and dance all implement revision during the composition process. If revision is viewed as a reprocessing of ideas (Fitzgerald & Markham, 1987), where reprocessing includes not only addition to text, but also reconsiders original intentions, then this principle can work in any sign system. Hillocks (2007) noted this possibility stating, “If writers can see what they have written in a different way, they will be able to improve it” (p. 127). This study suggests using multiple sign systems to allow students to see their writing in a different way, which could be an additional way to study revision.

Second, including transmediation in the revision process could assist researchers in studying revision in a new way. Since there is little research to address revision from a semiotic stance, further study is needed in order to investigate the integration of multiple sign systems into the revision process. NCTE (2008) recommended a holistic approach toward teaching writing, emphasizing the process rather than the product. Literacy can incorporate other ways to work within the writing process, specifically the revision process, by using other modes (sign systems) to generate meaning. Allowing students to focus on the generative meaning could be a way to engage students more broadly. Newkirk (1989) agreed stating, “If we are to encourage decision making in the writing classroom, we need to view writing in the broadest possible way, as the interweaving of various symbol [sign] systems, which is how children tend to see it” (p. 60).
In this sense, writing can be taught by incorporating other sign systems into the process. Siegel (1995) argued that teaching and learning literacy should place emphasis on using more than just language. She wrote, “The tension between contrast and commonality is the very heart of transmediation inasmuch as the learner must find a way to rotate the content and expression planes of two different sign systems” (1995, p. 472). In this study, transmediation encourages students to create meaning where meaning did not previously exist, thus, higher level thinking and abductive reasoning are brought forth in the learner’s mind. This can provide students new ways to see their writing when they return to their original thinking, bringing in new insights from transmediation.

Third, many studies on revision have focused on the cognitive aspects of revisions (see Faigley & Witte, 1981; Flower et al., 1986; Scardamalia & Bereiter, 1983; and Sze, 2002). Instead, this study suggests researching revision as a way to develop an aesthetic sense of revision including more of a mind/body connection, or what Perl (1990) referred to as “felt sense.” Perl believed that meaning is not discovered in writing, but rather, it is crafted through a process of “coming-into-being” (p. 145). Perl (1990) wrote, “Writers need to draw on their capacity to move away from their own words, to de-center from the page, and to project themselves in to the role of the reader” (p. 146). This process draws from one’s inner reflections and bodily sensations and is internalized during the writing process.

**Definition of Terms**

*Abduction:* The process of reasoning by creating a new concept based on an existing concept; a “hunch.”
**Editing:** The process of seeking out and correcting grammatical errors, such as punctuation and spelling in order to provide fluidity for the reader.

**Flash fiction:** Writing genre consisting of 250-750 words, evoking deep human emotion.

**Flow:** When the creative mind or body is stretched voluntarily to the limit of experiencing something engaging and challenging at the same time (Csikszentmihalyi, 1997; Gardner, 1993).

**Intertextuality:** The process of making connections between other texts to facilitate constructing meaning of new texts.

**Mode:** A form of communication, such as language, music, dance, drawing, movement and gesture, and math.

**Revision:** The recursive nature of making changes (major or minor) at any point in the writing process. These changes are caused by tensions in the writer’s mind, which may occur even before the act of writing begins, and in order to be resolved, must be implemented.

**Semiotics:** The general theory or study of signs and sign processes.

**Sign:** “Something which stands to somebody for something in some respect or capacity” (Peirce, 1931-1958/1999, p. 72); also referred to as a representamen.

**Sign system:** Human invented tools to construct and convey meaning; also referred to as multiple ways of knowing (Leland & Harste, 1994), or modes.

**Transmediation:** Movement between and among sign systems; the “translation of content from one sign system into another” (Suhor, 1984, p. 250).
**Writer’s workshop:** Collaborative writing opportunities to enhance the writing process with mini-lessons, conferencing, peer sharing, and exemplary writing models (mentor texts) to teach the craft of writing in any genre. The emphasis is on the process over product.

**Summary**

In sum, revision has been studied mostly from a language centric viewpoint. It is an understudied topic, and oftentimes viewed as an afterthought in classrooms rather than a central facet at the heart of quality writing. Little research has focused on including multimodality in the revision process. In this chapter, I provided a rationale and purpose of this study, along with three research questions. I also provided the theoretical framework in which this study resides and explained the significance of the study. Furthermore, working definitions of revision, transmediation, and sign systems have been presented.

Chapter 2 includes a review of the related literature. Along with this overview, an historical analysis on trends in revision research and sign systems will be included. Chapter 3 describes a detailed description of the naturalistic inquiry methodology that informed the research questions along with the data collection and analysis procedures used in a naturalistic setting. In chapter 4 I present the findings of students’ sign system choices and revision decisions in their writing along with changes in writing, including perceptions and attitudes about revision. Chapter 5 includes discussion of these findings and implications when multiple sign systems are an integral part of writing.
CHAPTER II
REVIEW OF LITERATURE

With the inclusion of sign systems and transmediation in the revision process, this study addresses a review of literature across three topics: semiotics, revision in writing, and arts-based learning. First, I will provide a brief history of semiotics, followed by research on how sign systems and transmediation have been studied in education. Furthermore, I will share the numerous benefits transmediation has on learning and how transmediation can assist revision in writing. Then, I examine the research on revision, noting trends over the past three decades. Finally, I end by sharing the significance arts-based learning has on education, especially how it relates to this study.

Semiotics, Sign Systems, and Transmediation

Telling someone what a symbol “meant” was like telling them how a song should make them feel – it was different for all people.

--- The DaVinci Code (Brown, 2003, p. 46)

Novels such as The DaVinci Code (Brown, 2003) and The Name of the Rose (Eco, 1983) and contemporary TV shows including Psych and The Mentalist highlight the intuitive nature of the lead “detective” to solve the case (or crime) by noticing and interpreting clues or cracking codes. Detective stories are semiotic inquiries in disguise. Humans, by nature, read the world around them, and this requires an unconscious use of reading signs. Both The DaVinci Code's Robert Langdon, and his Ph.D. in “symbology”
might be fictional, but what is real is the study of signs and sign systems spanning across all disciplines and fields, including education.

In order to provide an overview of the research on sign systems and transmediation, how they entered the field of literacy education, and how they pertain to this study, it is essential to understand the philosophical and theoretical underpinnings from which they originated: Semiotics.

**Semiotics, Sign Systems, and Transmediation Defined**

Using semiotics as the foundation for this study will allow ideas of sign systems and transmediation to be used during research of how students communicate through their expression and construction of signs, both linguistically and nonlinguistically. Semiotics is referred to as the study of signs and sign processes. In addition to the natural signs created in the world, humans read and create signs in order to find meaning in them. A friend raises her wine glass – a toast; a student raises his hand in class – an indication he would like to speak; a stranger forms a “V” with her index and middle finger – called a peace sign, but all are signs. A sign is most commonly defined as something that can stand for something else in some way.

Signs can be created through human invented tools called sign systems, also referred to as multiple ways of knowing (Leland & Harste, 1994) or modes (e.g., language, music, dance, drawing, movement, and math) to construct and convey meaning. When this meaning is recast between or among sign systems, transmediation occurs (Alvermann, 2011; Berghoff, 2007; Leland & Harste, 1994; Siegel, 2006; Suhor, 1984). The definition and creation of transmediation emerged from a high school English
classroom (Suhor, 1984), but the study of signs and sign systems has been in existence for over 2,000 years.

**Historical Review of Semiotics**

Semiotics has a long and rich history; its earliest moments tracing back to ancient Greece when Hippocrates (460? – 377? BC), founder of medical science, identified a way in which patients could attribute their symptoms and associate them with a particular disease (Sebeok, 1994). He coined the term *semeion*, meaning mark, or sign, referring to a culturally-based medical symptom. This idea continued to grow throughout Greece, and when it reached Aristotle’s (384 – 322 BC) time, his mentor, Plato, disregarded this notion, stating that humans were incapable of finding knowledge from sense experiences (Danesi, 2004). However, Aristotle believed in pursuing a mind, body, and cultural connection with human knowing and expanded it to become semiosis, the interpretation of signs, or, the science of meaning. His triadic relationship of words consisting of the physical part of the word, the referent, and its creation of a meaning are considered to be the basis of modern day semiotics (Danesi, 1994).

Extending Aristotle’s thinking, St. Augustine (354 – 430 AD) believed the sign to be not just arbitrary (conventional), as Aristotle noted, meaning, words, for example, did not have any reflection or reference to the properties with which the word resembled, but also nonarbitrary, meaning, a natural sign, one that is produced naturally (e.g., a bodily symptom) (Todorov, 1982). It would be several hundred years later until philosopher John Locke (1632- 1704) introduced semiotics as a formal study of signs, one in which
he defined as a “doctrine of signs” (Danesi, 2007), and the definition that Charles Sanders Peirce would adopt.

**Saussure or Peirce?: Two semiotic traditions.** Semiotics continued to grow in the Western world, however, into two distinct camps: Swiss linguist, Ferdinand de Saussure (1857-1913) and American philosopher and mathematician, Peirce (1839-1914), did not know of each other’s work, but they each created a new way of looking at signs.

Saussure analyzed signs according to two areas: the signifier, which is a form of the actual sign, and the signified, which is the idea that is associated with the sign (Saussure, 1916/1999). An example of this would be a red rose (signifier) is associated in many cultures to represent love (signified). These relationships are dynamic in the fact that meaning can be subjective depending on its cultural implications and surroundings. This implies that the bond between signifier and signified is also a communicative device, meaning there cannot be one without the other (Eco, 1976). Considered to be language-centered and dualist by many theorists, Saussure regarded signs as arbitrary since there is no natural connection between the form and idea, as in the word “dog” and the concept of dog. Humans must learn these connections. Semiology interprets signs in this manner (Berger, 1984).

Pierce’s thinking differed from Saussure in the way humans interpret and create signs. According to Peirce (CP 1931-1958/1999), a sign, or representamen, is “something which stands to somebody for something in some respect or capacity” (p. 72). He argued that signs are relatable and have connection (see Figure 1).
Peirce regarded semiotics, which he called semiosis, in pragmatic terms rather than adopt Saussure’s structuralist views (Deledalle, 2000). For example, Peirce considered only symbols to be arbitrary, since he viewed symbolic representation as cultural perceptions and feelings. Throughout his classification and creation of three distinct trichotomies, meaning, the relationship in which the sign interacts with itself, with the object, and with the interpretant, Peirce identified 66 forms of signs, some subcategories of the signs mentioned here, but the most-referenced signs by semioticians today are the icon, index, and symbol (Colapietro, 1989).

Peirce classified signs through three levels of meaning (see Table 1 below).
Table 1

*Peirce’s General Trichotomy of Signs*

<table>
<thead>
<tr>
<th>Levels of meaning</th>
<th>Signs in reference to themselves (nature of signs)</th>
<th>Signs in reference to their objects</th>
<th>Signs in reference to their interpretants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firstness</strong></td>
<td>Qualisign (a quality) e.g., an adjective in language</td>
<td>Icon (resembling an image of the sign) e.g., a drawing, a map, onomatopoeic words such as drip, drop</td>
<td>Rheme (concept) e.g., the meaning that the adjective green brings to a sentence</td>
</tr>
<tr>
<td>(body/sense-based)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondness</strong></td>
<td>Sinsign (an object or event that draws attention to a particular object) e.g., a pointing finger, the adverbs here and there; pronouns</td>
<td>Index (pointing out something real or imagined in time-space relation) e.g., a pointing finger; the words this and that</td>
<td>Dicent (statement) e.g., the meaning elicited by the word here and/or there</td>
</tr>
<tr>
<td>(mind/cause-effect-based; otherness)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thirdness</strong></td>
<td>Legisign (a law or habit) e.g., the sound of a referee’s whistle in a football game; a police or ambulance siren</td>
<td>Symbol (refers to an arbitrary or abstract notion) e.g., hand gesture “V” sign to represent peace; unique to human species</td>
<td>Argument (reasoning made to demonstrate truth or falsehood); through deduction, induction, and abduction</td>
</tr>
<tr>
<td>(culture-based; mediation)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The trichotomy is based on how the sign relates to itself, to its object, or its interpretant. Firstness is based on the personal, sense-based meaning of a sign. Secondness expands outward to include a sense of otherness, and thirdness, which is the most abstract, is a culturally-mediated level of meaning. For example, symbols can only be represented in thirdness due to their arbitrary nature created within its culture. At the most abstract level, a sign, in reference to its interpretant, can only be created through deduction (process of reasoning by relating a general concept to a specific one), induction (process of reasoning by relating specific instances to create a general pattern), and abduction (process of reasoning by creating a new concept based on an existing concept; a “hunch”) (Danesi, 2000a). Deely (1990) equated this trifold process to a spiral, defining it as “the
process whereby alone new ideas are seized upon – ideas further to be developed
deductively and tested inductively, beginning again in the cycle” (p. 6).

Due to Peirce’s influence on semiotics in the twentieth century, researchers in the
United States continued to transform semiotics into a field of study, a science, and, as
many argue, a method of research. Charles Morris (1901-1979), for example, used
semiotics to divide language analysis to include syntactic, semantics, and pragmatics
(Sebeok & Danesi, 2000), while Thomas A. Sebeok (1920 – 2001), famous for equating
semiotic study to a spider’s web, entrapping many who examine it, expanded semiotics to
include all life (biosemiotics) and animal signals (zoosemiotics) as working in a semiotic
fashion (Danesi, 2004). Rosenblatt (1978) noted her transactional theory was heavily
influenced by Peirce’s triadicity model to incorporate her thinking of the reader, the text,
and the poem. She wrote, “Peirce’s model had from 1938 on strengthened my
transactional view of language. I understood that language is socially generated.
However, I saw that language is always individually internalized in transactions with the
environment at particular times under particular social and cultural circumstances” (p.
182). This is no surprise considering the lineage between Dewey, who at one time was
Peirce’s student, and the influence Dewey had on Rosenblatt, especially regarding
transaction versus interaction.

International Semioticians. Other philosophers around the world, such as
Roman Jakobson, Roland Barthes, M.A.K. Halliday, and Umberto Eco assisted in
making semiotics more contemporary. Building upon the idea that signs are
communicative in nature, Halliday (1978) argued that the essential feature of a text is its
interaction. He stated that in order for meanings “… to be exchanged between members, they must first be represented in some exchangeable symbolic form, and the most accessible of the available forms is language” (p. 140). The exchange of meanings is an interactive process, thus evolving language as more of a social-semiotic process. Hence, the field of social semiotics emerged, one in which “new literacies” claims its materialization.

However, Eco’s novel, The Name of the Rose (1983), brought semiotics into mainstream popular culture (Danesi, 2004). Read as a detective thriller, Franciscan monk, William of Baskerville, is requested to help a medieval monastery identify and solve a series of murders within this closed society. Adso, his trusty apprentice, learns how to “read” the signs that surround them over the course of the novel, which leads to solving the case.

Eco (1976) decisively argued the difference between studying semiology (as with Saussure) or studying semiotics (as with Peirce) noting, “anyone inclining toward a study of sign systems that has no necessary dependence on linguistics must speak of semiotics” (p. 30). He also introduced the radical notion that a sign is anything that can be used to tell a lie (1976, p. 7). Siding with Peirce’s belief that the interpretation of one sign creates another, which makes all signs interconnected, Eco called this “unlimited semiosis,” since in order to interpret a sign, a new sign is generated, thus creating a transformation of thinking, which then leads to the creation of another sign. Eco’s (1976) belief that “the sign always opens up something new” (p. 44) generated new thinking on
semiotics to include how meaning can form between and among other signs, shaping new potentials for meaning. Thus, transmediation entered into the equation.

**Emergence of Transmediation**

Charles Suhor (1984) adopted Peirce’s semiotic stance into his high school English classroom where he coined the term transmediation. Suhor defined transmediation as the “translation of content from one sign system into another” (p. 250). According to Suhor, humans naturally engage in multiple sign systems at once, like language with gestures when speaking, or songwriters composing both lyrics and accompaniment at the same time. Suhor studied his 11th grade students reading Steinbeck’s *Of Mice and Men*. He recognized that the students who avoided doing a traditional written response to the book, but instead employed a different mode (such as drawing or song), generated deeper understanding to the story’s complex themes.

Additionally, Suhor noticed that by explaining their intentional decisions used within chosen sign systems, students also increased engagement with peers, became more reflective in their own thinking, and created “metaphors” for their understanding of the novel and its characters. In this study, he further breaks down transmediation into two categories: literal and imaginative, each having significant difference in generating meaning. He uses the example of reading *Huckleberry Finn* and creating a raft for understanding as literal transmediation, whereas writing while listening to music from that era would be more imaginative transmediation.

Siegel’s (1984) dissertation, *Reading as Signification*, continued to work with Suhor’s notion of transmediation in an elementary classroom and found that
transmediation created new connections for students that were not originally there, which increased generative and reflective thinking. Her work also demonstrated the need for an inquiry-based curriculum model in schools.

**Emergent literacy research investigates transmediation.** During the 1980s Harste, Woodward, and Burke (1984) and Dyson (1982, 1986) worked with young children to pave the way toward a deeper analysis of semiotics, specifically how sign systems naturally occur in emergent literacy. In her seminal work, Dyson (1982, 1986) observed how kindergarteners chose not to differentiate between drawing and writing. Instead, Dyson found that young children overlap drawing, writing, and oral storytelling sign systems during early writing acquisition, creating a natural interrelationship between these sign systems. She argued that children need time to explore their reasons and purposes from writing, which then evolves over time.

Harste, Woodward, and Burke (1984) found that in order to form meaning, children move freely between the sign systems of writing and drawing. These sign creations encourage literacy. Harste et al. identified children reading signs as a form of literacy, which carries over into their writing. For example, when children read environmental print that is nonlinguistic-based, such as company logos (think Crest logo on a toothpaste tube), they interpret and make meaning with these signs as easily as if they were reading words. Harste et al. concluded reading signs is a generative process, stating, “Learning to mean in writing … involves transmediation from one form of knowing to another” (p. 177).
Both Harste and Dyson’s work highlight how sign systems naturally overlap for children. Students’ out of school literacy experiences include interactions with multiple sign systems, such as company images, and they use these communication systems to create meaning in an intertextual way, meaning, signs overlapped to create new signs. By extending the definition of text, students’ can find connections through naturally occurring symbiotic events in their lives (Short, Kauffman, & Kahn, 2000).

**Multiliteracies as the new transmediation.** With the New London Group’s (1996) theoretical framework questioning how to transform schools and school literacy, semiotics in education began to shift toward the evolution of what it means to be literate in a 21<sup>st</sup> century format. This foundational text set the tone for future theorists to incorporate what they coined “multiliteracies” and its social and cultural implications for use in education. Introduced by the New London Group (1996), the term multiliteracies expanded communication to include out of school literacies that involve students’ culture and dominant language. Multiliteracies stems from a social semiotic approach toward literacy providing an integrative framework that includes multiple modes of meaning making (Kress, 2010) and integrates, “print, visual, and audio texts of cultural and linguistic diversity and includes communicative skills of speaking, listening, writing and reading” (Hagood, 2000 as cited in Damico & Riddle, 2006, p. 34). Multiliteracies also add a new dimension to text formats, creating new literacy expectations (Barone & Wright, 2008). Furthermore, these text formats extend possible units of analysis for research by broadening text to include aspects of culture and society (Flewitt, 2011).

When students are able to work within a multiliteracies framework, they are more
apt to express themselves via intelligence, artistic talent, and imagination (Kist, 2005). Thus, this framework allows students to see themselves as intelligent and imaginative. Cummins (2006) acknowledged that multiliteracies pedagogy builds on students’ “cultural and linguistic capital” (p. 53) that they bring to school. This is where works by Gee (1996/2012), Kist (2005), Kress (2003), and Street (2003) have branched into “new literacies”, centering on discourse analysis, critical literacy, and the sociopolitical underpinnings attributed to semiotics.

Furthermore, a multiliteracies framework includes a shift of viewing multimodality from print to digital media. Over the last decade, research has included how multiple sign systems transact with one another via technology, where the central focus places students’ sign system making as central to understanding their literacy learning (Jewitt, 2008; Kress, 2010; Chisholm & Trent, 2013; Ranker, 2007, 2009; Shanahan, 2013). These studies observed image-language relations through digital compositions, recognizing that a new understanding of multilteracies’ metalanguage (codes and conventions) and metafunction (types of meaning) needs further attention. They also recognize how digital technology affords the creator different opportunities to compose multimodal texts on a different plane (the computer screen).

**Sign Systems and Transmediation in the Classroom**

Semiotics centers on meaning and logic, but little research on transmediation has been done over the last thirty years in education. In the newest edition of the *Handbook of Research on Teaching the English Language Arts* (Lapp & Fisher, 2011), transmediation is not mentioned, nor are the other terms synonymous with
transmediation, such as *synaesthesia* (Pahl, 1999), *transduction* (Kress, 2003; New London Group, 1996), or *semiotic import* (Ranker, 2007). However, there is one chapter devoted to semiotics (see Siegel & Rowe), but its goal is to connect semiotics with technology and literacy.

**Methodology of Literature Review**

Research studies conducted in PreK-16 educational settings in the United States, the United Kingdom, Australia, New Zealand, and Canada over the last thirty-one years (1982 – 2013) appear in this literature review. These studies were published in peer-reviewed education journals, peer-reviewed education conference papers, and book chapters. While a few books have been published on sign systems and transmediation (see Albers & Sanders, 2010; Berghoff, Egawa, Harste, & Hoonan, 2000; Gallas, 1994; Harste, Woodward, & Burke, 1984; Semali, 2002), they were omitted in this review since my purpose is to specifically focus on how research was conducted and presented to the education community through accessibly disseminated material, such as academic journals. Furthermore, this review examines research that can better assist me in both seeking out gaps in the literature, and providing insights into research methodology and methods from a semiotic viewpoint. Studies presented in journal articles are more adaptable in replication and present a more condensed view of the findings and implications to use as a heuristic versus books, which may or may not be applicable to my dissertation situation, such as age range, content, etc. and may be slanted more toward the theoretical over the practical nature of semiotic inquiry.
A search for these studies was conducted on the following databases: Academic Search Complete, Education Research Complete, Education Full Text, Middle Search Plus, and ERIC. Search terms included the following in various combinations: students, teacher education, semiotics, transmediation, teaching, English, language arts, literacy, arts based literacy, sign systems, classroom, multiple ways of knowing, synaesthesia, transduction, semiotic import, and semiotic mediation. Additionally, footnote chasing (which I call reference rewind) produced articles. This cycle continued until references repeated themselves, revealing that the search was exhaustive.

To narrow further, I searched for studies that contained explicit research questions or purposes, collected data, and described findings. From these results, 45 fit the above mentioned criteria. Methodologies employed were nine case studies (e.g., Sidelnick & Svoboda, 2000), five ethnographies, (e.g., McCormick, 2011), 29 participant-observers (e.g., Harste, Leland, Grant, Chung, & Enyeart, 2007), and two autoethnographies (Albers, 2001; Hoyt, 1992).

An overview of the studies I examined and highlight in this review include fifteen studies centering on the use of multiple sign systems (e.g., Gallas, 1991). Six studies centered on the use of dramatic play in early childhood literacy. One study focused on dance (Smagorinsky & Coppock, 1995); one study analyzed gesture (Wilson, 2003); one study focused on music (Begoray, 2008), and seven studies analyzed art (e.g., Whitin, 1996). There were two studies that focused on art and music (e.g., Berghoff, Borgmann, & Parr, 2001) and one study centered on art and dance (McCormick, 2011).
More importantly, for the purpose of delving into how transmediation shapes writing, only twelve studies were found to include an emphasis on writing: eleven studies analyzed art and writing (e.g., Dyson, 1986) and one study (also in the dramatic play category) focused on dramatic play and writing (Rowe, Fitch, & Bass, 2003) with young children.

Methods of data collection among the studies selected for this review included video recordings, audio recordings, student samples, interviews, journaling, observations, photographs, and “stimulated recall” (Smagorinsky & Coppock, 1994, 1995), which centers on participants’ reflective process and intentional decisions rather than the product.

**Multiple Sign Systems Research**

If in the variety of the systems of signs, one discovers systems that differ from others by their specific properties, one can place them in a special class without removing them from the general science of signs. The number and range of concrete objectives that present themselves to semiotics argue for their systematic elaboration around the world. (Jakobson as cited in Sebeok, 1991, p. 77)

The following research is separated by sign systems (although some overlap will occur) in order to highlight various studies and scholars in these systems of meaning. The categorization and breakdown by sign systems will also display a gap in the literature regarding each sign system, which will encourage much-needed research on the
implementation of using this particular sign system (and others in an integrated way) to expand students’ learning and literacy in the classroom, as well as in their lives.

**Multiple sign systems.** The heart and soul of transmediation is rooted in the use of multiple sign systems. When given the opportunity, students are able to think generatively and reflectively using transmediation since it provides multiple opportunities for students to create connections that might not have been there while learning in a single sign system. The 15 multiple sign system studies over the last 30 years indicate this. There are benefits to include and implement multiple sign systems and transmediation in the classroom. For example, multiple sign systems play an essential role in forming and extending aspects of curriculum (Gallas, 1991). Building on authentic learning situations, multiple sign systems have the potential to create an inquiry-based curriculum (Gray, 2006). Inquiry is a semiotic act when it is experienced as a meaningful act, meaning, students are engaged in examining questions that are significant to their lives (Short & Kauffman, 2000; Youngquist & Pataray-Ching, 2004). This is commonly seen when children engage in play (Youngquist & Pataray-Ching, 2004) and has the potential to allow students to consider multiple perspectives (Berghoff, 1993). For example, Fueyo (1991) observed that children need to have class time to engage and play in a variety of sign systems using manipulatives in order to produce creative writing.

Multiple sign systems can generate an aesthetic stance on teaching and assessment (Berghoff, 2007), meaning, the use of multiple sign systems in the classroom can also be an enjoyable act of learning for both teacher and student. Short, Kauffman,
and Kahn (2000) encourage teachers to create a systemic way of learning rather than using multiple sign systems as an end of unit assessment. Berghoff (2007) encourages teachers to use multiple sign systems as tools to learn children’s lived experiences, which will highlight the ways they interpret the world and make meaning within it. For example, Sumida and Meyer (2006) addressed a way to reform curriculum through a concept they coined $T^4$: transmission, transaction, transmediation, and transformation. Their research examined fourth and eleventh graders in Hawaii in how educated citizens read the world, prepare students for globalized futures, and what the ideal school day would need in order to implement this preparation. Through embracing students’ Hawaiian culture, using hula dance as one example, students were able to transmediate their understanding of indigenous birds through their native sign system of hula dance.

Multiple sign systems can also create an aesthetic stance on student learning. For example, Rausch, VanMeter, and Lovett (2002) worked with 25 at-risk adolescents in assisting them with social emotional issues via artistic vehicles, such as drawing, music, writing, drama, and storytelling. They recognized that adolescents found their sense of self through using these semiotic modes and understood their personal afflictions noting, “Such transformation of deep level emotion into a form that is interpretable by the individual and society appeared to provide a means of catharsis for the participants (p. 37).

Furthermore, multiple sign systems, such as art, music, math, movement, and drama help students to recast complex ideas into other forms, such as writing (Berghoff, 1993; Cowan & Albers, 2006). Understanding how to read and interpret multiple sign
systems enhances students’ reading comprehension in content areas, such as science, since many texts in this discipline appear in multimodal representation (Alvermann, 2011). It also generates deeper understanding for students regarding challenging content area concepts (Gallas, 1991).

**Dramatic play.** Drama enhances movement and gesture sign systems in authentic situations. Van Oers and Wardekker (1999) found authenticity holds children’s attention as they make meaning. However, they also recognized children would only play if they understood the meaning surrounding it (e.g., castle, shoe shop, railways). Meaning occurs in social contexts. For example, Rowe (1998) found that social interactions assisted students in their learning and making a “shared” meaning by playing out scenes in stories. She also realized that when children recreated scenes from books they found puzzling, they were able to problem-solve in a more efferent stance, meaning, they relied on information to guide their plan of action. Dramatic play can also boost oral language skills of English learners (Greenfader & Brouillette, 2013). Furthermore, Adomat (2009, 2012) found that process drama enhanced young children’s reading comprehension through meaning making. Process drama extended the notion of retellings and centered on dramatic exploration of deeper layers of meaning in the stories. By becoming characters in the various picture books, students were able to immerse themselves in the story, where they could better understand plot, characters’ motivation, point of view, and sequencing.

Overall, these studies show the importance drama has in meaning-making. By creating risk-free, exploratory environments, teachers can create lived-through
experiences for students, even as early as the toddler phase. Most importantly, through kid-watching, teachers can learn about their students’ out-of-school situations, since many will incorporate these into their play.

**Art.** According to Harste (in press), art “highlights seeing more differently, critical expression, abduction, and agency in the meaning-making process and as such supports critical literacies very much needed by 21st century citizens” (p. 14). Marjorie Siegel’s work (1984, 1995) recognized these benefits in students when they engaged in a practice called Sketch-to-Stretch. This strategy enabled students to visually symbolize what a reading meant to them through art. Siegel (1995) highlights how two studies helped students of all levels understand complex curriculum and readings through drawing. She also found metaphors to be quite helpful to students when remediating information.

Using art creates a recursive, symbiotic event for the learner (Leland & Harste, 1994; Smagorinsky & Coppock, 1994). To highlight this notion, Smagorinsky and Coppock (1994) found that 16-year-old Dexter generated new connections to a short story through drawing a graphic representation of it. His thinking about the story shaped the drawing (text) he produced, while at the same time, creating the drawing redefined his thinking of the story. Leland and Harste’s (1994) work also recognized this. They found transmediation encouraged reflection and supported learners in making meaningful connections. Pahl (1999) referred to this as working and thinking in a third dimension.

Kendrick and McKay’s (2004) research used drawing to connect with students’ outside-of-school literacy experiences. They found that very few children in grades 1 and
2 portrayed themselves as students in classrooms or depicted literacy events in a school setting. Students can participate in creating new roles for themselves, as well as the teacher, in a collaborative environment (Whitin, 1996). By thinking about events through various sign system lenses, students can take on new identities, seeking out questions such as, *what would an artist think about this topic?* (Leland & Harste, 1994). Sign systems then translate into research tools.

Overall, these studies reveal drawing as a necessary and natural way to communicate, especially for children who may struggle with language and regard drawing as a tool to assist students to move from image to word. Art is as powerful and predictable a sign system as language (Harste, Leland, Grant, Chung, & Enyeart, 2007).

**Art and writing.** Artists’ workshops and writers’ workshops, when used effectively in the classroom, have similar structures: they both provide choice, mini-lessons, collaboration, and reflection. Moreover, writing can be a tool in the artists’ workshop as a part of learning. Ernst (1994) stated, “Writing about the process of thinking and learning is essential to the artists’ workshop” (p. 47). Moreover, Ernst’s study revealed that writing helped elementary students revise their artwork. Students decide when best to use a particular sign system as well as communicate criteria for assessments (Bustle, 2004; Mavers, 2009). Clyde’s (1994) research opened a window to understand how children communicate best through their chosen sign system. She followed Douglas, a first grade boy, through his struggles of writing. By allowing him to explore his passion for drawing, she realized there are other ways of knowing that are less
verbocentric, meaning, language does not need to be the primary sign system for meaning.

Art also enhances cognitive ability, provides opportunities for multiple interpretations, and expands reading comprehension, which improves writing ability (Reilly, 2008; Unrath & Statz, 2011; Wolf, 2006). Smagorinsky and O’Donnell-Allen (1998) studied high school students’ character analyses of Laertes in Hamlet. By creating intertextual connections through drawing and writing in symbolic representation, students were able to better comprehend Laertes’ intentions. Art and writing can build upon each other, especially for students who struggle in reading and writing or are learning English as a foreign language (Reilly, 2008). For example, Sidelnick and Svoboda (2000) conducted a case study with seven-year-old Hannah. Labeled with learning difficulties and a troubled home life, Hannah’s reading and writing showed developmental delays. By allowing Hannah to draw her interpretation of and interaction with stories, researchers found that drawing increased her phonetic ability through connecting sounds to beginning letters in her pictures. Additionally, her confidence grew in her writing ability, and she could create sequential details in stories through writing.

These studies reveal the impact the arts can have on student engagement and learning. Through using art as a sign system to deliver meaning of stories, like Hamlet, or through writing their own stories, children will be able to transfer and communicate their understanding at a deeper level. More importantly, all studies reveal learning should not be confined to one modality and that literacy begins naturally as a multimodal event. However, schooling quite possibly forces the separation for children.
Music and art. Transmediation prepares teachers in creating democratic learning communities where diversity is valued (Berghoff, Borgmann, & Parr, 2003). Transmediation can “change the consciousness of students who want to become teachers” (Berghoff, Borgmann, & Parr, 2001, p. 7). Incorporating music and art in a two-semester unit on slavery, their study revealed pre-service teachers expressed a strong preference for using one particular sign system over another, and were somewhat resistant to using music in particular. They found that students’ lack of knowledge in music restricted their composing ability. Berghoff et al. (2003) found, however, that by positioning artwork and music lyrics as aesthetic objects, pre-service and in-service teachers could appreciate the value of an inquiry-based approach to learning.

Dance and art. McCormick (2011) studied sixth graders’ interpretations of poems through art portraits and choreography. She found that students’ use of these two sign systems affected how they interpret and create new texts. Not only did she focus on students’ reactions and responses, but she also studied how the three teachers conducted their language to critique and highlight comparisons of the poetry’s meaning to the specific sign system (art form) being used. Here, she found that teachers examined these texts via thinking like an audience member and provided a detailed description of the work, including a structural analysis of the art form. Through this “teacher talk,” students mediated through multiple sign systems gaining meaning from each one.

Music, dance, and gesture. While McCormick’s (2011) work highlighted dance, few studies have examined music, dance, or gesture as a single sign system in conveying meaning. In fact, this review of literature only reveals one study for each category.
Smagorinsky and Coppock (1995) focus on two high school females who changed their interpretation of the text through creating a choreographed dance. This study urges teachers to appreciate multiple interpretations through semiotic “toolkits,” which creates a transmediational environment for students.

While also focusing on kinesthetic learning, Wilson (2003) studied a multiage classroom of first and second graders who created tableaux scenes to help interpret text signs. By students’ translating understanding of the story into gestures, meaning grew, while also tapping into feelings and shaping thinking. Wilson’s honesty regarding her own feelings of avoidance of drama, admitting she only reserved it to holiday activities, adds a human touch to the study.

Unlike previous research in this review, Begoray’s (2008) study differs in the fact that she studied her preservice music teachers. This study revealed preservice music teachers benefited from taking literacy courses specializing in research, practices, and theories related to language literacy. Music majors in this study recognized music as having its own language, and more importantly, instructional strategies used in reading, such as graphic organizers and journal writing, assist in organizing highly abstract concepts in music. Surprisingly, when given the opportunity to study and discuss their thinking on music, most students went to a verbal sign system rather than a performance or music sign system.

Overall, this section implies literacy may not be regarded as performance. Much research is needed for bodily movement, especially through dance, as well as the implications these sign systems have when joined with other sign systems. Dance can be
a way of knowing for many students. “Dance has the capacity to be the muscle of the imagination, a magical invitation through the creative process to reimagine new worlds” (Snowber, 2012, p. 56). The study of music as alternative to writing should also be addressed. More importantly, what does this lack of research say about an unwillingness to participate in these particular sign systems? What is it about music and dance that potentially intimidates students? Or does this reveal more about teacher apprehensions?

**Math.** Five studies briefly discussed how students incorporated math as a sign system: (1) Whitin (1996) using concepts in pie charts; (2) Siegel (1995) discussing how to take challenging math concepts and turn them into drawings as metaphors in order to comprehend these concepts; (3) Leland and Harste (1994) allowing students to represent their understanding of stories through mathematical equations; (4) Short et al. (2000) discussing math diagrams; and (5) Mavers (2009) working with block manipulatives as visual representation. However, none of these studies focused in-depth on how or why students gravitated toward mathematics as a sign system to assist in meaning generation. Further research is needed to discuss relationships between math and other sign systems.

**Benefits and Challenges of Transmediation**

In all cultural matters it is the form of growth that enables us to understand the form of the existing product (Cassirer as cited in Berthoff, 1984, p. 260).

Harste (in press) wrote, “This process of ‘naming’ our world for purposes of making and sharing meaning is what literacy and the study of literacy are all about” (p. 2). Furthermore, Harste (1994) regarded transmediation as a highly literate process and
the “key process” (p. 1226) of literacy. He noted that when students are unable to communicate in one sign system, they may be able to better clarify their thinking in another sign system. Additionally, the more complex the meaning, the more likely multiple sign systems will be used (Short & Burke, 1991; Short & Kauffman, 2000).

Transmediation offers opportunities for students to engage in generative and reflective thinking since they must create their own connection between sign systems (Berghoff, 1998; Hoyt, 1992; Siegel, 1995). Thus, transmediation will not only assist connections for the learner, but it will also make connections for the learner’s peers through communication from multiple sign systems. Vygotsky (1978) noted that signs give humans an innate ability to reflect in a metacognitive way about their own learning.

When students develop an awareness of their own meaning making process, they will better be able to manage, choose, and self-monitor their own knowledge creation, thus, engaging in deeper reflection of their own practices (Tochon, 2002).

Additionally, transmediation can have the most impact on school culture through analyzing social constructs and critical literacy. It can create a more democratic classroom avoiding what Eco (1976) and Siegel (1984) call “verbocentrism” (language as the dominant sign system) as the main tenet of literacy. With the current structure of schools placing language as the dominant sign system for learning, what are the implications for centering literacy learning in this way? Research suggests that school systems are excluding and isolating many students whose cultural backgrounds do not emphasize language as the primary sign system for communication (Sumida & Meyer, 2006). Transmediation can assist English Language Learners and Second Language
Learners in language acquisition by pairing other sign systems with language (Genishi, Stires, & Yung-Chan, 2001; Ranker, 2009; Wolfe, 2012).

Studies also suggest that when students use multiple sign systems, they are able to transform labels they acquired throughout their schooling into positive identities, so that they are no longer labeled as “struggling,” but rather as “talented” and “knowledgeable” (Berghoff, 2007; Clyde, 1994; Fueyo, 1991; Siegel, 1984; Smagorinsky & Coppock, 1994, 1995). Literacy can become an act of active learning. However, this change must come by reassessing ideas of curriculum, assessment, and what it means to be literate, especially during the act of writing.

**Potential Challenges in Teaching Transmediation**

Initially implementing multiple sign systems can be challenging for teachers. For example, Richards (2005) encouraged multiple sign system use in her methods courses to literacy preservice teachers, and although numerous discussions centered on the benefits, most preservice teachers felt frustrated with the application process of how to implement this way of learning into their lesson plans. Furthermore, preservice teachers avoided sign systems they felt least comfortable with themselves. While working with students, many preservice teachers forgot to model their thinking during sign system demonstrations and did not include students in the planning process for future lessons, foregoing the students’ needs and interests. Albers (2001) reflected on how teachers can move from theory to practice with sign systems. She argued that teachers must be versed in multiple sign systems and “learn the literacy” in order to better understand and teach
numerous sign systems effectively. Hoyt’s (1992) self-study also reflected this notion and how implementing multiple sign systems affected her own teaching.

Since semiotics entered the literacy field, multiple sign systems (ways of knowing) has given literacy education an alternative to centralizing language as the dominant way of learning. Semiotics acknowledges the multiple sign systems students encounter on a daily basis (Berghoff, 1993; Harste, Woodward, & Burke, 1984; Short, Kauffman, & Kahn, 2000; Siegel, 1984, 1995). Unfortunately, verbocentrism still prevails in schools today, thus forcing the 21st century learner to learn in a way that might not be his/her central way of knowing outside of school. Different experiences with sign systems and background knowledge will affect students’ interpretation and meaning generated from transmediation. Even though Peirce’s triadic model of semiotics is valued by the research community, it appears that Saussure’s two-way model of interpretation is the basis in which standardized learning is situated (e.g., one correct answer for a multiple choice question).

Overall, utilization of sign systems and transmediation in the classroom can offer an alternative to a language dominant way of learning and instead provide a more accurate understanding of how students generate meaning in a sociocultural and arts-based mode of learning. This can be especially powerful when working with students in the writing process, specifically revision.

**Review of Literature on Revision**

Research on revision has been examined over the last three decades through a variety of models and methods. For the purpose of this section of the review of literature,
I highlight the professional conversation surrounding revision and take note of studies that center on what happens when revision works for students as well as when it does not work. I then share research that emphasizes a mind-body connection with revision, which ties into how transmediation can assist middle school writers in the revision process.

**Methodology of Literature Review**

Research studies conducted in PreK-16 educational settings in the United States, the United Kingdom, Australia, New Zealand, Spain, Holland, Thailand, China, and Canada over the last thirty-four years (1979 – 2013) appear in this literature review. These studies examined education and literary fields, such as English rhetoric and composition, and were published in peer-reviewed journals, conference papers, and book chapters. A search for these studies was conducted on the following databases: *Academic Search Complete, Education Research Complete, Humanities Full Text, Psychology and Behavioral Sciences Collection, Professional Development Collection*, *Middle Search Plus*, and *ERIC*. Search terms included the following in various combinations: *students, teacher education, teaching, revision, revising, revision in writing, revision and wikis, peer revision, revision and English as a Second Language, revision and English as a Foreign Language, writing, the writing process, classroom, editing, and reviewing.*

Numerous articles on revision appeared, such as Harper’s (1997) toolbox tips for incorporating revision in the writing process and Jago’s (2001) discussion of the importance of comments on students’ papers. However, these were not studies to be replicated, nor did they have data collected and analyzed. Therefore, I also searched for
studies that contained explicit research questions or purposes, collected data, and described findings. From these results, 49 fit the above mentioned criteria. Eighteen studies were labeled as quantitative (e.g., Hillocks, 1982), 22 qualitative, (e.g., Baer, 2008), six mixed methods (e.g., Crawford, Lloyd, & Knoth, 2008), and three reviews of literature (e.g., Fitzgerald, 1987).

**Professional Conversation Concerning Revision**

I believe that all writing is rewriting—even when you’re writing something down for the first time; it’s still an act of translation in a way because you’re trying to use text to bring life to this thing that exists in your mind. – John Green (2013)

I love to re-write. First drafts are usually painful. But a good re-write morning is bliss. Teachers love to hear me say this, but I must hasten to add that when I was in elementary school I didn't even know what a revision was. – Katherine Patterson (2013)

Famous young adult writers like John Green and Katherine Patterson are no strangers to revision. In fact, both view revising as a necessary part of the writing process. They are not alone. Numerous how-to guides for writing are purchased each year, such as *On Writing Well* (Zinsser, 1976), *On Writing: A Memoir of the Craft* (King, 2000), *Writing Down the Bones* (Goldberg, 1986), and *Bird by Bird: Some Instructions on Writing and Life* (Lamott, 1994). Although each author brings a unique outlook toward writing, they all share the same viewpoint of revision: It is difficult. It is
personal. It is necessary. Zinsser (1976) stated, “Rewriting is the essence of writing” (p. 3). The literature written by famous writers sharing “tricks-of-the-trade” extends into the education community as well. Teacher-researchers (K-16), developing their craft of teaching writing to students, have also published numerous how-to books on the teaching of writing. Even though specific strategies might vary, all share the belief that revision is an integral part to writing and teaching writing.

For example, Atwell (1998) mentioned techniques, such as cutting and taping, adding with carets and other icons, highlighting, and circling items in drafts as mini-lessons to assist students in developing their writing. Hillocks (2007) noted teaching students how to add, cut, and rearrange their work through questioning strategies and whole class revision modeling. Gallagher (2011) expanded Hillocks’ techniques by teaching RADAR (i.e., replace, add, delete, and reorder), noting that this should be done through teacher modeling on both handwritten pieces and word processing track changes. Kittle (2008) recommended peer feedback, modeling how to search for the heart in a piece of writing, and time (time in class, time away from the draft, and time to revise throughout an entire semester) as crucial for developing writers to recognize the importance of revision. Noden (2011) used checklists with his students in order to help them identify form, content, style, and conventions, which he noted overlap in writing. Messner (2011) suggested using color-coded pencils to identify the five senses in students’ writing, noting which sense was overpowering the piece or missing completely.

Other techniques in revision have been researched over the last thirty years as well. From these studies, researchers have found significant importance in what deters
and motivates students to revise. Below is an overview of what has been researched regarding revision and the findings based on these studies.

**Research on Revision Over the Last Four Decades**

Over the last three decades, the instructional framework for teaching writing has moved toward a sociocultural, inquiry-based, process approach (Commission on Composition, 1985; Conference on College Composition and Communication, 2007; Nagin, 2003; Smagorinsky, 2009). Before this, a linear view of writing, consisting of prewriting, writing, and postwriting dominated the research (Fitzgerald, 1987). Writing adopted a stage model, like following the five steps in order on the back of a cake mix box. Revision was initially seen as a routine gesture done at the end of the writing process (Fitzgerald, 1987), which had consequences on revision research.

Fortunately, Graves’ (1979) longitudinal study on the revision processes of young children paved the way for recognizing writing’s developmental stages and revision’s role in this process. Revision began to be viewed as a highly complex operation including knowledge and process (Flower et al., 1986), one in which revision included the writer’s active role in actions and mental events as well as peers’ feedback.

Because of the 1980s growth in cognitive research, various models of revision were created. For example, Faigley and Witte (1981, 1984) created a taxonomy of revision that included microstructure and macrostructure features as well as six types of operations (e.g., adding, deleting) and six linguistic levels (e.g., graphic, lexical). Flower and Hayes (1981) identified three stages of revision: planning, translating, and reviewing. Bereiter and Scardamalia (1983) invented a CDO model: compare, diagnose, and operate.
Additionally, numerous studies created taxonomies for coding and categorizing revisions (Bridwell, 1980; Faigley & Witte, 1984; Sommers, 1980).

These taxonomies centered on how inexperienced and experienced writers thought about revision, specifically their differences in approaches to how one revises writing, especially regarding surface-level changes (Beach, 1979; Beason, 1993; Bridwell, 1980; Faigley & Witte, 1981; Flower et al., 1986; Perl, 1990; Sommers, 1980; Witte, 1983; Yagelski, 1995). For example, Sommers (1980) identified the frequency in which inexperienced writers made changes at the operational level: deletion, substitution, addition, and reordering. Additionally, these changes were examined in terms of levels of changes in which these operational revisions occurred: at the word, phrase, sentence, or theme level.

Faigley and Witte (1981), influenced by Sommers’ research, expanded revision research to include whether or not students changed the meanings found in their texts when they revised, noting “micro-structure” (e.g., revising a sentence) versus “macro-structure” (e.g., changing the entire meaning of the work) revision. Chanquoy (2001) continued to study revision via macro- versus micro-structural changes by categorizing the revisions her participants made in their writing as additions or deletions of words or parts of text.

This notion of writers restructuring their thoughts influenced how researchers examined revision through a systematic recording of measured word units over the course of multiple drafts. Even though these studies appear to be highly structured, emphasizing the deconstruction of revising, they made revision part of the writing process. However,
by focusing on external forces, the emphasis became about the teacher’s view of writing rather than the student’s view (Haar, 2006). For example, many studies conducted on revision during the 1990s and early 2000s centered on the teacher’s feedback and perceptions of writing, which gave revision a push forward, but much emphasis stayed on the teacher, rather than on the child (Beason, 1993; Mlynarczyk, 1996; Olson, 1990; Patthey-Chavez, Matsumura, & Valdes, 2004; Sze, 2002; Yagelski, 1995).

Fortunately, with research now focusing on social worlds (Jones, 2008; Midgette, Haria, & MacArthur, 2008), with an emphasis on peer interaction (Humphris, 2010; Kaufmann, 2010; Keen, 2010; Peterson, 2003) and personal intrinsic thinking (Bardine & Fulton, 2008; Dix, 2006; Sandmann, 2006) in writing, many studies have turned toward revision as development and identity rather than correction, thus revealing numerous benefits for students as they engage in the revision process. Studies have also underscored special populations. For example, Kindzierski (2009) noted that students with disabilities are better able to make meaningful changes in their writing with revision instruction. Revision might also assist English as a second language (ESL) and English as a foreign language (EFL) learners in learning to write in a non-native language (McGarrell & Verbeem, 2007; Mlynarczyk, 1996; Sze, 2002). Furthermore, research in revision has revealed numerous findings on what detracts and assists writers in revising.

**What deters revision in student writing?** A lack of instruction in revision strategies is one of the leading indicators of students’ inability to understand how revision contributes to better writing, and more importantly, how to achieve better writing through revision strategies (Baer, 2008; Bridwell, 1980; Fitzgerald & Markham, 1987; Flower et
Additionally, teacher beliefs toward what constitutes good writing impacts how students interact with their peers’ writing as well as their own (Yagelski, 1995). This is because many of the revision strategies students learn are based on what the teacher deems as “good” writing, which could affect how writers revise, since the audience of their work is often limited to the teacher.

This also raises another problem in relation to audience, specifically, teacher feedback as the primary feedback on drafts. Studies suggest that feedback from teachers is done either post-final draft, or provide general comments that students often disregard (Connors & Lunsford, 1993; Hillocks, 1982; Patthey-Chavez, Matsumura, & Valdes, 2004; Sommers, 1982). Even worse, negative comments can lead to students’ unwillingness to write (Graves, 1983/2003; Smith, 1994). For example, Graves (1983/2003) noted that when students do not understand teacher responses on their drafts they tend to produce voiceless writing in order to play it safe. Sommers (1982) found that teachers’ comments could be interchangeable, “rubber-stamped from text to text” (p. 152) rather than viewed as specific to the students’ personal writing assignments.

Additionally, Sommers (1982) noted that teacher comments might actually make the writing worse. This happens when students try to interpret the vague meanings, such as “awkward”, not really understanding what the comments mean or how to make the change. This also prevents students from taking risks with their writing, such as playing with techniques, words, and formatting, since their teacher’s comments prove to be more important on the draft than what the student writer thinks about his/her feelings of the
Sommers (1982) stated, “We [teachers] find what we look for; instead of reading and responding to the meaning of a text, we correct our students’ writing. We need to reverse this approach” (p. 154). If done ineffectively, teacher feedback positions the teacher as the expert with the answers, having a “magical potion” that solves students’ writing problems, rather than teaching students to learn to make changes and be in charge of their own writing.

Moreover, the types of revision comments teachers provide students often center on style or surface matters rather than ideas and content (Connors & Lunsford, 1993; Hillocks, 1982; Patthey-Chavez, Matsumura, & Valdes, 2004; Sommers, 1982). This can turn into a series of correction circling and proofreading instead of reading for meaning and content. If teachers create a sense of “error detection” as feedback to students, it could have negative consequences on the writer. Smith (1983) stated that placing an “emphasis on the elimination of mistakes results in the elimination of writing” (p. 567).

This may contribute to why inexperienced writers confuse editing with revising, making only surface-level changes, whereas experienced writers made all revision operations at all levels. These surface level changes usually center on script and spelling corrections. Studies found these types of corrections in drafts are easier to recognize and provide less difficulty in rationalizing how to alter the writing (Chanquoy, 2001; Faigley & Witte, 1981; Flower et al., 1986; Sommers, 1980; Sze, 2002; Witte, 1983; Yagelski, 1995). Additionally, inexperienced writers have difficulty determining the overall meaning of their writing, affecting how they diagnose problems in their writing, which
inhibits them from choosing successful strategies in order to correct those problems in their writing (Flower et al., 1986).

**What motivates revision in student writing?** When revision is taught successfully, through reflection, conferencing, positive teacher feedback, specific instruction linked to reading strategies, and time between drafts in order for students to think about their writing (including the expectation of multiple drafts), students not only revise more, but at a deeper level (Baer, 2008; Bardine & Fulton, 2008; Keen, 2010; Muldoon, 2009; Peterson, 2003).

The teacher’s pedagogical context in which revisions occur plays an integral role in the quality of revisions. For example, students revise if there is an environment conducive to authentic writing purposes. This environment is described as a classroom “…in which the writers’ peers provide most of the input, including formative assessment, can support strategic revision” (Keen, 2010, p. 278). This led to thinking that students may not have enough investment in their own work to want to revise, where critical reflection could encourage this connection to their writing (Baer, 2008; Muldoon, 2009). For example, when students wrote memos (reflections) in response to specific questions regarding decisions they made while writing, it assisted their future drafts and provided a way for students to evaluate their own writing (Bardine & Fulton, 2008; Miller, 1982). Muldoon (2009) wrote, “Critical revision forces students to stand up and justify their choices and explain which revision suggestions and feedback made them think more carefully about their work or why such feedback made them even more certain that their initial choices were correct” (p. 70).
Feedback from peers can also play an important role in revising (Keen, 2010; Peterson, 2003). One way for students to receive feedback from peers is through peer conferencing. For example, Fitzgerald and Stamm (1990) looked at student comments made in group conferences and then revisions on their papers (per 100 words) and found that conferences influenced students to revise more both at the macro and micro-level, which also improved their drafts. Peterson (2003) found that peer talk in the classroom assists in the revision process. Students considered peer talk “oral rehearsal” before writing.

Now with technology and online sites assisting writing in the classroom, research in revision has recently incorporated how Wikis (collaborative websites that allow visitors to freely add or revise content, e.g., Wikipedia) have assisted peers in sharing an online writing space to read and review their classmates’ writing (see Kost, 2011; Pifarre & Fisher, 2011; Woo, Chu, & Li, 2013). Additionally, peer collaboration included social validation of themselves as writers. Furthermore, “students’ immediate feedback to their peers’ writing was more likely to provide an authentic reader’s perspective than teachers’ evaluative feedback” (Peterson, 2003, p. 268).

Student-teacher conferencing also has been shown to improve revisions (Murray, 1982; Newkirk, 1989). Newkirk (1989) stated that teachers have two parts in the student-teacher writing conference: “on the one hand, to respond to the student, to evaluate, to suggest possible revisions and writing strategies; and on the other to encourage the student to take the initiative, to self-evaluate, to make decisions, to take control of the paper” (p. 317).
Teacher feedback, when done effectively also increased revision (Beason, 1993; Brannon & Knoblauch, 1982; Hillocks, 1982; Sommers, 1982). For example, Hillocks (1982) found that when teachers provided focused, positive feedback on particular aspects of students’ writing over a series of compositions, it improved their writing. This is especially true with students learning English as a foreign language (EFL) since teachers can provide “hard-recognized errors” that EFL learners may not be able to detect by themselves (Srichanyachon, 2011).

Studies also connected revision strategy instruction with increased revision efforts and overall quality in students’ writing (Fitzgerald & Markham, 1987; Olson, 1990; Yagelski, 1995). Revision instruction also impacted meaningful changes in student writing with students with disabilities (Kindzierski, 2009) as well as students learning English as a second language (ESL) (Sze, 2002).

Furthermore, McCutchen, Francis, and Kerr (1997) suggested that reading strategies might be similar to revision strategies and could improve the revision process if connected. In order for students to make significant changes that alter the meaning at the macro-structure level, students must learn how to re-read their writing. Beach (1979) suggested that experienced writers rely on other readers’ responses in order to determine whether their meaning/message is clear.

Studies also suggest that for many students, “revision is not a generative practice, but appears to be a set of rule-governed actions for proofreading and correcting” (Flower et al., 1986, p. 16). Moreover, most revisions occurred in the mind of student writers, which is an in-process drafting of text. Research notes there might not be enough space
granted to students between drafts in order for them to take a step back from the writing in order to “re-see” their work (Fitzgerald & Markham, 1987). Sommers (1980) agreed noting that many students lack “a sense of writing as discovery – a repeated process of beginning over again, starting out new” (p. 387). Koutsoftas and Gray (2013) found that planning had significant impact on students’ drafting but had no direct effect on revising their drafts.

This means that students need time between drafts in order to distance themselves from the writing, helping them “re-see” writing as a generative process, which builds up their confidence (Beach, 1979; Bernhardt, 1988; Fitzgerald & Markham, 1987; Flower et al., 1986). For example, in a study with special populations of college students, Bernhardt (1988) found that students understood the revision process, and if given ample time between drafts, in this particular study, over the course of one weekend, they were better able to produce more macro-structural changes. Bridwell (1980) also found that the expectation of producing multiple drafts also increased students’ revisions. Additionally, if students were given teacher support via evaluation between drafts, revision occurred in greater degrees of changes (Beach, 1979).

**A Lack of Students’ Voices on Revision**

The previous studies reveal how revision has much to do with the teacher’s beliefs and attitudes on writing rather than the student’s ownership over his/her writing. What seems to be lacking in the existing research is a focus and concern for how students feel about revision, especially regarding their beliefs and attitudes in their own voices. To date, the review of literature found only one study (Humphris, 2010) that included
students’ voices regarding their thinking about how and why they should revise their writing. Humphris used think-aloud protocol, asking students to explain what occurred in their thinking during the revising process. She found that although students agreed revision was an integral part of their writing, they were unable to articulate why. Therefore, Humphris included another phase in her study that consisted of metacognitive thinking with “writing buddies” to explain further the importance of why they chose to revise. This phase revealed that when students could engage in social practices with writing, they were better able to articulate their metacognitive processes during revision.

Although a few studies have included students’ voices, they centered on how one should revise, which goes back to the teacher’s notion of good writing. For example, Baer (2008) studied her sixth graders, asking them to generate what good writing and bad writing look like. From there, they created a list of ways to revise to include good writing into their original drafts. Although discussion centered on revision, it regarded the teacher’s acknowledgement of whether students confirmed her own interpretation of good writing and did not include students’ perceptions of the revision process. Dix (2006) also followed three students during their revision practices, noting that all three worked through revision differently, and although students’ voices were included in the research, the responses were geared toward how they revised, counting the specific number of revisions made between drafts rather than why they revised.

Overall, research reveals that revision should be regarded in a holistic, recursive manner that needs to be taught in schools at all levels of education. Teaching revision is just one aspect though. If revision is to be regarded as essential to the writing process,
this notion should stem from students as well as teachers. Students’ voices are missing in how and why they revise. This may be due to how research has centered primarily on the cognitive domain and has unfortunately, missed another domain of learning: a way to study revision through the affective domain.

**Connecting Mind and Body in Revision**

The previous research primarily addressed three aspects of revision: how much revision occurred, when it occurred, and what kinds of revisions were made in order to understand when revision assisted student writing. However, in the 1990s, revision research began to shift toward looking at the writing process as a way for students to read the meaning produced by their own work; to consider the text as a whole, and model the value of generating extra ideas.

Perl’s (1990) work on “felt sense” and Welch’s (1997) “something missing, something else,” which centered on college students, steered revision toward specifically focusing on the affective domain; how writers feel about revision. Perl (1990) focused on how writers adopt a “felt sense” toward their writing drafts. Borrowing from Eugene Gendlin, a philosopher at the University of Chicago, Perl (1990) believed that “when writers are given a topic, the topic itself evokes a felt sense in them. This topic calls forth images, words, ideas, and vague fuzzy feelings that are anchored in the writer’s body. What is elicited, then, is not solely the product of a mind but of a mind alive in a living, sensing body” (p. 143).

Perl believed that meaning is not discovered in writing, but rather, it is crafted through a process of “coming-into-being” (p. 145). This process draws from one’s inner
reflections and bodily sensations and is internalized before writing begins. However, Perl noted that the process is cyclical, where composing and recomposing includes a back-and-forth movement from “sense to words and from words to sense, from inner experience to outer judgment and from judgment back to experience” (p. 147).

Additionally, Welch (1997) found that teachers are not asking the right questions to assist students during the writing process. Specifically, Welch suggested questions, such as “something missing, something else?” to promote revision in a non-restrictive sense. This will encourage students to write in more challenging and unique ways rather than “what’s comfortable and familiar” (p. 234). In order for this to happen, teachers must be able to realize that their sense of reading the student’s work is based on learning that there are other approaches to read the draft. Welch stated, “There are borders students and teachers can name, question, negotiate, and rename, creating excessive understandings of what revisionary work can mean” (p. 234). This means that teachers must turn this question of “something missing, something else?” toward their own responses to students’ drafts.

Indeed, revision has come a long way since Graves’ (1979) longitudinal study, but it is still a comparatively underdeveloped and under-represented topic, in both research and education. The goal of writing teachers should be to “find ways to break down barriers, to help all writers see revision as an opportunity to uncover what it is they really want to say, and to discover new ways to say it” (Trupiano, 2006, p. 178).

Revision has many opportunities for reflexive moments. There is a potential to build students’ metacognitive awareness during revision, which could lead to increased
confidence in their writing. Perhaps the inclusion of transmediation can help revision take place at the idea and content level rather than focus on superficial changes. Furthermore, revision with transmediation could be examined in a student-friendly manner rather than as a series of directions that could potentially create a disconnect in the inexperienced writer’s mind. Instead, revision paired with transmediation could build on aesthetic experiences, specifically focusing on arts-based learning.

**Aesthetics in Education**

This study is philosophically centered on three scholars’ work on the aesthetic experience in education: Donald Blumenfeld-Jones, Maxine Greene, and Elliot Eisner. In this last section, I not only highlight their work on keeping the arts in schools, but also framing education to be both knowing and being. Furthermore, I share how integrating an arts-based curriculum aligns with not only my theoretical framework, but also how it has influenced me to develop a new way of thinking about revision.

**Aesthetic Over the Cognitive Aspects of Learning**

Blumenfeld-Jones (2009) believed schools in the United States are focused on content-driven standards, placing emphasis on cognitive learning. He argued that Piaget’s cognitive stage model has become the primary way of learning; through logic. He stated, “Piaget’s conceptual leverage point may be useful but it is not the only leverage point for understanding the world” (2009, p. 42). Instead, Blumenfeld-Jones (2012) explored aesthetic consciousness as an equally important aspect toward understanding, especially using art-making as exploration for developing this consciousness. He argued that the ontological practices of feeling and being are not the
frivolous and upper-elite domains Western society has portrayed them to be, but rather consist as a natural disposition in which all human beings have the capacity to create meaning.

Connecting aesthetics to education, Blumenfeld-Jones (2004) believed that feeling cannot be removed from the intellect. He stated that educational experiences rely on both cognition and feelings and argues that it is through these feelings that humans learn ways of being. He continued that it is often these experiences that may linger more so than the cognitive learning aspect of the experience.

**Arts as a Holistic Experience**

Like Blumenfeld-Jones, Greene (2001) challenged the way schools avoided the arts and instead placed emphasis on a linear way of thinking, thus avoiding the holistic experience. Greene regarded all art forms as works that are brought to life through human’s creative engagement with them. She advocated for the arts to be centralized in students’ educational experiences rather than being treated as “didactic forms or as decorative devices in education” (2001, p. 19). Greene also emphasized the *either/or* notion that many educators have regarding the arts; not just as curriculum components but also as a replacement to cognitive learning. She noted that art provides self-reflection and connection potentials to others in the world around them. She believed art helps students to define vision, accomplishment, and an opportunity to see the world from another viewpoint. Moreover, if art enters schools, there must be time for students to engage with the process. She wrote, “… a work of art can never be brought into being unless a living person encounters it in person and in the light of his or her reality” (1978,
p. 192). In turn, she believed imaginative play and multiple sign system experiences are essential in order for students to develop new possibilities in thinking and awareness. For example, Mary Weems (2010), adopting Greene’s notion of aesthetic appreciation and expression, visualized a utopian school that provided opportunities for students to explore their creativity and imagination through play, creative writing and art in order to assist students to become critical consumers furthering their “imagination-intellectual” growth.

**Transmediation’s Ties to Arts-based Learning**

Eisner (1981, 1997) and Greene (1995) believed arts-based learning in schools impacts transmediation. They argued that each sign system (e.g., language, art, music, math, dance, and drama) has a technical component, as well as a discipline connection. Background knowledge and experiences with various sign systems influence what one sees in a piece of art or hears in a sonata movement. By keeping arts in the curriculum, students will not only gain in the technical aspect, but also continue to challenge their own notions of literacy. When students engage in a “text” (e.g., painting, song, dance, writing), they will need to search for connections in order to bring meaning to another “text.” This will also allow students to critically analyze and recognize cultural foundations that may influence their interpretation(s) of the text as well.

Eisner (1997) called for a mind-body connection in curriculum and utilizing multiple sign systems as a way to allow students to experience this connection in schooling. Eisner believed combining multiple forms of representation (multimedia) into units, especially with older students, enhances interdisciplinarity in curricular choices. Multiple forms of representation are accessible to students of all ages when at home, in
the community, with family. Furthermore, Eisner argued that schooling eliminates equity-based learning by excluding multiple forms of representation. He stated, “The forms of representation that an institution emphasizes influence who succeeds and who does not” (1997, p. 352). He believed that if schools implemented a curriculum centered on multiple ways of knowing and representing knowledge, a greater chance of equity in learning is possible.

Incorporating arts-based learning, specifically through transmediation, has influenced me to develop a new way of thinking about revision that incorporates both the cognitive and affective domains through a mind/body connection not commonly emphasized in schools. This new way of thinking aligns with the belief that all students should have access and availability to multiple forms of representation for a successful, holistic learning environment (Eisner, 1997). This includes the way writing is taught in schools, especially revision. When revision can be thought of as an opportunity to reinterpret one’s writing, then transmediation can serve as a way for students to reprocess and re-see this writing by viewing their thinking in another mode, which will in turn, allow the reprocessing of ideas to expand and grow into deeper understanding of message, mode, and mood.

Summary

According to the review of literature, transmediation has powerful benefits regardless of what sign systems are used. Transmediation can offer a way for students to re-see their writing in a new way, providing moments for deep reflection and alternative paths in generating meaning in their writing. Furthermore, revision research is calling for
a new way of looking at revision. This study attempts to fill the much-needed gap in research on revision, especially regarding a new way to view revision. This new way includes looking at revision through the integration of transmediation into the writing process, specifically during revision.
CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

The purpose of this naturalistic inquiry study was to investigate seventh grade students’ possible changes in both writing and feelings regarding revision when paired with transmediation (movement between and among sign systems, such as drawing, music, drama) in the writing process. Specifically, this research focuses on students’ thinking concerning why and how they revise when transmediation is part of the writing process.

This study is significant because there is little research on revision that includes transmediation in revision. What makes this research important is that when previous research on revision has been conducted, it is primarily based on cognitive aspects rather than aesthetics that integrate both mind and body into the revision process itself. This study proposes to investigate revision in a new way; one in which students can better understand revision as an integral part of the writing process, investigating changes in both students’ perceptions of revision and changes in students’ writing. Studying these changes, via implementing multiple sign system/modes of communication with transmediation, will emphasize more of a mind/body connection than if based on language alone. Therefore, this naturalistic inquiry study (Lincoln & Guba, 1985) aims to fill a gap in revision research that promotes the inclusion of multimodality in writing that may offer a new direction in how revision is taught and learned.
In this chapter, I will describe and provide a rationale for my choice of research methodology, discuss the context of the study, including the purposeful selection of both setting and participants, and outline my data collection and analysis methods. Finally, I will address issues in qualitative studies regarding establishing trustworthiness, credibility, and limitations of the study.

**Naturalistic Inquiry**

I am shaped by naturalistic inquiry (Lincoln & Guba, 1985), in which “the aim of naturalistic inquiry is not to develop a body of knowledge in the form of generalizations that are statements free from time or context. The aim is to develop shared constructions that illuminate a particular context and provide working hypotheses for the investigation of others” (Erlandson et al., 1993, p. 45).

These shared constructions resonate with naturalistic inquiry since understanding among a group or culture centers on multiple realities. The researcher recognizes and acknowledges that these “realities” have been created by individuals within a group or culture, and it is the researcher’s job to communicate all shared realities in a way that interprets the participants’ experiences that is agreeable to those involved in the research. In this view, reality is interrelated (e.g., as a whole cloth) in which one cannot isolate instances in the experience without, in turn, destroying the holistic meaning of the experience (Erlandson et al., 1993). In fact, the naturalistic researcher will most likely leave the setting of a study with new constructs of reality. Here, I sought relationships that provided a newfound understanding of the revision process and how students can articulate this understanding in their own voices.
Additionally, the researcher in naturalistic inquiry must establish relationships with those in the setting. According to Lincoln and Guba (1985), participants and researcher influence one another. The researcher must be involved in order to understand the shared and multiple realities occurring in the setting. This will enable the researcher to create findings, rather than discover them. These findings will emerge as the study unfolds where data collection and analysis are concurrent.

Furthermore, for naturalistic inquiry, the researcher must keep descriptions as close as possible to the actual setting, which is done through thick description. Erlandson et al. (1993) stated that this thick description “will bring the reader vicariously into the setting the researcher is describing and thereby pave the way for shared constructions” (p. 24). Additionally, thick description will lead to credibility, transferability, and dependability in which other settings and contexts will yield similar findings that could be repeated. This thick description also consisted of non-language based modes of communicating my findings, where the data I collected consisted of a variety of modes, such as art, music, dance, which play an integral part of how I present my findings in this study. This connects to my first research question that investigates what particular sign systems seventh grade students gravitate toward in order to assist revision in their writing.

**Research Site**

**Location of study.** The study took place at a public middle school (Whispering Pines Middle School) in Great Lakes, Ohio (names are pseudonyms to protect the identity of the school, town, cooperating teacher, and students). The middle school’s seventh
grade curriculum centered on narrative writing during the first nine weeks of school, and
my original goal was to conduct the study during the first quarter. However, due to
student enjoyment of the study, calendar breaks, and a request from the teacher to
integrate a class novel, we continued the unit until December when she resumed teaching.

Great Lakes School District is in a high socio-economic income bracket, with the
average household income listed as $153,907 in the 2012 Fiscal Year Ohio Department
of Education District Report. The demographic of student population is identified as
96% Caucasian. It has won numerous educational awards, such as the National Blue
Ribbon Award for Excellence in Education.

My initial contact with the school happened when I was asked to participate in
their first annual Regional Writing Forum held at the middle school. I presented three
different workshops on how to write flash fiction. Each workshop held 30 seventh
graders who were from 10 different middle schools in the area as well as parents who
volunteered to chaperone and their English teachers. Additionally, since the Great Lakes
School District hosted and created this event, the principal, librarian, and staff of the
middle school as well as the superintendent also attended one of the sessions. Many
students who attended the “field trip” were members of their school’s Power of the Pen,
which is an elective offered at the middle school level where students can enter writing
challenges.

Due to this newfound connection, I emailed the superintendent asking if I might
be able to work with one of the teachers on staff at the middle school level. He directed
me to the principal, who then set up an initial meeting with an interested teacher named
Ms. Smith. After meeting with her, I found that she has been teaching for nine years and began her teaching profession at this middle school. Her colleagues and administrators regard her as an excellent teacher. Furthermore, she wanted to gain new insight into teaching writing and revision and was interested in hearing how to incorporate multiple sign systems into her teaching. The principal offered me one of Ms. Smith’s classes, which happened to be an advanced placement English class comprised of mostly gifted students. The class is a 50- minute period, from 1:06 p.m. to 1:56 p.m. each day, and students are enrolled in this class either due to identification on an educational plan (EP) as gifted or considered high achieving in language arts due to grade point average (GPA).

**Duration of study.** The first day of the study began on September 3, 2013, where I began teaching in Ms. Smith’s class. The study ended on December 13, 2013 with a celebratory author party. During this 15-week study, there were two weeks in October when Ms. Smith needed to teach a whole-class novel, so these two weeks were not weeks I collected data at the site. However, I did visit the site twice during the two-week novel unit to meet with Ms. Smith and observe how students engaged in novel discussions centering on science fiction.

**Participants of study.** Participants’ age range were approximately 12 to 13 years-old during the duration of this study when they begin their first day of seventh grade on August 26, 2013. Students in Ms. Smith’s seventh period advanced placement English class were given the option to participate in this study. Gifted identification was not a requirement for participation.
Recruitment began on day one of the study, where I introduced myself and shared the script I submitted with my IRB approval documents (see Appendix C). Participants were informed at the beginning of the unit the intent and purpose of this study; I also discussed possible harm (no greater than everyday life), their right to withdraw from the study at any point during the study, and how choosing to participate would not affect their grade with Ms. Smith in any way. Ms. Smith and I collected consent forms from both students and parents the first week of the study since consent for the study did not prohibit students from beginning the flash fiction unit.

Participants included willing students with parental approval on consent forms who were enrolled in Ms. Smith’s advanced placement English class. All 27 students agreed to participate throughout the entire duration of the study, including audio and videotaped consent. I met with the class and taught daily for 13 weeks. However, the study lasted 15 weeks since two additional weeks included observation when I was not teaching. Students’ grades for these 15 weeks centered on the three writing units for this study, which included completion grades for drafts and transmediated objects and final draft scoring of three flash fiction essays based on a rubric. Additionally, Ms. Smith assigned and graded other assignments, which were independent of the writing unit, such as literature circle role sheets, *Time Machine* weekly journal entries, quizzes, and a book report on the novel, vocabulary assignments, workbook pages, and weekly quizzes on grammar.
My Role as Researcher

Having been a teacher of seventh grade students for 10 years as well as having gone through a two-year gifted-endorsement program in Florida, I feel that my educational and professional background helped me connect to my participants, gaining a quicker understanding of their writing process. For example, there is a misconception in many educational communities that if students are identified as gifted, they must excel in all aspects of their schooling, including writing. However, the literature in gifted education suggests otherwise (see Berger, 2006; Betts & Neihart, 1988; Center for Gifted Education, 1999; Csikszentmihalyi, Rathunde, & Whalen, 1993; Van Tassel-Baska, 1998). Furthermore, my personal experience as a teacher of gifted in an all-inclusive gifted “academy” has given me great opportunities to see the writing process with gifted middle school students in a language arts classroom. I have witnessed initial reluctance and apprehension toward writing. This often stems from a sense of perfectionism commonly associated with the gifted mind (Delisle & Galbraith, 2002; Galbraith, 2000). Many times, this perfectionist streak hinders gifted students from writing altogether because of the messiness of the writing process; they feel that if they cannot get the words down correctly the first time, then why write at all? Moreover, there is a fear of failure in many gifted students, and this often leads to avoidance in risk-taking due to this fear of failing.

Since I became not only their teacher, but also the investigator for this study, I clearly stated the intent and purpose of this study, describing the process of research and the outline of events for the study to the students. I also reviewed the precautions I will
take regarding confidentiality and anonymity along with their role regarding member checking for authenticity of their thoughts and voices.

Additionally, I wanted to include Ms. Smith’s expertise in teaching in this community as well as her nine years of teaching experience in literacy. Therefore, Ms. Smith and I collaborated throughout the planning process, and she provided me with an open-forum for my work with students. Ms. Smith also assisted me with other students in the class during moments when I worked with, interviewed, and videotaped participants. She gave me freedom in my planning and teaching of writing, which was essential to engage students in a community of writing for this study. During the study, she requested that she have the first five minutes each day to provide a “warm-up” on grammar, centering on parts of speech, followed by a 20-minute assessment of grammar on Fridays. She also requested 25 minutes on Wednesdays for students to meet with their literature circles, where they read dystopian young adult literature in small groups.

**Prior Experiences With Transmediation**

The center of my teaching pedagogy relies on the belief that there are multiple ways of knowing and expressing understanding. However, prior to entering the doctoral program, I never knew there was a specific name for it. In fact, the notion of transmediation, noted above as the movement of ideas between and among sign systems, has impacted the way I taught middle school students in the classroom. Ensuring students could represent their thinking using multiple modes of communication other than language alone, students routinely engaged in inquiry-driven units creating puppet shows, video game simulations, film documentaries, songs, drawing, and sculpture
artifacts to help them make meaning of the content. At the time, however, I did not realize that these sign systems other than writing included revision as well; students revised within each sign system. This thinking of revision assumes the same recursive process of revision during the writing process. Reflecting further, the revisions students made during their inquiry-based projects increased with the use of transmediation.

I believe learning in this way can be transcendental for students, and I believe there is a way to intertwine transmediation into the writing process, specifically the revision process of writing. In the fall 2012 semester, I conducted a pilot study focusing on transmediation and revision with secondary preservice teachers in a writing course I taught. Preservice teachers selected one piece of writing from numerous drafts they had worked on throughout the semester and chose to revise it after they had generated new meaning of their work in another sign system. We shared our drafts along with our transmediated objects with each other at the end of the semester, and I quickly realized through analysis of their rough drafts compared to their revised drafts that transmediation influenced the way they revised. Preservice teachers revised in a holistic manner, making macro-structural changes, such as adding content and details, moving huge portions of their writing in different sections of the draft rather than the micro-structural changes, such as grammatical decisions, commonly referred to as editing rather than revising. Moreover, their reflections stated how transformative this experience was to their own pedagogical implications when they begin to teach the writing process. They stated that this was how they believed writing, specifically revision, should be taught to students and made plans to use transmediation in their own teaching. This investigation with college
students led me to think about expanding transmediation in the revision process to middle school students. I wanted to see if the inclusion of transmediation in the writing process generates a change in thinking with how and why middle school students revise.

**Overview of the Study’s Three Rounds of Flash Fiction**

The study consisted of moving from genre awareness in teaching writing as a process to sharing their portfolio of transmediated objects and multiple revised drafts in a community of readers and writers. I introduced seventh grade students to a unit of study approach toward writing, where they free-wrote in writing journals, engaged in writers’ workshop, and learned how to read like writers through engaging in reading mentor texts in two genres in which they had never encountered: flash fiction and flash science fiction (sci-fi). These genres were broken into three rounds during the study: the first two rounds were flash fiction (completed during September and October) and the third round was flash sci-fi (completed during November).

Flash fiction pieces are between 250 – 750 words (Masih, 2009) yet, they provide in-depth connections to the human condition. Writers in this genre care more about the outcome and elegance than in the traditional aspects of a short story. Flash fiction writers rely on shocking their readers, thus allowing them to think about issues outside of the text. While short stories require craft and skill to work within the word limit parameters, this genre may not seem as overwhelming for students because flash pieces are much shorter than the typical short story that runs about 1,000 - 5,000 words. Flash sci-fi adopts the same premise as flash fiction, but the elements of science fiction, specifically, notions of time travel, aliens, robotics, and futuristic societies, abound.
Furthermore, I specifically chose flash fiction due to its maximum 750 word-count. Revision is an essential component in producing highly effective pieces due to the space allowed. The word count is an ever-present component in the flash fiction writer’s mind. Plus, flash involves subtle writing techniques that are unique to this genre, which were modeled and learned via reading exemplary mentor texts. They began multiple flash fiction pieces in their journals where they chose to continue writing or abandon them. They were also encouraged to continue writing in their journals at home, outside of class time.

I incorporated flash sci-fi as a companion genre to their required whole class novel of H. G. Wells’s classic, *The Time Machine* (1895). I also found exemplary mentor texts in flash sci-fi that focused on thematic concepts Ms. Smith taught while reading the novel. Furthermore, we provided an inquiry model of learning by asking students to investigate a scientific topic of their choice, read informational texts, and then report back to the class on their topic. Through this research, students were able to learn about various scientific components that became “jumping off” points for students to incorporate in their flash sci-fi pieces. These topics included research on cloning, human-like robots, great engineering feats, space exploration, and deaths of stars and planets, for example.

Throughout the writing unit, participants were expected to create three finished writing pieces. Two writing samples were in the flash fiction genre, while one was in flash sci-fi. At the end of the study, students selected one finished writing sample to go into their class anthology, which were distributed during a celebration writing party on
Friday, December 13, 2013. Additional copies of the class book went to Ms. Smith and Whispering Pines Middle School’s library.

Throughout the unit, students learned and discussed revision techniques and the importance of revision in the writing process. Numerous discussions occurred in writer’s workshops in how to revise, what it means to revise, and the difference between revising and editing. Additionally, a new revision technique called the C.A.R.D. technique emerged from observations of how students talked about drafting their flash fiction rough drafts during the first round. The acronym represents various ways to revise: change, add, rearrange, and delete. This idea then assisted students in their dialogue surrounding revision with another in writer’s workshop and will be discussed in greater detail in chapter 4. Students also worked in a variety of sign systems, transmediating their thinking of their flash fiction drafts into other sign systems and revising based on this generative thinking.

Students’ rough drafts, revised drafts, and transmediated objects were shared in our classroom community during writing workshop groups consisting of three to four students in each group as well as whole class sharing at the end of each flash fiction/flash sci-fi piece (this sharing out time, also known as process sharing, occurred three times in the unit). Interviews and reflections are also components, which will be discussed in the next section. A further outline of the unit is provided in the table below:
Table 2

*Schedule of the Study’s Flash Fiction Writing/Transmediation/Revision Rounds*

<table>
<thead>
<tr>
<th>Week</th>
<th>Lesson Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Sept)</td>
<td><strong>Round 1:</strong> Introduced flash fiction genre through unit of study approach; studied and modeled mentor texts, multiple drafts, sharing in writer’s workshops</td>
</tr>
<tr>
<td>2</td>
<td>Continued flash fiction genre analysis and writing drafts with the inclusion of transmediation; sharing in writer’s workshops</td>
</tr>
<tr>
<td>3</td>
<td>Continued flash fiction genre analysis and writing drafts with the inclusion of transmediation; sharing in writer’s workshops; revising</td>
</tr>
<tr>
<td>4</td>
<td>Sharing days of “final” drafts and transmediated objects; <strong>Round 2:</strong> students began focus on second flash fiction piece with transmediation; writer’s workshop; member checking</td>
</tr>
<tr>
<td>5 (Oct)</td>
<td>Students continued working on second flash fiction piece; transmediation focus; writer’s workshop; revising</td>
</tr>
<tr>
<td>6</td>
<td>Wrap up of second piece; writer’s workshops continued; sharing days of “final” draft of second flash fiction piece with transmediated objects</td>
</tr>
<tr>
<td>7</td>
<td><em>Time Machine</em> reading</td>
</tr>
<tr>
<td>8</td>
<td><em>Time Machine</em> reading</td>
</tr>
<tr>
<td>9</td>
<td><em>Time Machine</em> assessment; <strong>Round 3:</strong> Introduced flash sci-fi connecting to students’ research on informational science texts; studied and modeled mentor texts, multiple drafts, transmediation, sharing in writer’s workshops; member checking</td>
</tr>
<tr>
<td>10 (Nov)</td>
<td>Continued flash sci-fi writing; writer’s workshop</td>
</tr>
<tr>
<td>11</td>
<td>Continued flash sci-fi writing; writer’s workshop; transmediation in the computer lab; revising</td>
</tr>
<tr>
<td>12</td>
<td>Revising; sharing day of “final” drafts of flash sci-fi with transmediation object</td>
</tr>
<tr>
<td>13</td>
<td>Students selected favorite flash piece to go into class anthology; Member checking (Thanksgiving break Wednesday – Friday)</td>
</tr>
<tr>
<td>14 (Dec)</td>
<td>Post-assessments; Member checking</td>
</tr>
<tr>
<td>15</td>
<td>Interviewed students/ Provided students a copy of their class anthology (celebration writing day!); Member checking</td>
</tr>
</tbody>
</table>
Data Collection

The purpose of data collection for a naturalistic inquiry study is to construct reality that is compatible with the natural setting under observation (Erlandson et al., 1993). Data can be collected in (and through) a variety of sources. However, as the researcher, I will be regarded as the most significant instrument. This means that throughout my study, I relied on using all my senses, intuition, and perceptions to gather data, and relied on recognizing my biases that may be shaped from data collection during analysis (Erlandson et al., 1993). Multiple data collection can support and corroborate conclusions (Eisner, 1998). Erlandson et al. (1993) suggest working with the following primary sources for data: interviews, observations, documents, and artifacts. These data sources are based on the researcher’s questions.

For example, observations in naturalistic inquiry studies involve capturing the life of the setting or organization using the five senses and thick description. Here it is recommended that the researcher combine participation and observation in this data collection. Another form of data is through interviews, which consist of a basic set of questions that are loosely predetermined in order to keep the flow of dialogue ongoing; it is the dialogue in interviewing that is crucial to this data source. Additionally, documents, which are written and symbolic records, are usually “available, stable, and rich in information” (Lincoln & Guba, 1985, p. 276-277). Finally, the last significant source of data are artifacts, which are considered material evidence, such as artwork, writing, tools or other forms of physical evidence (Erlandson et al., 1993) give insight into the study’s environment.
Therefore, based on these suggestions, I collected the following data and provided a rationale for each data source. (Additionally, Table 3 provides the data collected in relation to each research question):

**Field Notes**

Throughout each class period, I conducted extensive field notes of my observations noting specific moments where students stood out with their thinking regarding semiotic tools and understanding of revision writing. I also chose to videotape class sessions to assist me in field note-taking. There are a total of 17 videotaped sessions centering on small group writing discussions, whole class sharing of stories, students transmediating in the classroom, and students working in the computer lab. Bogdan and Biklen (1992) defined field notes as, “the written account of what the researcher hears, sees, experiences, and thinks in the course of collecting and reflecting on the data” (p. 107). These records will allow me to reflect back on various actions and thoughts that I felt important enough to record, which will provide me a new lens in which to view my interpretations of what occurred during class. Through these records, I am able to reflect on my own thoughts, examining why I selected this particular experience to record and what this reveals about my own identity as a researcher in this study. It also assists me in keeping a running log of activity during the study (Bodgan & Biklen, 1992). Finally, field notes also helped me to create memos, which I have placed in the reflection category below as separate data.
Open-Ended Questionnaires

Before students began the unit, I asked participants to respond to an open-ended questionnaire regarding their thinking about revision in the writing process (see Appendix A). This questionnaire consists of six open-ended questions, and it helped me get a feel for the range of experiences with how students revise, their perceptions of revision, as well as varying comfort levels with revision. Participants were given the option to use their cell phones to call in their responses to an iPadio account that is under my name or to fill in the responses via written response. iPadio is a free website service that provides a private database to store audio files recorded on a landline phone or cell phone. This database site holds private registered accounts, which can be accessed through providing recipients a specific pin number and account number. Students received this information from me in order to call in their responses successfully. This software houses the call in an electronic audio file. Due to prior experiences where I have used this account in a school setting with students, I have found the recordings to be of good quality, and this quality assisted me in personally transcribing their audio responses into separate Word documents.

Furthermore, throughout the study, I collected responses to open-ended short prompts, such as using an “exit card” strategy toward the end of class to gain further insight into their reflections. These responses were also transcribed and inserted into a Word document.

Finally, by assessing their thinking on revision at the beginning of the study and then following up with a post questionnaire that provides the same questions from the
initial questionnaire administered at the beginning of the study, it allowed me to see changes in their reflections toward the questions that helped shape my data analysis.

**Artifacts**

During the study, students in the class kept a writing notebook. This notebook provided me access to scan all drafts of students’ writing. Students also kept a writing portfolio, which served as a running record of their progress in the English class. Ms. Smith used this portfolio to record students’ completing drafts and how they reflected on these drafts to serve as an assessment opportunity for her students as well as her required grade book. I was also able to take photographs of students’ transmediated objects. For example, students in this study created drawings, clay sculptures, and found art/3-D pieces as examples of transmediated objects that shaped their revision writing while drafting. I documented these objects by photographing them.

For the third round of writing centering on flash sci-fi, I asked students if they would be interested in transmediating via technology only, since it seemed to pair well with the notion of science fiction. In this portion of transmediation, students had access to three days in the school’s computer lab, and I showed them various software programs online that they might be interested in using to transmediate their flash sci-fi pieces. These included: GoAnimate, Animoto, Pixton Comics, Prezi, PowerPoint, Glogster, and iMovie. These online computer programs were easily available to students and were free, except for Glogster, in which I purchased a license for student use during the year and Pixton Comics, whom I emailed asking if they would allow me to use their program for
free during the duration of my dissertation study. They allowed the students full access of their site.

When students transmediated using these programs, they emailed me a copy of the link to their work, and I transferred each student’s link to a shared online site called Livebinders.com. Here, I housed their work in order for Ms. Smith and me to have access during and after the unit. Furthermore, at the end of each three-week writing cycle, students typed up their final draft and submitted it to me for a rubric grade as well as comments from me. I purposefully chose not to comment on their rough drafts when they turned them since I did not want to influence their thinking about their writing or influence how they should revise. Finally, at the end of the study, students then selected one writing sample they wanted to include for their class flash fiction anthology, where I created books for each student to take home.

Additionally, I asked my participants to include a section in their writer’s notebooks entitled “Revision Reflections” where they were prompted throughout the weeks to respond to various guiding questions on their progress of their drafts, revising, and transmediation. Students’ journals were collected and each entry scanned at the end of each finished piece (every three weeks). I wanted to capture their views in their own reflective thinking of how the inclusion of transmediation has shaped or informed their revision intentions. Furthermore, I also want to recognize their thinking behind their selection process of their chosen sign systems and how or why they selected these particular sign systems over others.
Interviews

Throughout the study, I interviewed participants in the study. Individual student interviews took place during class time while students were engaged in the writing and revision process. Questions centered on their revision and transmediation processes and lasted between 5-10 minutes. Bogdan and Biklen (1992) recommend “thinking short” (p. 129) when conducting interviews in a qualitative study. This is to avoid wandering in participants’ thinking. Questions were semi-structured and allowed me flexibility to ask follow-up questions based on their responses (see Appendix B). Questions centered on students’ intentional decisions with revision and transmediation and thoughts about how they incorporate this process as part of the writing process. As the interviewer, my obligation to my participants was to help them feel comfortable and protected (Rubin & Rubin, 2005). Interviews were audiotaped with my hand-held audio recorder for transcription purposes. These transcripts are available as Word documents and allowed for coding and analysis of possible themes to explore.

Additionally, participants formed collaborative writing groups in writer’s workshop time where I conducted group interviews (consisting of three to four students in each group). Some of these interviews were also videotaped for transcription purposes. Writing groups also recorded their discussions via recording devices or with their own electronic devices, such as a cell phone, which was recorded via audio file on a recording device or submitted electronically to the iPadio recording website described earlier.
Furthermore, as a follow-up to the study, I visited the participants the week of December 9th and conducted one-on-one interviews to see if students’ thinking changed since the study’s end. I also shared portions of transcribed documents, memos, and reflections of particular instances in which students participated, and I asked for further clarification if needed.

**Reflection**

According to Ravitch and Riggan (2012), research memos have a prominent role in qualitative research. For this study’s purpose, I used Maxwell’s (2005) notion of the memo as a systematic way to help me reflect on the development of my study’s design. It helped me keep track of my own goals and interests during the study. This also helped me stay connected to my research questions. Memoing is an integral part of naturalistic inquiry data analysis (Creswell, 2013). It helps connect ideas to the data during the process of coding that is necessary in order to construct themes. Rubin and Rubin (2005) recommended writing down thoughts that occur while transcribing interviews in a separate file. They also suggested jotting down participants’ quotes that could be used for further meaning in data analysis.

Additionally, I kept a research journal. This journal was a running word document that I wrote in daily to help me reflect on the study. Ravitch and Riggan (2012) referred to the research journal as “a place to examine – in an ongoing and oftentimes unstructured and informal way – thought, questions, struggles, ideas, and experiences with the process of learning about and engaging in various aspects of research” (p. 156). I sought out specific moments to reflect on, called critical incidents.
Table 3

Data Sources in Relation to Research Questions

<table>
<thead>
<tr>
<th>Question 1: What particular sign systems do seventh grade students choose during revision, and why do they select these sign systems?</th>
<th>Question 2: How does seventh grade students’ writing change based on revision strategies after engaging in transmediation?</th>
<th>Question 3: In what ways, if any, does transmediation enhance seventh grade students’ thinking about revision, specifically, regarding their attitudes and perceptions of revision?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field notes</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Open-ended Questionnaires</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Drafts</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Transmediated Objects</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Revision Notes</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Class Anthology of student writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual student interviews</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Writer’s Workshop groups (interviews/video)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Researcher Reflections</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

As I wrote up my critical incidents based on what occurred during class observations, I asked myself the following questions that Loughran (2007) recommended: What does the story tell and what purpose does it serve? This narrative inquiry, which I regard as a method of researching oneself and others (Clandinin & Connelly, 2000), allows me to
make meaning from these experiences. This method offers “critical frames for making sense of these experiences, the personal practical knowledge underlying them and their social context” (Kitchen, 2009, p. 38).

**Data Collection Outline**

Table 4 outlines a summary of the data that were collected throughout the study.

Table 4

*Weekly Data Collection for Participants*

<table>
<thead>
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<tr>
<td><strong>Field notes</strong></td>
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<td><strong>Open-ended questionnaires</strong></td>
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<td><strong>Drafts</strong></td>
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<td><strong>Transmediated Objects</strong></td>
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<td><strong>Revision Notes</strong></td>
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<tr>
<td><strong>Class Anthology of student writing</strong></td>
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<tr>
<td><strong>Individual student interviews</strong></td>
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<tr>
<td><strong>Writer’s Workshop groups (interviews/video)</strong></td>
<td></td>
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<td>x</td>
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<td>x</td>
</tr>
<tr>
<td><strong>Researcher Reflections</strong></td>
<td>x</td>
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</tr>
</tbody>
</table>

**Data Management**

I created PDFs of all student artifacts, observation field notes, and interview transcripts and housed them on a secure Dropbox website. Creswell (2013) recommends
the following guidelines for successful data storing, and ones I followed throughout my study:

- Create backup copies of any computer files
- Use high-quality tapes and tape recorders during interviewing
- Generate a master list of all data types in the study
- Protect participants’ anonymity through pseudonyms in all data
- Collect and store data in a systematized way in order to easily locate and access information from the study

Data Analysis

Ongoing data analysis occurred throughout the study, which constantly informed the progression of the study. According to Lincoln and Guba (1985), “Data analysis must begin with the very first data collection, in order to facilitate the emergent design, grounding of theory, and emergent structure of later data collection phases” (p. 242). Naturalistic inquiry notes that triangulation of the data will assist the researcher in creating categories in order to represent data. These categories will change over time and allow the researcher to develop a working hypothesis.

Codes come directly from the subcategories generated, focused coding, and memo writing that the researcher then triangulates to generate additional codes that emerge from the use of the constant comparative method. In naturalistic inquiry researchers may use a constant comparative method in order to triangulate the data (Glaser & Strauss, 1967; Merriam, 2009). The constant comparative method includes comparing individual perspectives, student interview transcripts, and all phases of artifact collection. These
patterns and themes were shared throughout data analysis via the following ways: member checking with participants, personal memos, and colleague feedback I received.

**Open Coding of Data**

While reading the data, I wrote memos of potential ways to code (Maxwell, 2005). I ensured that codes fit the data in a simple and precise manner (Charmaz, 2006). Additionally, keeping a researcher journal throughout the study allowed me to revisit my thinking about each class’s instructional decisions and discussions that occurred.

The first phase of data analysis consisted of comparing incidents and data to identify participants’ experiences, thinking and understanding about revision, and insights about transmediation. Here, patterns in the data are identified “with a label that simultaneously categorizes, summarizes, and accounts for each piece of data” (Charmaz, 2006, p. 43). An important step of open coding of data includes grouping similar representations of ideas that appear to have similar qualities, using students’ voices as a co-construction of categories. By incorporating students’ quotes into each category, also known as *in vivo codes*, preservation of authenticity of the actions and moment can better occur (Charmaz, 2006).

I began by coding students’ responses to each open-ended question on their pre-reflection. Students’ open-ended questionnaires, transmediated objects, rough drafts and revised drafts were then read and reread allowing themes to emerge. Each written reflection, observation, and transcripts of audio and videotaped events were then reread with these themes in mind, seeking out quotes that not only verified, but could also be
used as samples. These quotes were inserted into a Word document, separated by themes.

I also drew upon personal experiences to look for other possibilities of meaning (Charmaz, 2006). For example, I examined “hunches” that were revealed from comparative analysis of the data, and then I collected more data to confirm relationships that exist between abstract concepts and categories that emerged from the data. Table 5 illustrates a sample of quotes taken from the beginning of the study regarding the first research question: students’ sign system choices and reasons. Quotes were based on follow-up questions asked of participants after my first round of coding. I then returned to the field to follow up with more specific questions that could help me narrow and confirm these emerging themes.

Table 5

An Example of Quotes Leading to Theme Organization

<table>
<thead>
<tr>
<th>Could better express details/ideas with chosen sign system</th>
<th>Interest in trying out sign system</th>
<th>“Easiest” sign system</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I chose to do sculpture because it shows in detail the idea you want” (Erika).</td>
<td>“I thought collage was an interesting mode to try to use” (Alison).</td>
<td>“I think I can use it [clay] easier [sic]” (Wayne).</td>
</tr>
<tr>
<td>“I chose art because it makes me feel like I can show everything I want” (Susan).</td>
<td>“I chose clay because it sounds like fun and I like to work with it” (Ben).</td>
<td>“I picked this mode because it’s easy for me” (Elsa).</td>
</tr>
</tbody>
</table>
Establishing Trustworthiness

There are multiple ways I established trustworthiness throughout my study. They include: (a) credibility, which encompasses prolonged engagement, persistent observation, triangulation, and member checking; (b) transferability, which includes thick description; (c) and peer debriefing.

Credibility

Prolonged engagement and persistent observation occurred through observations over the entire 15-week duration. The use of the varied data components allows for triangulation in which data are analyzed and coded using a constant comparative method (Merriam, 2009; Strauss & Corbin, 1990). Triangulation occurred by using multiple and varied sources of data collection, such as field notes, students’ interview transcripts of both individual and group interviews, open-ended questionnaires, students’ journal reflections on revision, as well as their multiple drafts, and transmediated objects and finding common themes that emerged from constantly comparing these sources throughout data collection and analysis.

Since naturalistic study focuses on authenticity of participants’ voices and the setting, many researchers involve participants via member checking as well as allowing an outside reader to read the report. Member checking involves “…data, analytic categories, interpretations, and conclusions are tested with members of those stakeholding groups from whom the data were originally collected” (Lincoln & Guba, 1985, p. 314). Member checking between my participants and me occurred throughout the face-to-face discussions we had as well as formal member checks. Formal member
checks are a process carried out with regard to whether I authentically portrayed their voices and experiences during the study. Through this, I asked if I am using their voices correctly and if it is an accurate portrayal of their thinking and interpretation of their work.

**Transferability**

Rich, thick description of detailed events and instances will allow readers to take information from this study to inform their own practice. One intent of this study is to give pause to educators that multiple sign system use and transmediation within the teaching and practice of writing can be an integral and essential component in teaching revision. Therefore, the more details I provide regarding the time and context of instances, the more I can generate a database of descriptors.

**Peer Debriefing**

Additionally, I engaged in peer debriefing with two colleagues, a good friend who is also in the doctoral program, and my husband who has a Ph.D. in English. They are both considered outside the study and have experience analyzing and coding data. Lincoln and Guba (1985) stated peer debriefing works best when there is a “disinterested peer” (p. 308). These peers reviewed my findings as they emerged. I have chosen them because they are either going through the process of conducting a study for dissertation or have completed the dissertation process. They are knowledgeable in general about coding but are not considered experts in my field of study. I met with them several times throughout my study to examine data together. This allowed me to stay grounded in the data throughout my study.
Ethical Issues

An IRB (and all necessary components) was issued in July, 2013, and approval allowed me to begin the study anytime after August 19, 2013. All forms, consent and assent (see Appendices D-F), have been created, and I requested necessary approval from my dissertation committee. I also member checked with all participants for approval of the authenticity of their voices during the study and after collecting data. Names and identities have been protected by using pseudonyms in the dissertation as well as other published research.

Additionally, careful attention has been given to any concerns regarding the fact that I acted as both the teacher and researcher in this setting and followed guidelines to ensure that students do not feel pressured or obligated to participate as well as remain in the study for the entire duration of it. I also ensured that their decision to participate did not affect their grade. Ms. Smith explained to students that regardless of participation in the study, the class would center on flash fiction writing and revising for the next few months, but that choosing not to participate meant that I would not be able to use their work for data collection. Additionally, I checked in with students regularly throughout the process asking about their comfort level during the study. I also received positive feedback from the participants’ parents via Ms. Smith.

Limitations

There are a few limitations that occurred with this study. For example, one limitation is the demographic of participants and duration. Participants came from an affluent socio-economic school district where high expectations for curriculum and
instruction abound. Students in this study experienced multiple sign systems outside of school with dance, art, and music lessons, as well as utilizing multiple technological gadgets at home. Furthermore, the data collection occurred for 13 weeks in the 15-week study, following one class period consisting of advanced placement students. However, this duration consisted of being in the field daily for 50 minutes each day, equaling to well over 75 days of face-to-face time with the study’s participants. Furthermore, this study is not seeking to generalize its findings; rather, its intent was to study one particular setting that may provide further opportunities to conduct this study in other research sites.

Another possible limitation may be that with the presence of a videotape and audiotape, participants may not have fully revealed their identities or felt self-conscious sharing their thinking on tape. I tried to make them feel as comfortable as possible, again through the manner in which I pose questions during interviews as well as member checking, allowing them access to transcriptions. Additionally, after time, students became used to the video camera and audio taping, and these components either became invisible backdrops to the classroom or they became associated objects with me and my teaching.

**Summary**

This study can help expand our understanding of writing instruction by looking at revision in a new way and how the inclusion of multiple sign systems can assist the writing process. This new way of looking at revision in the writing process may offer literacy educators a way to engage both students and future writing teachers to embrace the teaching of revision writing as more of a holistic “re-seeing” of communicating and
generating meaning in their thinking about the writing process. Not only do I hope that this study will better inform my own research endeavors, but I also hope it will offer encouragement to the education field revealing that the integration of transmediation into the writing process can better assist students in thinking about the revision process in a new way.
CHAPTER IV
FINDINGS

This naturalistic inquiry study investigated what happens when transmediation (movement between and among sign systems, such as drawing, music, drama) is included in the revision process. The purpose of this study was to examine seventh grade students’ possible changes in both writing and feelings regarding revision when paired with transmediation in the writing process. Specifically, this research focused on students’ thinking concerning why and how they revise when transmediation is part of the writing process. Twenty-seven seventh graders at Whispering Pines Middle School completed multiple drafts of flash fiction, which is a genre limited to 750 words, along with transmediating their writing into another sign system, completed open-ended questionnaires, and were interviewed individually and in groups over a period of 15 weeks. Data analysis occurred during data collection through a recursive cycle of gathering data, open coding, and memoing through triangulation of the data. Below is a table of the data that were used and coded in this study (see Table 6):
This chapter is organized based on the three research questions that outlined this study. They are:

1. What particular sign systems do seventh grade students choose during revision, and why do they select these sign systems?
2. How does seventh grade students’ writing change based on revision strategies after engaging in transmediation?

3. In what ways, if any, does transmediation enhance seventh grade students’ thinking about revision, specifically, regarding their attitudes and perceptions of revision?

The following is a presentation of the data guided by the three research questions and subcategories that were identified throughout data analysis.

**Research Question 1**

*What particular sign systems do seventh grade students choose during revision, and why do they select these sign systems?*

This section describes the results of the research question by describing the sign system choices students made during three different rounds of transmediation and the reasons students selected these sign systems. In particular, this research question aims to connect how students transmediated their initial drafts for each round before the process of revising their stories. This section also examines out-of-school literacies, affordances, and new spaces that may not be accessible to students during school hours.

**Overview of Flash Fiction Units**

Flash fiction writing consists of fictional short, short stories (between 250-750 words) that connect to the human condition. Writing in this genre requires the writer to consider length, while also maintaining a powerful narrative that shocks the reader with a twist or unusual craft technique specific to flash, which allows the reader to think about powerful issues outside of the text (Batchelor, 2012). Typically, a meaningful flash
fiction essay will linger with the reader for days (sometimes weeks), even though it took three to five minutes to read. Flash science fiction includes the same requirements as flash fiction, but must include science fiction aspects, like cloning or time travel, for example.

Overall, three units (two flash fiction and one flash science fiction) were conducted over the course of the study and were designed to follow a unit of study process writing model. Each unit lasted three to four weeks in duration, and the first two essays, which were flash fiction, followed the same process described below. The third essay, flash sci-fi, followed a slightly different process due to incorporating informational texts as research and using technology for transmediating. The third unit will be described in a later section.

The first two flash fiction writing units began with reading mentor texts of flash fiction and collaborating in small writing groups and then whole class discussions of what techniques good writers of flash do in their writing, followed by giving the technique a name, and practicing it in their writing. We studied one or two flash pieces a day, depending on the instructional class-time provided and possible overarching themes in stories. Students practiced techniques in their journal section entitled, “write time” each day, or they had the option to extend an existing flash work by incorporating the technique.

Over the duration of the first two writing units combined, students read 23 flash fiction stories. Each unit included two weeks of reading mentor texts and writing daily. Students were given two class periods to finish an initial piece of writing in their journals
or start a new work. During the two days of writing and sharing in class with writing groups, students could also take home their journals each night and had the weekend to continue at home. Initial drafts were considered a work in progress without an attached grade, and I did not write any comments on these drafts, since I wanted to study students’ thinking about their writing without being based on any teachers’ perceptions or influence regarding what the teacher deems as important in students’ writing. Instead, I conferred with students via face-to-face conferences lasting anywhere from one minute to five minutes based on need. Students were also encouraged to email questions or ask for assistance at any time throughout the study, even continuing through present day.

On the day of transmediating their writing in another sign system, students were asked to reread their rough drafts in class quietly to themselves, and then based on this rereading, they could choose to work in any mode. In order to prepare students for transmediating their writing, we had earlier conversations to discuss multiple sign system use, which I referred to as modes of communication in order to make it more accessible for seventh grade students. Additionally, students practiced transmediation during the first week of the study when I provided sculpting clay and asked them to think about their written definitions of revision through another mode: sculpture. Numerous art supplies were provided, and musical instruments were also offered, as well as opportunities for dance and drama. I also suggested that students could videotape themselves at home if they felt too shy to perform in front of the class, and I shared stories of my former students videotaping themselves working in musical sign systems (e.g., singing, composing on an instrument) instead of performing live. Students had two full class
periods to transmediate their initial drafts and were encouraged to work with their transmediated object at home if they felt they needed more time to create their object.

After completing their transmediated pieces, students were encouraged to revisit their initial draft again and then revise based on transmediating their thinking into a new sign system. Students were given five days to revise their writing (including two days over the weekend) for a final draft due date the following week. During their revisions, students shared their thinking and writing, placing their transmediated objects in front of them on their desks and discussed their revision choices with their writing groups. Final drafts were typed, and I graded them based on a rubric I created and approved by Ms. Smith, since she needed to keep rubric-based writing scores for accountability purposes.

Sharing with the whole class occurred over two days. Volunteers were asked to read their final drafts in an “author’s” chair placed at the front of the room, while they displayed their transmediated objects via a document camera. Their peers provided positive feedback verbally. When grading their final drafts, I explained that I would be writing comments that were more like reactions as a reader to their stories, rather than checking for grammatical issues. Therefore, positive comments/reactions were primarily given throughout their pieces, as well as highlighted sentences that meant I “stalked” the sentence. During the unit, students learned how to “stalk sentences,” which meant that they would identify a line they liked in a mentor text and copy the line into their section of their writing journals called “Stalked Sentences.” Sentences could include techniques, aesthetically pleasing lines, or a particular pattern that they wanted to emulate. Even though I provided positive comments to students, I would also pose questions, for
example, asking if they wanted me to teach them how to break apart paragraphs or how to use dialogue in their writing for one-on-one mini-lessons that could carry into the next writing unit.

**Story #1 (Flash Fiction)**

For this first unit, students began transmediation in class on a Thursday and continued working on their objects the next day. Furthermore, they were able to take home their objects over the weekend to bring back Monday to have ready to assist in revising. On that first day of transmediating, the excitement and energy in the classroom was contagious. Instead of heading to their seats to complete bell work, students investigated the shelving where a buffet of materials was available. Materials were provided and displayed on the wall-to-wall shelving underneath the classroom windows and above the radiator heating system. Some students quickly grabbed their friends’ shoulders, exclaiming, “We get to play with [clay, paint] today!” Other students gave each other “high fives.”

Materials included: poster paper, sketch paper, watercolor paints, acrylic paints, paintbrushes, sponges, easel, scissors, pastels, charcoal, colored pencils, shading pencils, sketching pencils, modeling clay, index cards, ribbon, lace, anime graphic designer pens, sharpies, markers, glue, yarn, construction paper, card stock, boxes, magazines, how-to drawing books, bare books, felt, and pipe cleaners. Additionally, students could bring in their own materials from home, and they did (e.g., mirrors, spoons, envelope, ribbon, dice). I also took requests. For example, if a student needed a supply, but could not get it, they could leave me a note requesting the supply and I would purchase it for the class.
or bring in an item I owned, for example, various musical instruments. This happened regarding tracing paper, and I purchased a pack of tracing paper for the class.

After gathering materials, students returned to their desks, which were still in rows per Ms. Smith’s request, but students worked standing to the side of their desks, and walked with a purpose between the side of the classroom to gather more materials and their seats throughout the work time where students were on-task creating their objects. While observing and checking in on them throughout the class time, students reported to me that they loved creating in another mode and thought this activity was “fun and creative” and “exciting to be able to do this kind of work in language arts class.”

**Sign System Selection**

Students used a variety of sign systems in order to transmediate their writing for their first story. This section focuses on students’ descriptions of their objects, while the next section centers on reasons for selecting their sign systems. Below is a chart (see Table 7) describing the various sign systems represented in creating their objects and the number of students who used that particular sign system(s). Additionally, here is a video link created in Animoto that highlights students’ objects for round one:

http://animoto.com/play/4mgNDWNJPJCTb21bijnzDRxQ

From students’ work, I determined there were five categories for sign system use. Regarding whether an object could be labeled as multiple sign system or as a single sign system, I determined that if an object contained more than one sign system to represent the entire object, it was labeled as multiple sign system. Additionally, I determined that a drawing could be made on a 2D plane as well as a 3-D plane, which would still make it a
### Table 7

*Students’ Sign System Choices for Round One of Transmediation*

<table>
<thead>
<tr>
<th>Sign System Categories</th>
<th>Number of Students (n=27)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drawing/illustrating/painting</strong></td>
<td>7</td>
</tr>
<tr>
<td>Color drawing</td>
<td>2</td>
</tr>
<tr>
<td>Sketch (no color)</td>
<td>2</td>
</tr>
<tr>
<td>Wordless picture book</td>
<td>2</td>
</tr>
<tr>
<td>Watercolor painting</td>
<td>1</td>
</tr>
<tr>
<td><strong>Sculpture</strong></td>
<td>7</td>
</tr>
<tr>
<td>Clay</td>
<td>6</td>
</tr>
<tr>
<td>Object package</td>
<td>1</td>
</tr>
<tr>
<td><strong>Writing (letter)</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Photography</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Multiple Sign Systems (multimodal)</strong></td>
<td>11</td>
</tr>
<tr>
<td>News story (writing and photo)</td>
<td>1</td>
</tr>
<tr>
<td>How-to brochure (writing and drawing)</td>
<td>1</td>
</tr>
<tr>
<td>Board game (writing and drawing)</td>
<td>1</td>
</tr>
<tr>
<td>Poster collages (writing/drawing/photos)</td>
<td>3</td>
</tr>
<tr>
<td>Graveyard drawing with writing</td>
<td>1</td>
</tr>
<tr>
<td>Origami sculpture with drawing</td>
<td>1</td>
</tr>
<tr>
<td>Card game (writing/drawing/math)</td>
<td>1</td>
</tr>
<tr>
<td>Clay book with clay writing on cover</td>
<td>1</td>
</tr>
<tr>
<td>Ballerina drawing with shattered mirror on back</td>
<td>1</td>
</tr>
</tbody>
</table>
single sign system. For example, Kassie created a wordless picture book and inserted a fabric bow over her drawing of a bow in order to raise the image to make it appear 3-D in her book.

**Drawing/illustration/painting.** The first category, drawing/illustrating/painting, included students who chose to communicate through sketching, painting, and drawing images. For the purpose of this study, I define drawing as artwork incorporating sketching, shading, illustrating, and painting that can be displayed both on a flat surface, such as a canvas, or incorporating a raised surface, such as a portrait of a face with a lace bow attached to it for 3-D enhancement. Pictures could be in color or in pencil (e.g., sketch). For example, Dylan and Kassie (all names are pseudonyms) created wordless picture books. Jason drew a door that opened to a blank page symbolizing the ambiguous ending of his story. Tamara drew an outdoor scene of an apple tree in water color, purposefully blurred and blended together, which represented the sadness surrounding her character. Susan drew her main character, a little girl, surrounded by trees. She shaded and sketched her object with professional art sketching pencils (see Figure 2). She describes her object below:

My object is a drawing of a girl. You see her above the ground with tree branches around her: sitting in a tree. She is looking at the ground where there is a dead tree with a hole in it. In the hole, you can’t see anything (shadow) but there is a string hanging out. There is a hand at the edge of the paper reaching for a string.
Sculpture. The second category included sculpture, which was primarily created out of modeling clay and/or Play-Doh. Additionally, one student created a felt package, which I inserted into the sculpture category. For example, Wayne created a sculpture of a moldy burger engulfed in flies. Pete designed a clay lion scene complete with its bloody prey. Erika sculpted a detailed backpack used by her main character. Holly used multicolored modeling clay to represent the various images she wanted to portray from her story (see Figure 3). She described her model in an interview as the following:

My object is a building and it’s like a red brick building and it’s got like three stories on it and there are like blue windows and the one on the 3rd floor is open. There is a box and at the bottom of the box, um, what I was trying to make is like a girl, and this girl, she’s wearing blue jeans and her blond hair is blowing everywhere and there’s like little bits of blood coming out and then, um, next to her is her phone.
Writing. The third category consisted of writing and included student work that expressed their thinking through writing as the primary sign system. A letter or a journal entry, for example, would be labeled as a writing sign system. Only one student’s object classified as writing. Lexi wrote a letter in the point-of-view of her main character, Catherine, in order to provide more details of what her main character thought (see Figure 4). She included the letter in a sealed envelope, wrapped in white lace, and asked me to open it when I examined the objects after class. Here is what Lexi told me in an interview about her object:

What my object was… it is kind of like a rustic letter and it has inside a written letter that the main character Catherine wrote to the guy she’s in love with because she kills, well, [pauses] there’s a reason why and everything, so she kills and so she’s saying she’s so sorry and why she did it and everything and even

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Figure 3. Holly’s clay sculpture of fallen girl.
though she’s dead she’s still like writing it to him. On the outside of the letter there’s like a picture of a kiss and it has a big white bow from her wedding dress, which is significant.

![Image of a letter with a bow](image)

*Figure 4.* Lexi’s sealed confession.

**Photography.** I labeled the fourth category “photography” since there is one transmediated object that consists of colored images printed from the Internet, pasted together in a poster collage format, but did not include any other sign system. Originally, I thought about making “collage” a separate sign system category, since four students created collages; however, the other three collages were more multimodal, consisting of words, drawings, and photos, while Amy created a collage based on photos alone (see Figure 5). She explained:

My object is a collage of pictures that represent a part of my story and the connection between brother and sister. Also, there are two swings; one is broken showing that he’s dead and one that’s not broken for his sister that’s alive.
Multiple sign systems (multimodal). Finally, I labeled the last category “multiple sign systems” in order to not have to differentiate and deem one sign system more important than another. For example, Laura created a how-to brochure that consisted of writing primarily, but she also included six drawings that corresponded to her six steps in her “how-to perform mummification” brochure (see Figure 6). She chose to include drawings, and it complemented the writing, so I did not want to privilege writing over drawing. Therefore, I categorized it as multimodal. Below, she describes her brochure:

My object looks like a brochure you would get at a business. It’s on yellow paper, and has six steps. It’s hand written in black thin sharpie. It has one picture for each step with words on the top and bottom.
Figure 6. Laura’s how-to brochure on mummification.

Other multimodal objects included Randy’s board game entitled 5-0 Chase featuring events from his flash piece. It included a road path equipped with four car pieces drawn out of paper, a paper die, and paper cards that provided players directions, such as “Stop for gas. Move backward two spaces.” Another student, Heather, created a newspaper feature article centering on the ending of her flash story which involved a tragic car crash. She used both language and images to represent her object. Additionally, three students chose to create collages containing cutout words from magazines, images from magazines and the Internet, and Carrie included sticky notes taped to her collage with duct tape. These notes were from various characters in her story. One read, “Meet me at the Central Park at 5, we will then run away together forever if you don’t show then you will be reading my last note. John.”

Overall, students gravitated toward drawing in some form followed by clay sculpture. Students who chose to use multiple sign systems included drawing and writing as combinations for their object. Writing was not favored by students for this round of
transmediation. Furthermore, no students chose to transmediate their thinking via music, dance, or drama, even though these sign systems were available during in-class time or at home. I also polled students and asked how many had experience in music (instrument and/or voice), and 11 out of 27 students had either taken music lessons or were currently enrolled, including choir or band. Only three students had experience with formal dance training, but most of the students stated they enjoyed dancing in privacy. The lack of gravitating toward math (one student incorporated numbers into his card game) could be due to difficulty transmediating their thinking from writing to math, since not all sign systems can (or should) be representational of meaning in the same manner.

Additionally, in a survey conducted at the beginning of the study, 50% of the students stated their least favorite sign system was math (62% of the students’ favorite sign system was movement). Reasons they disliked math included, “It is really boring” and “It’s hard for me.” I also inquired about drama, but no students took part in the district’s middle school/intermediate school drama club.

Furthermore, none of the students had heard of tableaux when I discussed possibilities of drama. I had them engage in tableaux at the end of our first round of reading flash fiction, asking them to form acting troops. In their troops, they had to choose a flash fiction story from their mentor texts and decide on the most intense scene and perform it tableaux-style where they had to position themselves as characters or objects that would remain frozen in order to recreate the scene visually. When tapped on the shoulder, students would verbally state a line, which could either be a part of the text of the story or it could be self-created representing the internal monologue of the
character or situation. Even though students participated in this drama activity, none chose to use tableaux as their sign system representation, nor did they choose to write a script or act out their writing for this round. Instead, they gravitated toward other sign systems mentioned above, and their reasoning is described in the next section.

**Sign System Reasoning for Round One**

These findings examine the reasons students identified in their choice of sign system representation for their first flash fiction story. Two categories of reasoning emerged. They are: (a) students found comfort in their chosen sign system; and (b) students’ chosen sign system best explained their story.

**Sign system was comfortable.** Students expressed an interest and comfort level with their chosen sign system. They had prior experience and therefore, found it easy. Seven students noted that their primary reason for selecting their sign system choice was due to ease of use or feeling that it was “easy.” Five of these seven students chose clay sculpture, and all five were male. For example, Dave, who sculpted a UPS shipping box, to relate that he ships his little brother to another country in his story, said he chose that medium because “it was the easiest for me to use.” Wayne, who recreated a Boy Scout meal out of clay, agreed. “I used sculpture because I found it the easiest to use.” Two others, Ben and Joe, noted that they chose clay because it was easy, and they liked to work with their hands. To them, easy meant feeling confident that they could work with this sign system and that it felt natural.

However, there were a couple of students who did not feel this confidence in working with clay. For example, Darin, who created a card game, started with clay and
abandoned it the next day explaining, “The sculpture was really hard.” He stated that he could not mold and shape what he wanted to effectively. Susan also started with clay and switched to drawing, noting, “I changed from clay to drawing because I didn’t feel like I could do as much with it. Plus, I can draw really well, and it makes me feel like I can show everything I want.” For Darin and Susan, the idea of working with clay might be associated with child-like fun from early on in their education, and therefore, clay creations in middle school might resonate with their early elementary or pre-school “play” years. They initially gravitated toward sculpture as a natural extension of their way to communicate because of past experiences with clay, but after experimenting with it, they soon abandoned it because they intuitively recognized that this sign system might not be the best way to communicate their thinking and knew that other sign systems were available to them.

Sign system explained story. Out of the 27 students in the study, 13 stated that the main reason they chose their particular sign system to transmediate their first story was because it could best express the details, meaning, or problem of their story. For example, Tamara selected watercolor artwork stating, “It best showed what I was trying to get at [pauses] the main problem in my story.” Karen chose drawing, noting, “I thought I could show the most detail of my story pursuing drawing.” Laura, who created a how-to brochure, described her process of transmediating. She explains, “I think of items and ideas that represent the story and then put that into another form.” Dylan also used this process, noting, “First, I think of an important object or part in my story and then once I have chosen it, I decide what type of mode to choose. Then I make my
object.” With Dylan’s process, he separated each paragraph in his flash fiction essay and created a wordless picturebook. He translated each paragraph into an illustration in the book. He also explained that he thought about using sculpture at first, but then chose drawing because it would “convey” his story better.

Like Laura and Dylan, other students also said that their sign system choice accurately represented parts of their story. Elsa created a birthday present and specifically made this object because it was the most important part of her story, the beginning. She said, “My story is about a killing that started with a present.” Additionally, two students chose to work with clay, and they had similar reasoning. Holly stated that clay allowed her to “communicate with it,” while Erika claimed, “It shows in detail the idea you want.”

For students who selected their sign system based on how it best expressed their story, creating a representation of iconic images was important to them in order to see aspects of their stories come to life in another mode. It could also be that students felt that transmediating initially meant creating a representation of their writing. Laura’s how-to brochure and Dylan’s picturebook are representations of the plot while Elsa’s present was an integral item for her plot to occur. According to Suhor (1984), these types of transmediations would be considered literal transmediation since they are representations of the original sign system. The other end of the spectrum is imaginative transmediation, which is where metaphorical connections are created (Berghoff et al., 2001).

Transmediation was a new concept to students; it is something that they had not experienced in their previous schooling, especially in regards to writing. Perhaps the
beginning process of learning to transmediate for students begins at the literal level where they can examine their thinking in relation to what is concrete and able to be “located” in their writing. With additional experiences in transmediation, literal representation could shift toward more abstract, metaphorical connections made from the translation of content between different sign systems.

**Students’ initial drafts inspired transmediation.** Interviewing students while they transmediated their writing in class revealed that they looked to their initial drafts repeatedly for inspiration. This inspiration enabled them to feel that they could recreate their story aesthetically. For example, Heather, who created a news article, specifically said that she chose writing and images in order to explain her story in both pictures and words. Kari, who assembled a collage with words, drawing, and images stated, “I used my rough draft to inspire me to find these pictures that show how the details in my story can appeal to your senses.”

Moreover, students were inspired to recreate their initial drafts symbolically in their sign system. Jason created a front door of a house out of paper, which could be opened. Behind the door was an empty white space of paper. He said, “At the end, he [main character] is about to open a door, but he has no idea what is behind it, so that is why the other piece of paper is completely blank.” Tamara also represented her story via symbolism. She intentionally used watercolors to give the effect that the art produced tears along with her main character. She explained:

There was this girl and she dies and she was kind of like behind this tree and so it kind of showed her best friend walking and her eyes getting blurry because of her
tears. She starts to cry, so I did water colors so it shows that it all blends together. Because her vision gets blurry and so I did the watercolor to make it look blurry.

Students also used their transmediated objects to create retellings of their stories. For example, Maddie created a round, colorful drawing of a ballerina on her tiptoes only showing her from the waist down. On the other side of the drawing was a round mirror, and the glass had been shattered into smaller shards kept in place by glue. She stated that she used the part of her rough draft where her main character dances and looks in a mirror and the mirror shatters. Then, her other character, the person on the other side of the mirror finally sees her. She noted, “The mirror shattering inspired me to also shatter a mirror and make a person dancing on the other side.” Holly’s sculpture scene of the girl who fell from the building shown earlier was also a retelling. She described her thinking:

I feel like my sculpture told my story because I made this whole scene and I thought of important things which would be the window which she jumps out of and the phone that was used to call her, and I thought that would be important to place because that was how they were reaching her. All these things were key things in my story, and I thought they would be important to make them and put them all together.

Multiple Sign Systems Provided Risk-Taking and Choice

Since it was the students’ first time attempting transmediation with their drafting and revising, there was initial apprehension about what sign system to use and how to transmediate. Some students, like Kari, for example, revealed that they initially did not know what sign system to use and spent the first class period of transmediation time
(approximately 45 minutes) thinking through options. Thus, many students chose a sign system in which they felt comfortable. However, because they were offered a variety of materials and choices, students later felt comfortable changing sign systems. In interviews, four students explained that they initially started with one sign system and changed either because their initial sign system was too difficult to use or their sign system could not best represent their intended thinking. For example, Susan, who created the sketch of the girl in trees shown previously, initially started out with clay and changed because, “I didn’t feel like I could do as much with it.” She stated that she could not depict as much details as she could with drawing, especially since she considered herself a skilled drawer. With this first round of transmediation, multiple sign systems allowed risk-taking and choice for students to abandon or play with various sign systems.

**Students’ Overall First Impressions of Object Creating**

Overall, all 27 students revealed that they either “loved” or “really liked” making their object and shared three general reasons: (a) it was creative and different from anything they had ever done in school; (b) they were able to see their story in a new way; and (c) their initial act of writing became clearer to students when they returned to their first drafts after making their objects.

Eight students explained that they thought transmediating was creative and engaging. For example, Lexi said, “I really enjoyed creating my object because we got to be creative and just have fun with it.” Rory agreed, “I think that creating objects is fun and creative and is a cool way to see your story in a new way.” Additionally, two students commented that their enjoyment stemmed from the fact that transmediation with
writing was a new process to them. Elsa explained, “This is different than what I’ve ever done before” and Laura agreed, “You don’t get to do this type of learning in school.” Additionally, three students stated that transmediating offered freedom due to choice. For example, Ben stated, “I like how you let us make our object out of whatever mode we wanted.” Holly also agreed, noting, “I wasn’t sure what to use for my object at first because there were so many choices, but other people’s objects inspired me.”

Six students noted that making the object really helped them see their writing in a new way. For example, students commented that their object allowed them to understand their story better, helped them make their story feel “real,” and assisted them in getting new ideas. Molly stated that her object showed her writing in a “different way.” Holly agreed, “It [transmediating] can help you find a deeper meaning and discover things that you didn’t even know about your story when you were writing it.”

Six students specifically attributed their object creation as a way to help their beginning drafts become clearer to them. For example, Joe commented, “It helped me visualize my writing and helped me get in better details.” Pete agreed, “I like making the object because it can help the description of the story.” Transmediation also helped students understand their writing intentions better. For Susan, transmediation helped her visualize her own act of writing. She said, “I loved making my object because I realized so many things about my writing.” She noticed that her writing was suspenseful, since her drawing builds on this suspense with the girl hiding on the tree branch and the hand reaching from the edge of the paper. She commented that creating the suspense in the drawing, which stemmed from her writing, helped her continue to build on this suspense
when she returned to revise. Karen noted, “It makes my writing easier to understand.” Amy concurred, “It helped me understand my story better.” Transmediating their initial drafts into another sign system helped students think about their writing while they were in the act of transmediation. They were able to reflect and recognize what they really wanted to say or include in their initial drafts that they might not have noticed during their first attempt at writing.

Since this was their first experience with transmediation, I wanted to see if novelty played a part of their excitement and whether the newness of the study would wear off during the next round. I also wanted to see if students would select the same sign systems they worked with during this first round or if they would change, and more importantly, why. The next section describes the second round.

**Story #2 (Flash Fiction)**

For the second writing unit, students began transmediation in class on a Wednesday after meeting with their literature circle groups and continued working on their objects the next two days in class. Students also took home their objects over the weekend and brought them back Monday in order to begin revising their rough drafts. At the beginning of the week in which students transmediated their writing, I asked them to think about what sign system(s) they would engage in for the next round and to bring in supplies that they wanted to work with or to request particular items. Materials left over were restocked, and new materials were added based on requests and interests, including Popsicle sticks, cotton balls, buttons, sand, and calligraphy ink and pens.
Sign System Selection

This section focuses on students’ descriptions of their objects, while the next section centers on reasons for selecting their sign systems. I asked students to create a note card “placard” of information about their object, including naming their object, writing a description of its representation, and then identifying the sign system(s) employed. These placards were placed next to or on students’ objects during a classroom “museum” walk-through presentation on the day students returned their objects to begin their revision work. I took photos of each object, collected the placards, and scanned them for data use. Students labeled their sign systems, and then I determined whether I agreed with their identifications. There were two instances where I disagreed with students’ self-labeling, and I coded them differently. However, they both could be labeled as multimodal overall, so that is the category in which they were placed. An example of this instance is where Lexi created a multimodal object that she described as writing with found art. Instead, I would have labeled it as writing with math, since her object was a medical chart including a cancer-free diagnosis of her main character. The chart contained writing, bar graphs of blood work, and percentages showing her cancer remission. However, since multiple sign systems were used, “multimodal” became a good fit.

Students used a variety of sign systems, and new ones appeared. For example, 3-D art, found art, and drama appeared for the first time in this data set. I showed students YouTube videos of found art and 3-D art. I described found art as a technique that incorporates everyday objects into a creation of art, and 3-D art as a way to make their
object stand alone in a 3-dimensional plane, which could be why students experimented
with both 3-D art and found art since they did not learn about it in the previous round,
hence, making two new categories in this round. Below is a chart (see Table 8)
describing the various sign systems represented in creating their objects and the number
of students who used and labeled their objects as that particular sign system(s).
Additionally, here is a video link created in Animoto that highlights students’ objects for
round two: http://animoto.com/play/DD93SqqYeAveZ5tF1q4AVg
Based on my determination of labels, seven categories were created.

3-D art. The first category, 3-D art, included 10 students. These objects can
stand alone, and according to an informal conversation I had with students, they argued
that it should be its own sign system subcategory, since the mode itself is to create an
object that can be viewed from all angles. I agreed and found it fascinating how all 10
objects were so different. For example, Darin created a giant knife out of aluminum foil
and construction paper. Karen constructed a Star of David necklace. Jason made a
burning building falling in on itself out of Popsicle sticks, painted charred black. Maddie
used an hourglass that she filled with sand, water, and red food dye, and Alison created a
3-D scene using a music stand, a microphone, and seven “fan” letters written by a crazed
fan (see Figure 7). Even though I would label this form of transmediation as multimodal,
since she also used writing, I honored her self-determined category as 3-D art. On her
placard, she wrote:
Table 8

*Students’ Sign System Choices for Round Two of Transmediation*

<table>
<thead>
<tr>
<th>Sign System Categories</th>
<th>Number of Students (n=27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-D Art</td>
<td>10</td>
</tr>
<tr>
<td>Sculpture</td>
<td>5</td>
</tr>
<tr>
<td>Clay</td>
<td>4</td>
</tr>
<tr>
<td>Wood</td>
<td>1</td>
</tr>
<tr>
<td>Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Color</td>
<td>2</td>
</tr>
<tr>
<td>Sketch (no color)</td>
<td>1</td>
</tr>
<tr>
<td>Writing</td>
<td>3</td>
</tr>
<tr>
<td>Torn letter</td>
<td>1</td>
</tr>
<tr>
<td>Classified letter</td>
<td>1</td>
</tr>
<tr>
<td>Letter</td>
<td>1</td>
</tr>
<tr>
<td>Drama</td>
<td>2</td>
</tr>
<tr>
<td>Collaborative skit</td>
<td>2</td>
</tr>
<tr>
<td>Found art</td>
<td>1</td>
</tr>
<tr>
<td>Multimodal</td>
<td>3</td>
</tr>
<tr>
<td>Writing with found art</td>
<td>1</td>
</tr>
<tr>
<td>3-D art with drawing</td>
<td>1</td>
</tr>
<tr>
<td>3-D art with writing</td>
<td>1</td>
</tr>
</tbody>
</table>
Twisted Music: This beautiful piece of art finishes this artist’s story “Gone.” It puts in some details from the fan letters to the microphone. The piece of 3-D art is very interesting.

![Image](image.png)

*Figure 7. Alison’s 3-D art entitled “Twisted Music.”*

**Sculpture.** The second category, sculpture, included five students. One student, Dave, used wood to make a model racecar. Four chose clay sculpture. For example, Pete modeled a clay forest car crash scene, complete with snow made from cotton balls. Wayne created a soldier in his foxhole on the beaches of the D-Day invasion, complete with a “mortar” suspended in air by Popsicle sticks, aimed straight at the soldier. Dylan created a sailboat out of clay for the base, but also included Popsicle sticks and tattered paper for the masts (see Figure 8). His placard read:

Gustavo’s Ship: Gustavo’s ship represents the ship that Gustavo sailed in to South Carpia when he had been exiled for robbery and battery.
Figure 8. Dylan’s sculpture entitled “Gustavo’s Ship.”

**Drawing.** Three students selected drawing. Erika chose to draw a side profile of a girl with blond hair, in which speech bubbles stating “dumb blond” appeared on the edges of the paper. She used symbols to represent what the girl thought, like “A+,” “E=MC^2,” a light bulb, an insect, and a star, which contradicted the speech bubbles. Susan, who chose drawing the first round, created a sketch scene of a graveyard with a sealed coffin positioned in the center. The coffin contained an image of a bottle of poison complete with skull and crossbones. Rory created a colorful drawing of a burning building. He made smoke from stretched-out cotton balls (see Figure 9). His placard read:

Ashes: This drawing depicts a building burning. The flames are inside the building and also engulfed the sides and top of the building.
Figure 9. Rory’s drawing entitled “Ashes.”

**Writing.** The next category, writing, includes work from three students. Each chose to compose a letter, but did it differently. Laura wrote a letter to another character in her story as if she were the main character. Holly wrote a letter as the main character, then ripped it up and placed the pieces into an envelope addressed to Jeremy Brown, a different character. Tamara created classified documents to represent the offense her main character, the father, did to his daughter and placed them into a large manila classified envelope (see Figure 10).

Figure 10. Tamara’s writing object entitled “Classified.”
**Drama.** Two students chose to co-author a flash fiction piece and then wanted to reenact their story through drama. They outlined the most important plot points and then co-authored a script via Google Docs that centered on those scenes (see Figure 11). They rehearsed each scene during class time and even created props to accompany the acting. Interestingly, each student described and titled their work differently on their placard. For example, Ben wrote, “Insanity: A dramatic act of crazyiness (sic) and sadness” while Joe wrote, “Dramatics: this wonderful representation brings you an insightful view of things that happen to kids and people who grow up with a rough life.”

![Figure 11. Ben and Joe’s outline of dramatic scenes.](image)

**Found art.** One student, Sandra, chose to transmediate via found art. Her story incorporated aspects of the Mad Hatter from *Alice in Wonderland*. She used keys, coins, buttons, and the Queen of Hearts and Nine of Hearts playing cards and placed them over a giant top hat (see Figure 12). She stated: “I made a collage of found art that represents my main character. I jumbled all of the random things I could find that tied to the character.”
Multiple sign systems (multimodal). Three students included more than one mode, placing them into the multimodal category. These objects included 3-D art with either accompanying writing or drawing. For example, Heather created a scene of a wedding ring in a box and a letter written by her main character, Nick, which was placed in an envelope. Lexi’s object, mentioned earlier, contained a medical chart of her main character’s health. Kassie created a 3-D object where she drew her main character’s body and placed it on top of a mirror wrapped in chains (see Figure 13).

Figure 12. Sandra’s found art entitled “Hatter.”

Figure 13. Kassie’s multimodal piece entitled “Hostage.”
Below is an excerpt from an interview when she was in the process of making her object:

Kathy: Okay, so tell me everything that’s going on right now with your object.

Kassie: So this guy his uncle just died and his uncle is everything to him and he kind of goes insane and he like kills a bunch of people. I made his eyes really big so he would look insane. He goes into a school and shoots a bunch of kids, so um, he feels a lot of guilt because he knows that his uncle wouldn’t want him to do that.

Kathy: He seemed like a really torn character when I read your rough draft.

Kassie: Yeah, he kills himself.

Kathy: How are you representing that in your object?

Kassie: So my object is so [pauses] he in one of the sentences says that he felt trapped, so I’m drawing a picture of him in a mirror and chains all around him.

Kathy: Wow, what are you going to do with that (pointing to chain)?

Kassie: Um, I’m probably going to put it across like that (wraps the chain around the mirror).

Overall, 22% of students used the same sign system as their first object creation. Once again, music and dance were not represented. However, in this round, two students chose to transmediate with drama. The next section discusses students’ reasoning for
choosing their sign systems and whether they enjoyed transmediating with their first or second object better and why.

**Sign System Reasoning for Round Two**

This section examines the reasons students identified their choice of sign system. While only two categories emerged in the first round, this one led to four, with the first two categories repeated. Categories for round two included: (a) students explored new sign systems or were inspired from classmates’ work in the previous round; (b) the chosen sign system best conveyed their story; (c) students found comfort in their chosen sign system due to ease of use; and (d) students wanted their object to be an extension of their story.

**Sign system exploration and inspiration.** Seventy-eight percent of students (n=21) selected a different sign system than their first transmediated object, and one-third attributed working in this new sign system because they wanted to try something new. For example, Carrie, who initially made a collage, chose to create a 3-D tin heart. She said, “I picked this mode of communication because I wanted to try something totally different than what I did last time.” Darin, who started with clay and then moved to a card game, chose to create a 3-D object: a knife. He stated his reasons were, “I wanted to do something other than a game.” Molly reported that she wanted to try something different. In the second story, she transmediated her writing into a wheelchair made of Popsicle sticks with cotton balls for the wheels. The reader does not find out until the last sentence that the main character is in a wheelchair, which creates a surprise. She said, “I wanted to try something different than my first object.”
For the 21 students who chose to work in a new sign system, perhaps they were able to do so because they felt that the classroom provided a space in which they felt safe to explore and experiment with new sign systems without risk of failure or feeling vulnerable to criticism. Trying something different, noted in Molly’s comment above signifies that she felt comfortable to work in a new sign system, one that she had not had experience in before this study. During informal conversations with her while she made her Popsicle wheelchair, she took pride in trying to create a model out of sticks, sometimes feeling frustrated when the glue would not hold the cotton balls. While at the same time, she said she learned how to be creative in another mode of communication, especially when she thought of the idea to cut up foam squares to make the chair’s seat and back. Additionally, the fact that 21 students wanted to work in another sign system demonstrates that not only did students gravitate toward more than one sign system choice, but that the classroom allowed for this choice to occur. By providing students accessibility to multiple sign systems, students were able to connect to more than one mode of communication and experience transmediation with it.

Students were also inspired to work in another sign system based on their peers’ first object creations. Alison created letters written by a crazed fan, and stated that she found inspiration in Lexi’s letter in the first flash fiction presentation. She thought Lexi’s letter finished her story and she said, “I wanted to do that with my object.” Amy also modeled her second object after her friend, Maddie, who created the shattered mirror object. Amy commented, “I liked what Maddie did last time so I kind of based mine from that.” Amy created a multimodal art piece of a broken mirror sealed in a frame,
where the broken shards contained words written in red of what bullies in school had called the main character in Amy’s story. The bullying became so bad for the character that the art piece transmediated a pivotal scene in the story where the boy threw a stone in the center of the mirror before committing suicide.

On the surface, Amy’s art piece could initially reiterate the notion that for some students, literal transmediation in round two still occurred over imaginative transmediation. However, Amy’s piece also suggests that there could be a blurred space between these two labels of transmediation. When Amy talked about her piece, she described it as the most important moment for the main character and what is left behind for the family to see. She stated that the broken glass symbolized the broken pieces his family would have to put back together in order to understand why the character killed himself. This could be considered imaginative transmediation then due to the metaphorical connections. Additionally, according to Amy, the name-calling comments heard by the character are etched in red lipstick, representing blood and hurt. This scene was not in her story per se; rather the name calling led to the reason for the character to take his life. Therefore, upon first glance, it could be possible to initially note it as literal. However, Amy’s deeper thinking suggests that representations might appear to be representations initially until the thought behind them is shared by the creator. This blurred space may not be as easily defined as Suhor (1984) and others (see Berghoff et al., 2000; Loretto & Chisholm, 2012) suggest.

Students also wanted to explore their sign system based on aesthetics, through the touch and feel of the sign system. For example, Kari, who created a 3-D diorama of a
broken iPhone smeared in blood with portions of a torn letter surrounding it, noted that she chose her sign system because of how realistic it was to her. She said, “I enjoy the feeling of how the situation in my story could happen to anyone. I like how you can touch and feel the artwork. It makes me feel like I am the main character.” I asked her how she would define this type of art:

Kathy: How would you describe this type of art?
Kari: 3-D art because you can look at it.
Kathy: Yes, you can examine it too.
Kari: Yeah, like pick up the journal pieces and see what it says. I have some shards of glass in here too.

Dylan modeled a ship out of clay based on his main character’s exile to an island (shown earlier in Figure 8) and stated, “I wanted to make a ship but not a drawing. I wanted it to be 3-D and be able to touch and feel it.” For Dylan and Kari, being able to physically touch their thinking was important in order to visualize the stories.

**Sign system conveyed story.** Similar to the first round, one-third of the students’ reasoned that they chose their sign system based on the notion that it best conveyed the story’s details, meaning, or characters. Students gravitated toward sign systems that transmediated details. For example, Karen noted, “I chose this mode [3-D art] because it was the best way to describe the story.” Her flash fiction story included details of her main character in a concentration camp during World War II. However, the reader does not know the setting until the end, which creates a dramatic surprise. She created a Star of David necklace to represent this aspect. Furthermore, Susan specifically noted that her
sign system assisted her in noticing details she might not have otherwise observed. She said, “I chose drawing because it helps me find things [ideas] in my work I wouldn’t have noticed otherwise. I feel that I am very good in my work so I can see exactly what I want in my drawings.” She describes reciprocity between her drawing and writing, not only to complement each other, but also to allow details to become clearer in both sign systems.

Some students also believed that their transmediated objects conveyed a deeper theme or meaning. For example, Sandra, who created the found art piece incorporating Alice in Wonderland details, shown earlier, stated, “I picked this mode because my story is a spin-off of two fairy tales, and one of my characters I used was the Mad Hatter and he’s crazy and mad, so I thought found art would represent that.” Erika also believed her sign system would convey a message. Her drawing, entitled “Dumb Blonde,” described earlier, which she confessed is semi-autobiographical, contains symbols that represent the deeper meaning in her story. She chose drawing because “I love drawing, and I thought that a drawing was the best way to convey my idea.” Holly, who wrote a letter and then tore it into smaller pieces, placing the pieces in an envelope, agreed, “In something so small, it told the whole story in its own way.” Kari believed that her sign system of a box with her shattered phone, torn letters, and tissues smeared in blood symbolized a deeper way to examine her flash piece. She explained, “So this is supposed to symbolize it [the theme] and this is her memory of all her stuff in a box, like the box is her memory, so … I wanted it to stand out. I wanted the phone shattering, so the phone would get his [the father’s] attention.” Kari’s transmediated object symbolized the culmination of events before and after her plot, rather than focus on what her initial draft actually contained.
through words. Because of her idea to shatter the phone during transmediation, Kari placed this idea into her revised draft, including a paragraph describing the phone call scene. It read:

Before that, Lacy snatched up her phone and called 9-1-1. She could barely hear a word they said over the shouting and crying, but she managed to get out the few pieces of information they would need. They told her to stay put, but she wasn’t going to make any promises about that. She then heard footsteps coming downstairs. The fragile phone hit the hardwood floor, shattering.

Kari’s decision to smash her phone also extended into the metaphor that the character’s mother and ultimately the character Lacy, “crashed” through physical abuse as well as suicide. She changed her title to also signify this, calling her revised draft, “The Crash Before it All Ended.”

**Sign system provided comfort.** Again, as noted in the first round of transmediation, comfort was an important part of sign system selection for seven students. Dave created a wooden sculpture of a racecar, painted it red, with details of flames and racecar numbers from his story, stating that his choice was the best mode of all. Randy chose clay stating it looked like fun since he saw his peers in the previous round engaging with clay in an enjoyable way, and Pete chose clay again as his second object, commenting that he picked clay “because I like to play around with it and because you can do so many things with it.” Ben chose drama with his co-author and friend, Joe, because he thought it sounded like fun to “act crazy.” What’s interesting is that on his sign system inventory sheet he filled out at the beginning of the study, he chose drama as
his least favorite sign system because he did not like the idea of performing. Both he and Joe worked on their acting scenes, writing them during class, and then performing them with little hesitancy. It was only on performance day that Ben grew nervous. Joe embodied his character, a serial killer child, while Ben, who played his brother, remained stoic and stated his lines without emotion. While Ben initially chose drama because it seemed like fun, he became apprehensive about using this sign system later, and confided that out of his three objects, this was his least favorite to work with and would probably not choose drama again, although he did experiment with it.

Comfort in the sign systems also stemmed from ease of use and feeling confident in a chosen mode. For example, Maddie, who made the ballerina dancer drawing combined with the shattered mirror on the back for her first object, revealed that she chose 3-D art again (even though it was not labeled as 3-D art last time) stating, “I thought it enhanced my story last time. Also, the only other thing I was interested in was drawing, and I am not the best artist.” This is interesting because her peers raved about her artistic ability. The second round of transmediating contained broken glass in many students’ objects, which could possibly be modeled after her first round creative representation. Wayne and Elsa also stated they selected their sign system based on ease. Wayne said, “I can use it [clay] easier” and Elsa, who created a birthday party scene out of found art in a 3-D display said, “I picked this mode because it was easy to make but describes my story very well.”

**Sign system as extension of story.** Laura, Heather, and Lexi stated they selected their sign system because it created an extension of their story. These students used their
sign system to extend or showcase their writing as a companion text. What’s interesting is that they all chose writing as the sign system. Laura created a letter written from the opposite point of view of her main character. Heather composed a letter as if she were the main character, Nick, writing a letter to his fiancé before he died, with her object including an engagement box and ring inside it. Lexi created a medical chart that included both writing and graphs displaying the medical history of her main character’s turmoil overcoming cancer. Laura stated that she chose to create a letter because, “I felt that it would be a good way to get the emotion that the mother shows across. It also shows the situation from a different point of view, so it explains it a little more.” Lexi agreed, “It helped me explain my character, and it cleared up some things I didn’t write.” Heather concurred, “It helped clear up a mysterious object in my story, and it added a part of my story.” Here, writing became an additional companion text that helped them expand the story for their audiences.

**Students’ Preference of Sign Systems**

After completing their second round of transmediation, I asked students which object they preferred and why. Seventy-two percent of students (n=18/25) preferred their second object and provided three possible reasons. First, students thought the second object connected better to their story than their first or that it interpreted the story better. Carrie, who made the 3-D aluminum heart said, “I felt like it really connected better to my story.” Holly agreed, “I liked my second object better because it helped you find a deeper meaning and told more of the story. You had to interpret it and find that meaning
for you.” Dylan, who made the clay boat noted, “I like this object better because I feel like it fits better to the story than the first time.”

It could be that students understood the process of transmediation better the second time since it gave them additional practice with this new concept of learning and understanding. Students were able to see what transmediation could do for their revising after completing the first round of it. Therefore, they knew what they could expect out of the experience transmediation provided and further committed themselves to the experience in this next round.

Students also reasoned that this object was more creative than their first object. For example, Alison, who created the crazed fan 3-D art, said, “I like my second object better because I felt I could get more creative with my object because I was more prepared.” Amy, who made the shattered mirror with hate names on the shards simply stated, “I just think it’s more creative.” Students also took pride in how their objects looked compared to the earlier ones. They believed that the second object looked better or included more details. Dave, who made the wooden race car said, “I liked this object better because it is better looking.” Rory also commented on the look of his burning building drawing, noting, “I like my second object more because I think it looks better.” Elsa, who made the birthday surprise 3-D art collage, stated, “I like my second object better because it is very well made, and in my opinion, looks better than the box I made for number one.”

For some students, the appearance of their objects became a focal point for their work with transmediation. It could be that students took pride in their work because they
knew that they would have an audience who would look at their objects. During author’s chair readings, students read their final drafts to the class with their objects shown on the document camera as background images. After reading their stories, students would spend time (usually between three to five minutes) discussing their objects, commenting on their thinking behind the object creation and what it meant to the story. This became as important as sharing their writing.

With the first round, students were not sure what would become of their artifacts. They did not know if they were for personal or public use (ultimately both). Therefore, comparing the appearance of objects between the first and second rounds, objects contained more details and a more “polished” look in round two. Additionally, this caring and effort put forth to “beautify” their objects became opportunities for reflection. This means that the time students took to fine-tune their objects’ appearances gave them more opportunity to think. For example, Dave, who created a clay sculpture of a UPS shipping box during round one, crafted the box in one day since he suffered a concussion at the beginning of the study and wanted to complete his work in class instead of take it home for additional homework. This equated to no more than 40 minutes of transmediating “in the act.” Conversely during the second round, Dave created his race car over the course of three days. He assembled, painted, and detailed it, tripling his time of transmediating. Each day, he continued to add more details to his car, as his group listened to how he thought he might finish his story (he submitted an unfinished rough draft since he could not figure out the ending). He talked about his thinking with his peers while painting. This was prime reflection time for Dave. Object appearance for an
audience seemed to have increased direct time spent in transmediation mode, and ultimately, provided reflection opportunities for students to think about their writing when they were not writing.

The students who enjoyed their first object better noted it was because of its originality. Lexi, for example, compared her two objects together noting how her first object (letter inside laced envelope) was more creative and original than her second object (medical chart). Maddie compared her objects to her peers, stating, “If I had to choose one, I think I would choose my first object [shattered mirror with ballerina drawing] because it was more exciting and it was different than everyone else’s.” As mentioned earlier, Maddie’s shattered ballerina drawing inspired others in the second round to also break glass, and Maddie felt that her second object might not have had that “spark” that other students commented on like they did with her first. Jason, who also enjoyed his first object of the door drawing more, noted its simplicity and he claimed that he became frustrated when he had to color in all of his Popsicle sticks to represent the burning building. One student’s comment gave me pause when having to select one object over another. Erika explained, “I think that there isn’t a better one because you can’t really choose between drawn or sculpted art. I mean, what if you had to pick between the Mona Lisa or David?” Her point is an interesting one. Can sign systems differ between students’ thinking based on the experience or transaction they had with that sign system? Is it fair to ask them to choose between sign systems? The third round of transmediation had students working in a completely different experience: in a technology-only environment. Would students be able to determine what experience they
preferred, and does it make a difference to the transmediation experience overall when working not with hands, but with fingers on a keyboard?

**Story #3 (Flash Sci-Fi)**

For the final round of this study, there was a two and a half-week break between writing units. When students finished their second flash fiction and presented their writing and objects to the class, Ms. Smith then shifted the focus from writing to reading, since she was required to teach a seventh grade novel during the first semester. Because they read *Time Machine* by H. G. Wells, I wanted to find a writing genre that might compliment the various themes and situations they discussed and revealed in classroom talks about the book. Originally, I had planned to introduce students to historical flash fiction, but instead, I thought flash science fiction (flash sci-fi) would tie in nicely with Wells. Thanksgiving break was quickly approaching, and Ms. Smith asked if students could present this final round during the two days before break began. That way, she could plan to teach a new unit in December centering on reading. I agreed, which gave me one week for students to learn about and read flash sci-fi. We also thought that incorporating information science articles would benefit students’ background knowledge and could provide ideas to include in their own flash sci-fi works.

We provided students with a choice of science articles centering on futuristic concerns, like building a bridge to the moon, moving to another planet in our galaxy, mutations, people flying, disappearing continents, cloning, time travel possibilities, disease that might wipe out the human species, humans developing super powers, and creating robotics that are more humanlike than metal. In groups of three, students read
their chosen article, discussed with their peers, and then wrote a cautionary note to the
class of what might happen in the future, including pros and cons of this scientific
breakthrough/discovery. They were also encouraged to continue researching topics at
home they might find interesting after they heard their peers speak. I also generated
discussion based on events in the *Time Machine* and possible future scenarios.

Furthermore, we brainstormed a list of “nouns” that one would expect to find in
science fiction writing. We hung this poster in the classroom throughout a week of
reading mentor texts. Students read 10 flash sci-fi mentor texts (two per day), and I tried
to categorize each day’s reading by themes, such as time travel, aliens, alternate universe
experiences or other worlds, including virtual reality gaming, and cloning and
robotics/technology. After reading two flash mentor texts each day, students engaged in
noticing and naming elements that made each flash sci-fi piece unique and then practiced
that craft element in their journals. At the end of the week, students had five beginnings
to stories and had to choose to expand on one or start fresh with a new idea over the
weekend. Because of the time crunch, students were expected to bring their rough drafts
to class Monday to begin transmediating in the computer lab.

Technology was an integral part of discussions in the novel and in reading the
flash sci-fi texts. Therefore, technology seemed like an interesting choice to include
transmediation, which branches into the ideas of new literacies. I wanted to see if
technology worked in the same manner for transmediation that students had exhibited
when working with hands-on object formation for their previous two rounds, like using
drawing and clay supplies, etc. I wanted to see if students enjoyed transmediating their
thinking with technology and if this mode of communication would be able to translate content of writing as easily as it did with hands-on objects. Therefore, students were given three days in the computer lab to play with their thinking in a variety of technological ways.

First, I provided a list of possible computer programs and gave them each a password or link to the appropriate programs. I also encouraged students to help me brainstorm more programs that they could use in school. Some programs did not require passwords, like creating an iMovie or using PowerPoint to transmediate. However, some online programs required my assistance for setup purposes since they were used in a school setting. I purchased a Glogster teacher license for the year so that students would have safe and free access. I also emailed Pixton Comics to see if I might use its expensive website tools for free since it is for dissertation purposes. The company agreed to grant all 27 students full access to the program. This meant that there was no page limit, caption limit, or frame limit for comic-like creations. Students could create an entire graphic novel on this program if they wished. Other possibilities that I shared and provided examples of my own work were Animoto.com, in which students can create movies; Goanimate.com, in which students can produce animated cartoons; and Prezi.com, which is similar to PowerPoint, but is more visual.

We spent the first part of day 1’s computer lab time reviewing these programs. The remainder of lab day 1 consisted of students exploring their initial choice of computer programs with me assisting them if they needed help. They also sat next to peers and were freely sharing tips and how to navigate the various programs, especially if
students had prior experience with the program. Most students stated they had experience with PowerPoint, Prezi, and Glogster from completing assignments in other classes, such as social studies using these programs. However, Animoto and Pixton were new programs, and students seemed to gravitate to them because of the new-ness. For example, in an initial count on the first day in the lab, I asked which programs they were thinking of using to transmediate. Below is a chart indicating their initial thinking (see Table 9).

This table reflects how students gravitated toward the unknown computer programs such as Pixton and Animoto that they had not experienced prior to the unit. Furthermore, three students were open to multiple possibilities of transmediating. What is interesting to note is that although eight students initially thought they might use Animoto, ultimately, that number was reduced by half, with only four students submitting final Animoto transmediations. The students who abandoned Animoto stated that the 30-second free version was not long enough to conduct a video. Therefore, they sought out an alternative program that could be less limiting on their production, such as a Glog, iMovie, or Pixton comic.
### Table 9

**Students’ Initial Computer Program Choices**

<table>
<thead>
<tr>
<th>Name</th>
<th>Glogster</th>
<th>Animoto</th>
<th>Pwrpt</th>
<th>Go-animate</th>
<th>iMovie</th>
<th>Pixton</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Randy</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Heather</td>
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<td>x</td>
<td></td>
<td></td>
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<td></td>
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</tr>
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<tr>
<td>Ben</td>
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</tr>
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<td></td>
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<td>Kari</td>
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<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clone camera pro</td>
</tr>
<tr>
<td>Elsa</td>
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<td></td>
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<td>x</td>
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<tr>
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<td></td>
</tr>
<tr>
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<td></td>
<td>x</td>
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</tr>
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</tr>
<tr>
<td>Dylan</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
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</tr>
</tbody>
</table>

When students completed their work, they emailed me a link to the website that housed it. I then created a LiveBinder that gave each student in the study a tab, like a real binder. I embedded their links and/or transmediated objects (if contained in a file) on an
individual tab for easy access when they presented or wanted to share their work.

Following completion of their computer-generated transmediated objects, students revised their rough drafts and some even revised and rewrote entirely new flash sci-fi pieces based on their work transmediating in the computer lab, which will be shared in the following section.

Final drafts and sharing concluded this third and final round, which ended the day before Thanksgiving break. I then returned in December for follow-up interviews and had students choose their favorite flash piece to submit for a class anthology, as well as create a collaborative class flash fiction piece for the anthology, co-authored by all 27.

**Flash Sci-Fi Transmediated Object Selection**

Since all 27 students transmediated using a computer program incorporating multiple sign systems, such as drawing, writing, music, and movement on the screen, new literacies scholars would define these objects as multimodal. Therefore, to break it down further, I categorized students’ objects based on the medium (in this case, the computer software) in which they transmediated. See Table 10 below for students’ chosen computer programs.

This table demonstrates that choices for transmediation were mostly evenly distributed in the first five computer programs followed by two students using Prezi and one student who created an iMovie. Furthermore, the 10 male students in the study gravitated toward only three programs: Pixton Comics, Goanimate, and Glogster.
Table 10

Software Choice for Round Three of Transmediation

<table>
<thead>
<tr>
<th>Computerized transmediation</th>
<th>Number of Students (n=27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixton Comics</td>
<td>6</td>
</tr>
<tr>
<td>Goanimate</td>
<td>5</td>
</tr>
<tr>
<td>PowerPoint</td>
<td>5</td>
</tr>
<tr>
<td>Animoto</td>
<td>4</td>
</tr>
<tr>
<td>Glogster</td>
<td>4</td>
</tr>
<tr>
<td>Prezi</td>
<td>2</td>
</tr>
<tr>
<td>iMovie</td>
<td>1</td>
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</tbody>
</table>

Pixton Comics. Six students chose to transmeditate using Pixton Comics. Their efforts ranged from nine to 13 frames and included writing in speech bubbles and captions along with graphics. The user manipulates the graphics and chooses size, characters, color, settings, and actions. For example, Ben created a comic containing 12 frames where his main character is given a task; to find “them” in time to save his life. Each frame follows a sequence of tasks the main character completes and then in one of the final frames, the character finds a note that reads: “You have failed. We are them. Game over!” The next frame contains the words “BOOM!” and the final frame is white.

Another student, Erika, transmediated her flash sci-fi into a nine-frame cartoon
representing the heroine in her father’s science lab where her goal was to save the world. She time traveled and prevented invaders from taking over… temporarily (according to her last frame). Wayne also transmediated his story into a nine-frame cartoon. His cartoon depicted the end of the world consumed by “savages.” Scenes included cities with fleeing and dying people, a solitude camp scene where the main character gathered supplies and courage, and a fatal gunshot to the chest.

**Goanimate.** Goanimate enables students to create comics, but then turns them into animation, complete with computer-generated voiceovers of speech bubbles. Students advance the movement in each frame via commands and then can band them together simultaneously to create one continuous video animation. Student animations ranged between 20 to 30 seconds in duration. For example, Susan created a 30-second Goanimate video that begins with a voice-over hologram warning the main character that his boss will betray him. The character does not heed this warning and agrees to go outside with his boss during an eclipse. The video ends with the main character dropping to his knees, pulling out his hair, his eyes forming dark circles, crazed by the Eclipse’s effects, his boss standing over him laughing, “ha … ha, ha, ha.”

Another student, Dylan, created a 30-second Goanimate video entitled “Warzone!” that incorporated the scenes from his flash sci-fi that he thought retold his story. His video started with computer voice-over narration stating “The war rages on” while machine-gun equipped fighters spread out to flee a UFO attack. They run for safety back to their base camp, but the doors are blocked by “giant, evil bunnies.” The next scene includes a fighter with his helmet removed, asleep on a couch. He wakes and
a speech bubble states, “How did I get here?” Students who worked with this program informed me that Goanimate is limited on figures to include in animation, and they explained giant bunnies were the only animation that depicted evil. Therefore, even though bunnies are not a part of his flash sci-fi piece, he chose them to represent the ongoing battle in his story. To watch Dylan’s video, link to http://goanimate.com/videos/0cig0kN-Xzug.

**PowerPoint.** Kassie, along with four other students created individual slideshows. Slideshows ranged from 9 to 11 slides and included both writing with captions on the slides, as well as images taken from the Internet to represent key aspects of setting, characters, and events. One PowerPoint presentation included music. When Kassie presented, she wanted to read her story with her slides displayed in the background so that students could gain a visual to enhance her presentation. Her friend, who was familiar with the story volunteered to pace the slides as she read it aloud. To see her presentation, click the link below.

http://www.livebinders.com/media/get/Njc0NTg4Ng== Another student, Lexi, transmediated her flash sci-fi through 10 slides. The first nine included black backgrounds with brief, two-three word statements written in white and red font that captured the meaning of her story. They where phrases like, “3 left,” “lack of everything,” “The blinding brightness.” Her final slide used a white background with red lettering, entitled, “The New World.”

**Animoto.** Animoto is an online video creation service that allows users to create movies by incorporating music, video clips, text strips, and photos in a connective
fashion, usually packaged by thematic concepts. The free service allows users to create 30-second videos, while the paid version allows unlimited time for movie creations. Students in this study used the free version, since I could not get a package that could allow more than one user, which was myself. If I allowed them to use my personal Animoto account, it gave them access to my Twitter, Facebook, and Pinterest accounts, as well as the pieces I previously created. Therefore, students signed up for the free version with their school emails, and it worked well for this study since their transmediations became movie trailers that enticed viewers to read their flash sci-fi pieces. For example, Carrie generated interest in her story by asking “What if you were linked to a star?” and flashed images of supernovas exploding into space (see Carrie’s Animoto here: http://animoto.com/play/Pw8Rt13HdmPMNd45iEB0lA). Molly pulled quotes from her sci-fi story describing a new and foreign land that her world had to migrate to, which was in another galaxy (see Molly’s Animoto here: http://animoto.com/play/ysRBGkdOHIHKbB0VA3XlhA).

**Glogster.** Glogster is an online program that enables users to create “live” bulletin boards called Glogs. They are considered live because video clips, animation, and attachments can be pinned to the boards. When they go “live,” students can also comment on one another’s boards. Students had the option to use the GlogsterEDU version, which I purchased for the year. This version is considered safer due to lack of advertisements, and when Glogs are posted, only invited members can view them. Three Glogs were created by four students, since Rory and Dave co-authored their flash sci-fi piece together, so they also created their Glog together. Glogs ranged in organizational
format. For example, Rory and Dave created a timeline of words and images to represent their thinking in a linear fashion, while Laura posted notes and images to describe her main ideas. To see her Glog, click here: http://sxwp48ys8.edu.glogster.com/flash-fiction

**Prezi.** Prezi is similar to PowerPoint, since it is a program to assist users in arranging information for presentations. However, Prezi differs from PowerPoint in that information can be arranged and formatted in nonlinear ways. Viewers of this rapid movement that specializes in zooming in and out to transition between information have been noted to feel “dizzy” since the presentation’s focus and movement can be unpredictable. Two students chose to create Prezis, and both had completely different visions. Kari used her Prezi as an advertisement to promote an object in her story, while Heather used the Prezi format to highlight key points in a chronological fashion. She created her Prezi as an autobiography, where her main character told her life story. View Heather’s Prezi at [http://www.livebinders.com/play/play?present=true&id=1168124](http://www.livebinders.com/play/play?present=true&id=1168124) and click on Heather’s tab.

**iMovie.** iMovie enables Mac users to edit videos they have created on video equipment, including iPhones. Only one student, Maddie, chose to create an iMovie. What’s interesting is that she chose to create it at home rather than at school, which will be explained in the next section. When students and I watched her movie, we felt like we had just “seen” a preview for a blockbuster science fiction movie. She captured the details and images she provided in her writing into a video of her story, which allowed us to know more about her story and ideas. Watch her 55-second movie trailer here: [https://dl.dropbox.com/s/xhw61wnc8it9wj0/Maggie%20-%20Trapped.m4v](https://dl.dropbox.com/s/xhw61wnc8it9wj0/Maggie%20-%20Trapped.m4v).
**Flash Sci-Fi Transmediated Object Reasoning**

Four themes emerged based on students’ decisions to transmediate via software. They include: (a) the program was the best way to represent their story; (b) the program seemed cool and enjoyable; (c) there was familiarity with the program; and (d) the program offered ease of use to incorporate ideas from their story.

**Best way to represent story.** Eight students stated that their chosen computer program offered the best way to represent their story. For example, Erika said, “I think Pixton will show what I want to show about my story.” Elsa said she also used Pixton because “I can show a better image of my story.” Karen, who used Animoto agreed, “You can add music, pictures, and videos and it’ll be the best way to show my story.” Dave and Rory who co-authored a flash sci-fi piece also chose their computer program, Glogster, because they needed a way to create a timeline of events showing the lead-up to the overthrow of mankind. They said that Glogster was the only program that could ably show their story via a timeline. Tamara, who used PowerPoint, also believed that “it will represent my story well.” Even though a range of programs were used, each student had a particular software program in mind that they felt could best represent their intended message. They also had the opportunity to abandon the program and choose another one during the three days in the computer lab. For example, Maddie worked on Animoto during the first day. When asked if she liked Animoto, she stated, “Yeah, I liked it, but I couldn’t really picture me using it with my story.” The next day she decided to switch to creating an iMovie.
Notions of “Cool”. Since I demonstrated each program with an example of my own work, students could see what a final product looked like. I also showed them a brief tutorial for each and they had time to experiment in the computer lab with my assistance, as well as at home (since all students stated they had Internet access at home). Seven students noted that they chose software based on the perception that it initially looked like fun or that it seemed “cool.” For example, Pete used Pixton because he said, “I think it’d be cool to make a comic.” Alison also determined her object mode based on coolness. She commented, “I thought I could make it [my PowerPoint] really cool.” Other students gravitated toward the fun aspect of the programs. Molly, who created an Animoto, said she chose it because “it looks fun.” Amy, who made a Glog said, “I just think it will be a fun idea.” Engagement in and enjoyment with technology as a sign system complemented the students’ proclivity toward their chosen programs, since after experimenting with a variety of programs, these students ultimately stayed with their chosen software because of the enjoyment they had while transmediating.

I use the coding of “cool” in this section not to trivialize the content that the data revealed, but instead to reveal the thinking of a middle school student. To a seventh grade student, fun and cool are a part of their pre-adolescent vernacular, indicating a sign of acceptance. Scholars such as Danesi (1994, 2000b) have written about the notion of cool from a semiotic perspective. In his book, Cool: The Signs and Meanings of Adolescence (1994), Danesi states that the language used by teenagers, which he calls “pubilect” (a combination of puberty and dialect) stems from social semiosis in order to identify with other peers. The physical and emotional changes that occur at puberty
become symbolic behavior. Public speech is social discourse that is reflective upon teenagers’
thought processes. Making transmediation synonymous with cool is then a public
indication to their peers that what they are experiencing is acceptable. It has become an
accepted way of learning in the classroom. In fact, Danesi (2000b) states that how
adolescents see themselves socially has an impact on how they relate to their educational
experiences. He wrote, “Teenagers literally ‘pick up’ their ways of acting and thinking
osmotically from each other so as to seek adherence and conformity to peer-generated
and peer-sanctioned models of behavior” (p. 14). Therefore, if students in the class
perceived transmediation as cool, then transmediation has become part of their social
experiences, which in turn, made learning more meaningful to them.

**Familiarity with computer program.** Six students commented that they chose
programs based on whether they had used the software before and felt familiar with it.
For example, Lexi, who created a PowerPoint, said she chose it because “I had a good
idea of what to do with it, and I’m familiar with PowerPoint.” Sandra, who also made a
PowerPoint, agreed, “I am familiar with the program.” Kassie also made a PowerPoint
and commented that she chose it because she “understands it.” Joe, who used Goanimate
said he chose it because “I’ve done it before.” Susan, who also used Goanimate, said “I
like making comic movies.” Finally, one student chose a program based on familiarity
with the mode of communication: creating comics. Jason, who had never used Pixton
before, but enjoys creating comics on paper stated, “I chose Pixton because I am good at
writing comics because I have read so many funny graphic novels.” For these six
students, familiarity was important in order to provide a comfort level when using
technology and transmediating, so that they could bypass learning the program (with the exception of Jason) and instead, transmediate immediately.

**Computer programs selected for functionality.** Five students mentioned that they selected their computer programs based on ease of use, such as how easy it would be to incorporate ideas from their writing into the program. For example, would it allow for a smooth transmediation experience? Ben, who used Pixton noted that it looked “easy to learn.” Carrie, who created an Animoto said that she chose it because “it is easy to incorporate ideas.” Laura agreed, and said that making her Glog allowed her to easily “put down various ideas [on the bulletin board],” which she noted was the best way to make her object.

**In-school versus out-of-school accessibility.** Even though students had access to technology both in and out of school, three students had difficulty finishing their project in time to begin working on revisions. This marked the first time students felt that they needed more time to work on their objects. The three students who needed more time all worked in different programs: Pixton, Goanimate, and PowerPoint. Furthermore, one student, Dylan, noted that he wanted to create a movie, but felt that school time did not give him enough freedom or access to work on the movie the way he would like. He wanted to bring in costumes, but felt that school might not give him that space in which he would need to create his movie. He also discussed the lack of technological support in creating a movie in class. Therefore, Dylan stated he ultimately chose to create an animated movie on Goanimate stating, “I thought that a Goanimate would be easier to do at school.”
Maddie, who created an iMovie, discussed with me how she used her in-class time to research or gather ideas, but then had to create and film the movie at home.

Below is an excerpt of our conversation:

Kathy: So what do you think you’re going to do today?

Maddie: Well, I have an idea to make a video where in my story, there’s a person who’s at war kind of and so I’m trying to find something I can use as a video and then at the end of my story it kind of like goes black and he doesn’t really know what’s going on and then it starts all over again so I’m trying to find something I can use in my video and then at the end of my video it was going to black and so like as if it was him but I’m not really sure how I’m going to do it yet.

Kathy: Wow, you could film it on your phone possibly.

Maddie: Yeah, that’s what I was thinking, too.

Kathy: And then you can just transfer it to like an iTunes account so you could stream it.

Maddie: Yeah, and I have iMovie at home so I could use that. But right now I’m just trying to figure out what to use.

Kathy: So you’re on YouTube right now looking for ideas of what to use?

Maddie: Yeah.
For Maddie and Dylan, in-school technology prohibited them from completing transmediation in such a way that they had accessibility to create in an environment that provides freedom to represent and/or create their story. For the three students who needed more time, in-school technology prohibited them from having enough time to learn the program before having to leave the computer lab and continue work at home.

**Students’ Thoughts on Using Technology for Transmediation**

At the end of their time in the computer lab, students were asked to comment on their experience using technology. Students had mixed feelings. Below, their reasons are divided into three categories: students who naturally gravitated toward technology, students who had difficulty transmediating with technology, and students who felt that technology inhibited transmediation.

**Students’ natural gravitation toward technology.** Students who liked transmediating with technology expressed a wide range of positive comments. For example, Randy, who made an animated video with Goanimate said it made his story come alive. Rory, who created a Glog said, “I thought it was really fun and let us be creative in a whole new way.” Both Laura and Dave, who made Glogs noted that they loved working on a computer for class work, and Pete, who made a Pixton comic noted that he liked it just for the fact that it was something different done at school. He added, “It was a change from the normal.” Some students also enjoyed the challenge that working with technology provided. For example, Holly, who created an Animoto noted that she liked working on the computer because it was challenging. Tamara, who created a PowerPoint agreed, “It was more difficult, but the end product was better than my other
objects.” Elsa also agreed, stating, “I thought it was difficult sometimes, but overall, it was a very nice way to make my object.” For these students, technology became a natural extension of their work in school. They enjoyed the challenge and opportunity to stray from the traditional classroom experience that working in the computer lab provided.

**Students’ difficulty with technology.** This category represents the statements students made about their thinking of transmediating with technology. Comments ranged from needing more time to feelings of annoyance due to technological glitches. For example, Ben, who claimed he needed more time said, “I would have liked more time so I could learn how to use it [Pixton] better.” Alison (who created a PowerPoint) agreed, stating, “I ran out of time.” Ben’s frustration grew out of feeling overwhelmed in learning the intricacies of a new program with little time to do so. By the third day, when students were expected to conclude their transmediations (or take them home in the evening to finish) Ben had completed his Pixton comic but with reservations. He explained that he was going to have to revise his flash sci-fi draft in order for his comic to make sense because he “couldn’t do everything that the story had in Pixton.” Furthermore, he reflected that he made the most revisions out of the three stories because of using Pixton.

Other students were annoyed at times in the computer lab due to technical difficulties with the computer or the software. One student had to start from the beginning after working on his comic for a day, since nothing saved for him on his account. Another student had difficulty manipulating the objects to fit the screen when working with Pixton Comics. Amy’s response sums up students’ annoyance with
glitches. She said, “It was … sometimes annoying because computers sometimes froze or didn’t save.” Susan also agreed, “It was fun working on the computers, but technology is sometimes hard to work with, and I would have preferred having the choice to choose technology or not.” Darin agreed that technology can sometimes be challenging to achieve the overall goal in mind and make it match with what the computer can actually do. He stated, “The thing I used [Goanimate] did not use different voice tones, so the video is boring.” Although it might appear that technology has the potential to create new ways of transmediating that the earlier rounds could not do, such as voice-overs and animation of art, students did not utilize these benefits to their advantage either because they did not know how or they felt that it inhibited them. To them, starting with a “blank” canvas felt freer than the computer canvas (the screen).

**Limitations of transmediating with technology.** Students that disliked transmediating with technology felt that it limited or restricted their transmediating. For example, Wayne, who created a Pixton comic stated, “I didn’t like it at all. I couldn’t get what I wanted.” Lexi agreed, sharing her aggravation regarding limitations. She said, “I didn’t really like working with computers because I feel so limited, and I feel like I’m not looking at the story differently because of my object, whereas the other objects I did.” Kari, who created an Animoto also agreed, “I thought it was more difficult and more constricting than being able to use any form of medium.” Joe agreed, writing me a personal note in his journal, which read: “I just don’t know why I’m not getting a lot out of it like the other modes.” The computer programs in this instance of transmediation prohibited students from seeing their writing in the way they intended. They felt that
these programs not only produced limited applications to include iconic images and symbols, but they also limited the physical space in which to create and transmediate. For these students, technology appears to be more of a hindrance than a help when transmediating.

Four students mentioned that they would rather not use technology to transmediate, which is surprising since they are the models of how Prensky (2005) defined this generation as the “digital natives.” Instead, students stated that they preferred working in their previous sign systems. Kassie said, “I liked making 3-D projects better than transmediating on the computer.” Sandra agreed, “I would rather not use computers to transmediate.” Maddie appreciated the experience, but preferred her previous sign systems as well. She noted, “I think it was harder using technology and I liked being introduced to it, but I would rather not do another object with it.”

**Comparison Between Transmediating With and Without Technology**

Overall, six of the 27 students believed that it was easier to transmediate with technology than with their two previous sign system experiences. For example, Darin commented on the shorter timeframe needed to complete the technology object. He said, “I think it was easier because it took less time to make.” Darin admitted that he spends most of his time after school on his computer or iPad playing video games and has done this since elementary school. Therefore, he feels that technology is an extension of his life, a place in which he feels natural and comfortable. For Darin, transmediating with technology could be equated to playing a video game. He created a Goanimate video and finished the video on the second day of the computer lab time. He also assisted his peers
on numerous occasions who had difficulty with that program. His directions to his peers were as natural as reading off a recipe card. Darin would enter his friend’s computer space, taking over the keyboard, instructing what to do while doing it for the friend.

Additionally, three students discussed their apprehension with having to be artistic in the two previous rounds and felt that working on a computer made them feel that art is not a prerequisite, since the computer can do much of the work. Dylan explained, “It was easier because it allows me to be creative and not rely on my artistic ability like in my other objects. Also, I like technology and find it easy to understand.” Jason agreed, “I thought it was easier because it taught me how to use a computer program, and it was more fun because I do not have the greatest artistic ability.” Rory noted the ease of the software, which could create exactly what he wanted to represent. However, ease did not necessarily translate to claims of technology objects as their favorites. Of the six students above, only three determined that their technology object was their favorite of the three objects they transmediated.

For the 21 students who found transmediating with technology more difficult, their reasons varied. However, the majority, 15 students, concluded that the difficulty stemmed from feeling limited or restricted with technology. For example, Alison stated, “I couldn’t just make an object. You had to go along with the computer program’s rules.” In a later interview, Alison expanded her thinking:

Because when you’re like making it with your hands I guess, when you’re using something other than a computer, you can basically do whatever you want. Like you can make a collage, you can make a sculpture, but with a computer it has to
be like a certain thing, and you can’t do certain things and you can’t add certain things.

Susan agreed, “I couldn’t find the right things on Goanimate.” Maddie (who created an iMovie) also commented on having a limited selection. She said, “It was hard for me to find the right pictures online.” Karen (who created an Animoto) also agreed, noting, “It was harder because you had to find all the pictures and you couldn’t just draw the picture you wanted, so you didn’t have many choices.” For these students, iconic image representation was an important part of the process. They felt that they needed to find and select appropriate images to represent their thinking of what they imagined their story to look like rather than choose images that could be more symbolic to the themes and creativity associated with ideas.

Choosing iconic over symbolic could be due to their age. Abstract thinking, according to Piaget, begins in the final stage (formal operational), which occurs between the ages of 11 and 15 years (Dimitriadis & Kamberelis, 2006). At the beginning of the study, students entered their seventh grade year as either 11 or 12-years-old. Piaget notes that although the four cognitive operational stages are sequentially organized, children can move between stages during times of transition, which is what might have occurred during this study. According to Piaget (as cited in Dimitriadis & Kamberelis, 2006), “We must hear their [children’s] words, follow their explanations, understand their frustrations, and listen to their logic” (p. 173). Laura’s words identify both her frustration and her logic. She explained, “It was more difficult because you didn’t have as many choices, and you couldn’t get as creative like before you could use many different
things.” Erika also mentioned options: “It was more difficult because on the computer you don’t have as many options as without one.”

It seems that both Laura and Erika are implying that they could have been more abstract without the use of technology. However, looking over their other two transmediated objects from the earlier rounds, both students chose to work concretely during “traditional” transmediation instances. Laura made the how-to brochure, which laid out the six steps needed to mummify a body (see Figure 6). She then wrote a letter for her second object. Erika created a replica of a backpack in her first object. However, her second image, a drawing entitled “Dumb Blonde” (described earlier) did contain symbolic images such as a light bulb, “A+,” and “E=MC²,” but, it did not go beyond those symbols.

Furthermore, one student reported to have a more difficult time revealing deeper meaning using the computer, while another student claimed that working on the computer and learning the program took longer than when she created her first two objects. Finally, three students discussed feelings of difficulty with technology. Heather shared her challenges with Prezi, explaining, “It was more difficult because I didn’t really get how to do it.” Two other students expressed their apprehension with technology. Amy commented, “It was harder for me because I am less creative when it comes to computers.” Kassie agreed, “It was more difficult because I am bad with computers.” In a later interview, she stated, “I liked the first two [objects] the best because I like drawing better than being on the computer.” Insecurity around using a particular sign system
(software in this instance) could also be a factor when transmediating with technology, thus leaving the students feeling more vulnerable and inhibited.

**Overview of Three Objects**

At the end of the study, in a reflection survey, I asked students to rank their favorite to least favorite object based on how proud they were regarding each object. I also followed up during post-interview opportunities to ask them about why they selected a particular object as their favorite. Twelve students ranked their technology object as their least favorite out of the three, which also represented that combined with the first two objects (non-technology) versus technology alone, these 12 students chose their first two objects over technology, meaning, they preferred working in traditional sign systems over technology. For example, Pete chose his clay objects over his Pixton comic stating, “I liked using the clay because I could change it really easily and I could get into a lot of detail with it.” Elsa, however, disagreed, choosing Pixton as her favorite mode of communication. She said, “I think the cartoon was the easiest to work with and you could save it and you could take it home and then back to school and save it. And I think that with the present and the party thing, it was harder for me to show everything and arrange it, and with the comic, I could arrange it more.”

Overall, allowing multiple sign system opportunities encouraged students to find the best fit for their thinking and then translate their writing into a particular sign system. Students were able to practice with sign systems, and moreover, having the opportunity to engage in transmediation three times encouraged students to think creatively and
innovatively, while also taking risks and learning more about their own strengths and room for growth in various sign systems.

The next section shares findings of changes that appear in students’ writing, particularly regarding revising because of creating their objects. I also examine writing behavior and changes in how students think about writing based on their experiences with transmediation.

**Research Question 2**

*How does seventh grade students’ writing change based on revision strategies after engaging in transmediation?*

This section describes the results of the second research question by describing writing decisions students made during three rounds of flash fiction and flash science fiction writing. More specifically, I focus on students’ revision processes via interviews and compare initial drafts to revised drafts, examining why and how students chose to revise. Additionally, this section also examines writing behavior and changes in how students think about writing and themselves as writers based on their experiences with transmediation when paired with revision in writing. Finally, I highlight how the quality of students’ writing changed from initial to final drafts through revising from transmediating.

**Creating a Discourse of Revision**

When students began this study, they were apprehensive about revising. Research question three will specifically address their initial attitudes and beliefs regarding revision, but overall, students approached revision with negative connotations that they
expressed with audible groans and complaints of uncertainty about what it actually meant for them and their writing. Initially, they equated revision with editing, specifically seeking out misspelled words, capitalization, and punctuation errors. Because of these preconceived notions and misnomers about the idea of revising, I found that students struggled with how to talk to one another about revision when sharing and discussing each other’s writing.

As a result, I realized that students needed to have a shared dialogue in which to center their conversations when revising in writing workshops. As a participant-observer while also serving as their primary teacher during this study, I found that my former years as a teacher assisted me in helping students create more of a community of learners, especially during writer’s workshop. In previous years, I have found that a successful and thriving classroom community occurs when students share a common discourse. This means that when students are able to talk to one another in a shared way, they are able to not only engage more with each other, but they delve deeper into the material because of this shared discourse.

I also pulled from my experiences as a writing teacher, where one successful strategy that helps students write is to notice (make observations) and then name (identify and create a consistent reference) what they noticed. This is a practice teachers can use when working with mentor texts in particular. We had practiced this “notice and name” technique when reading mentor texts throughout this study and students were aware of how to implement this technique into their writing, modeling from great mentor texts. For example, when reading, “To Reduce your Likelihood of Murder” (Monson, 2006),
students noticed the organizational pattern of how the author crafted his sentences in a “Do not” pattern, with the following sentence connecting to the previous sentence. They then noticed how the final paragraph in the story began each sentence with “Do.” They named this the “Do Not/Do” technique and noted that this division of paragraphs starting with the negative and ending with the positive affected the story. They also noticed the short, choppy sentences. They then practiced these techniques in their writing and identified it in their peers’ writing. Therefore, during my observations with students during their chosen first flash fiction draft in late September, I found myself needing to “notice and name” what was occurring with students’ discussions surrounding revising.

From this noticing and naming, I developed a technique to assist students in discussing revision, which grew out of observations of students when they shared their writing process with their peers. This then became an emergent design, one that I did not anticipate when entering this study. This technique, which I called the CARD technique stems from the various ways students talked about drafting their first flash fiction pieces. They used phrases such as “change,” “switch,” “take out,” and “add,” which helped me create the CARD acronym. I noticed these words used by students, and then I named it CARD in order to provide a shared discourse in which the classroom community could immerse themselves when discussing their thoughts from transmediation and how to apply them to their revisions.

Below is a figure (see Figure 14) that shows the breakdown of the acronym. I printed and laminated small 3x5 cards of the figure for students to keep in their writing notebooks. I explained to students that this technique came from their thinking and their
words. Students clipped this card to the inside of their writing notebooks. Later, I noticed that they referred to it daily when drafting and revising, as well as during conversations in writer’s workshop. This technique eased and increased conversations among peers in writer’s workshop because they could now talk about what they wanted to do based on their thinking from transmediating in order to revise.

**Your Revision CARD:**

- **Change** (e.g., switch point of view; plot events)
- **Add** (e.g., extra parts to include new info, details)
- **Rearrange** (e.g., move around chunks of your story)
- **Delete** (e.g., take out parts that don’t help your story or are confusing)

*Figure 14. The CARD technique.*

I also modeled how I might use this technique in my own writing. I have practiced modeling my own writing throughout my years as a writing teacher and found that when students are able to see me write, think aloud, seek advice, and feel frustration, it makes the writing process more real, raw, and honest to them. Students are able to see that writing is not a prepackaged finished draft but rather, many drafts and revisions are needed in order to get the writing to a finished spot. This modeling occurred days after students had begun revising their own stories so that my sharing would be similar to other students sharing their thinking.

I shared a first draft of a flash fiction story that I had started on my laptop, hooked it to the projector, and highlighted where I might possibly employ these four techniques
in my own revision process (see Figure 15). I wanted students to see the process of how I revise in “live time,” so we discussed as a group what these four techniques sound like

<table>
<thead>
<tr>
<th>Finding Comfort in the Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>The child shuddered as thunder clapped against the sky. She knew something was out there in the night. Something that shouldn’t be. ADD DIALOGUE?</td>
</tr>
<tr>
<td>She wrapped her pink Care Bear bathrobe tightly against her body, peering through the front porch screen. Nose pressed against the dusty checkered wire, the door jolted forward from her weight. She sprawled onto the top wooden step of her home’s landing. Brushing off fallen leaves from the Autumn wind, she took hold of the side rail, deliberately placing her toes onto the first step. The floorboard creaked under her weight. First a step, and then a pause. Step, pause. Almost there, she whispered. One more step. One more pause.</td>
</tr>
<tr>
<td>There! She reached the sidewalk safely and turned to face home. Her home. The home of wishes and secrets. She glanced up toward the room. The light was on. Still on. Always on. She twirled around on the balls of her feet and inched closer to the lawn. Her toes entered the soggy grass, sinking into the cold, damp Earth. Add sensory details here? Lightning streaked across the darkened canvas of the forest wall beyond the boundary of her yard. Looking over her shoulder, she glimpsed an image of him. Darting across the lawn, swirly pig tails brushing against her cheeks, her breath carried her through the mist, trees passing in her peripheral vision as fast as cars. She stopped, hands on her knees, and panted. ADD MORE</td>
</tr>
<tr>
<td>She found the spot. The spot where she left him. ADD MORE about digging</td>
</tr>
<tr>
<td>Brambles poked out of his contorted sides like a voodoo doll, damp from the evening’s downpour. But he was safe, and that was all that mattered. ADD MORE</td>
</tr>
<tr>
<td>Her Teddy Bear.</td>
</tr>
<tr>
<td>IDEAS to revise my story:</td>
</tr>
<tr>
<td>Change: point of view from 3rd person to 1st person? / change time of day? / change title? / paragraph 3 ending sentence change to “she saw him.”?</td>
</tr>
<tr>
<td>Add: add more details at the beginning to set time of day? / maybe enhance sensory details of smell of rain and grass? / include digging details about dirt underneath fingernails, earth worms, etc. in paragraphs 4/5? / add something at the end of paragraph 6? / add dialogue at the beginning maybe?</td>
</tr>
<tr>
<td>Rearrange: move around sentences in paragraphs 2/3?</td>
</tr>
<tr>
<td>Delete: Care Bear bathrobe detail? / delete sentence about the room with the light part?/ eliminate last paragraph “her teddy bear” ?????</td>
</tr>
</tbody>
</table>

Figure 15. Modeling the CARD technique with my own first draft.

when metacognitively talking through the process of revising, and more specifically, what they look like, if implemented in the writing. They shared ideas for me to try, which are below the story, and I modeled “aha” moments that came to me during this
sharing moment and revised in live time with them watching and assisting me in the process.

I share this experience with the CARD technique because it became the primary discourse in how students talked about revision, which is central to my second research question. By sharing a common ground of four key ways writers in the class revised (e.g., changing, adding, rearranging, and deleting), it made it easier for students to feel comfortable expressing the decisions they made when they revised because of their transmediation experiences. This sample of my own writing also demonstrates how we discussed the idea that revising includes questioning and playing with writing. The students saw that revising did not require a set answer. They also noticed through my thinking and modeling that I could experiment with revising. I did not have to keep a particular change after all.

For example, the idea of altering the draft from a third person point of view to first person point of view seemed intriguing to the students, so we changed the perspective in the first few paragraphs. However, students then commented that they did not like it as much as the child using “I.” They preferred it back to third person point of view. One student stated that she felt a better “distance” from the child in the story, which allowed her to “see the whole picture of the story.” This distance between the reader and the child seemed to be lost when I switched it to first person.

We quickly returned to the original version and began working on other techniques, such as adding details and what this looked like during revising. Students were eager to offer ideas to expand my paragraphs, and again, this modeled that revising
is potentially expanding writing through thinking and creative play. I also transmediated my flash piece, sharing a drawing I made of the little girl’s perspective as she looks out to the openness of her yard where her teddy bear awaits. When we began revising by adding details, we referred to my drawing, which helped students offer suggestions to possibly expand my paragraphs with more details gleaned from the illustration. In this study, students looked to the CARD technique to share and discuss how to implement new ideas and thoughts that stemmed from their transmediated objects. Overall, the discourse surrounding revising became more about the writer’s intentions and less about the teacher’s intentions, which will be shared in the next chapter. Students began to see that they held ownership, which grew from the CARD technique, since they felt empowered because it stemmed from their thinking.

Changes in Writing

This section describes three key findings based on conversations with students during the revision process, a review of students’ drafts for all three flash units, and their written reflections of revision. Findings include: (a) students experimented and developed independent revising techniques to assist their writing process; and (b) students created deeper revisions at the macro-structural level.

Students Experimented With Self-Created Techniques in Revising

Students’ transmediation of their writing into other sign systems influenced how they returned to their writing in order to revise. From this, changes in how to tackle revising developed and were reflected in numerous ways in their writing notebooks. In this section, I share four observations of techniques students developed on their own to
assist them. However, first I wanted to share the overall symbols students used in their revising and describe what they look like on paper, which includes the notion that revising is a visually messy process.

**Overall symbols for revising.** Students used a variety of symbols to help them during revising. For example, drafts displayed crossed-out sentence lines, carets or asterisks with insertions of sentences and complete paragraphs either crammed in the margins or with arrows following through to the next page in order to drop in new ideas, which filled their notebooks. Some students chose to bubble entire passages and draw arrows indicating where to drop the passage into a new space in drafts. Additionally, there were paragraphs crossed out with squiggly lines or giant “X”’s indicating they no longer wanted to use that portion of their draft.

**The messiness became a sign of good revision.** The writing during revising became messy. At first, students apologized that their writing was messy in drafts. For example, Amy commented as she watched me flip through her notebook to find her current draft, “Yeah, it’s really messy now that I’ve done stuff to it.” However, after rounds of writing, it almost became a sign of pride that it was indeed messy, and they began to view it as an indication that they had revised and changed their writing. In writer workshops, students compared who had the messiest journals and laughed about it. However, this messiness did not seem to distract their thinking about rewriting, nor did it affect how their peers read their writing when they exchanged notebooks or read stories aloud to one another. Below is an example of a writing group sharing each other’s stories (see Figure 16).
Additionally, below is an example of a student’s page in her notebook that reveals her style of revising (see Figure 17) and highlights the messy display of revisions that she stated did not interfere with her thinking or writing.

Colors. Like Alison’s image in Figure 17, many students chose to revise penciled first drafts with colored pens, which were available during transmediation work and remained in the classroom for them to use whenever they needed them. For example,
Randy and I conducted a mini-conference regarding his second story. While discussing the plot, I noticed that he added a note to himself in blue pen, and I asked him about the color choice, noting that his revisions really stood out because of this choice, and he stated, “Yeah, I think I’m gonna’ like, if I wanna’ add something, I might add it in blue or a darker color.” Joe also chose to do the same with his first story, but with multiple colors. I asked him to tell me about his process and he described, “I just like to use colorful things because it helps me remember. Because if I were to just use like black or whatever, that kind of blends in with my writing. It’d be hard to see to like to be able to recognize what I need to be able to take out or what I needed to put in, and so that’s why I like using the colors ‘cause they pop out.”

At first, 11 students did not use color in revising their first story, but this technique seemed to gain in popularity when other students in writing groups noticed. For example, in the second story round, only six students did not use color in revising, and then it dropped to only five students. Below are Heather’s three different flash stories throughout the study where she found revising in color to be helpful (see Figure 18).
Figure 18. Example of Heather’s three flash fiction pieces and her color-coded system.

**Annotations, images, and questions to self.** Twelve students chose to make notes to themselves in the margins of drafts about how they should revise, sometimes even positing questions to themselves or doodling images. For example, annotations included personal directives to help them remember where to revise in their rough drafts, such as Kari writing the following comments in her margins: “Add!”; “switch”; and “add more to lead.” Molly wrote on her second flash piece, “details, take out!” Heather provided a range of word options in a word bank she created at the top of her rough draft where she listed “seeing, reaching, watching, looking” and decided to use “reaching” in her final draft. Susan wrote in large letters at the top of the last page in her second flash piece, “REVISION WORK,” indicating she needed to work more on her ending section. Rory wrote in the margin of his second flash piece the words “change, add, rearrange,
and delete” to remind himself. He also posed a question at the top of the draft asking, “point of view of victim?” Other students posed questions throughout their pieces too. For example, Alison directed herself to question removing the specific hourly times she had throughout her second flash story, asking “remove times?” and noted to herself, “add onomoapias?” [sic. onomatopoeias] and “add details?” in the beginning of her draft. Students also questioned their titles by noting, “title?” or “keep title?” where other students brainstormed various titles in which to select for their final draft at the tops of their revisions. Sandra asked herself whether she wanted to keep sections of her stories by noting “keep?” where she thought about removing parts.

Reading through student revisions, I wondered whether some of their questions were posed for me to answer or for their peers during writer’s workshop times, or whether they were self-pondering questions. For example, Susan wrote in her third story’s margin, “Is there enough sci-fy?” When I asked Susan if that question was meant for me, she said it was a reminder to ask her peers. This reveals that her personal opinion as well as her peers’ opinions were valued more than the teacher’s opinion, steering the revision-making decisions away from the teacher and more toward the individual. Even though this question could be posed for her or others to answer, there were clear messages directed to me in a couple of notebooks. For example, Amy wrote an apology at the top of her third story, explaining, “Sorry this is really bad.” She also included another note to me in her second flash fiction piece stating, “Changing like Lexi.” Holly also inserted a written note at the top of her sci-fi piece telling me, “I revised when I was
typing this,” even though it looked like her rough draft had been revised with substantial changes, including a lot of additions of passages along with deleted lines.

Furthermore, two students drew images during revising moments in class, after their rough drafts and transmediated objects had been created. Susan sketched the key points she wanted to make as symbolic images, which she stated were based on making her object. She drew a coffin, a drink with steam coming off the top, CNN in large bubbled letters, and the word “sickness” in bubbled letters with the words “red blood” next to it. Dave sketched two images side by side of his race car he sculpted. One depicted the car intact while the other showed a heaping mess of the same care after the collision, which was the premise of his flash fiction.

**Numbered passages.** Additionally, a few students numbered their paragraphs or broke their writing into sections and numbered them in the margins to help them decide the order and flow of the story’s plotline. For example, Susan explained how she used numbers to help her add items into her revision during her second flash piece. She explained, “When I was writing it, I was revising when I was adding, so I’m kind of just like adding stuff now with the numbers.” Darin also used numbers during his second story revising, since he wanted to split his draft into two sections, making a flashback section part of his story, but found it confusing to keep track where passages went before one another because of the flash back scene. Therefore, he found that numbering his sections helped him.

Revising by numbering passages also helped students when they wrote in reverse chronological order to tell their story, a technique called “Before that,” modeled after
Hannah Bottomy’s flash fiction piece “Currents” (2006). Each new movement backward in time in the story begins with the words “Before that.” Students found that they enjoyed reading how the story’s events unfolded in a backward fashion and many wanted to try out the technique in their own writing, but many found it confusing. Numbering the passage assisted them when revising. For example, Amy experimented with the “before that” technique and included ideas for passages throughout her writer’s notebook, but soon found that she needed to reorder them and chose to number the passages 1-13. Figure 19 below shows an image of a page in her notebook with various numbers in the margins representing the order she made her passages in the final draft.

*Figure 19. Amy’s numbering in the margins.*
Revisions Included Macro-Structural Changes

Students revised with their transmediated objects in front of them, spending time thinking and studying how new insights could assist them in reflecting about their writing differently. With transmediating their writing into other sign systems, students revised holistically, looking at the larger picture in their work, which resulted in deep, macro-structural changes, rather than surface level changes that centered on grammatical issues. For this study, I focused on all identifiable revision by comparing students’ original drafts to their revised drafts and then to their final drafts. Holistic categories were created, which include changing, adding, rearranging, and deleting. In this next section, I share their thinking about how and why they revised their writing into these categories, which stemmed from their transmediations.

Change

When students and I initially talked about change, we narrowed the idea to changing overall core aspects of our writing. This was in part because any revision could be considered change. When a writer deletes a sentence and then inserts a new thought, for example, that could be considered changing the writing. Therefore, we had to be specific when discussing how to change aspects of our writing during revision. We decided that we meant change to be major changes that would alter the entire premise of a story, such as point of view, setting, characters, or plot events. These kinds of changes in a student’s writing would significantly alter the entire piece. For example, Maddie wrote about a person winning a contest for time travel in a time machine and decided that she would rather have her character go on a mission where her character had to secretly
enter the villains’ “headquarters” and save the day. The notion of time travel appears in a subtle way at the end of her new piece, but overall, she drastically changes the entire premise of her character’s situation and her actions in that situation, as well as the setting from semi-futuristic times on Earth to an entirely different planet that humans settle in the future. Lexi also noted that she changed the plot of her first flash piece. She said:

I decided to change the plot a bit, that instead of her just running away, her having to kill him. Another decision I made was to decide if I wanted to describe Christopher or leave him being a complete mystery. I also changed the conversation between Catherine and Christopher to explain what happened more so it was more clear to the writer.

Below is a comparison between Lexi’s initial draft and her final draft (see Table 11).
Table 11

*A Comparison Between Lexi’s Initial and Final Drafts of her First Story*

<table>
<thead>
<tr>
<th>Lexi’s initial draft</th>
<th>Lexi’s final draft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Titles:</strong> Taken; Steeple; Away; Hostage; Stolen; Clenched; Cold Feet; Affair; Yellow Cab; I Love You, Not.</td>
<td><strong>Cold Feet</strong></td>
</tr>
</tbody>
</table>

Lacey the woman floods from the church, her white dress blowing behind her. She looks behind her to see the people. The people who have been there for her through everything. Their confused stares and worried glances cause her to run faster, faster. Finally when she gets to a yellow cab, she turns around one last time. She sees the face who used to play with her every afternoon when Mom was @ work. She smiles wide at her and mouths the words to her. Then suddenly, she notices the clenched hand around her arm. Him. The face that took care of her when she was sick and read her her favorite story before bedtime. She also sees strangers, mostly strangers. I’m doing this for her she thinks. She’ll be safe now. It’s time. His grip is almost too hard for her to bear. “Hello Catherine.” She turns around slowly and sees a handsome but chilling face. “Christopher. What are doing here?” She’s very steady but her heart’s going a million miles and hour.

Cold Feet

The woman flees from the church, her lacy white dress blowing behind her. Her perfect hair falling out as she runs down the stone stairs. She looks behind her with a twinge of regret, and sees faces of people she knows and loves. Their confused stares and worried glances cause her to run faster and faster until she climbs into a yellow cab. She looks behind one last time. She sees the face that used to play with her every afternoon when mom was at work. The fact that took care of her when she was sick and read to her favorite bedtime stories. The woman looks at her in the eyes, and mouths the words “I love you” to her. “But how will she be safe now?” How will she survive?” she thinks to herself. She almost turns back to do the job she meant to do today. Then suddenly she notices the clenched hand around her arm. Him.

The grip is almost too hard for her to bear. “Hello Catherine” he says. She turns around slowly and sees a handsome face with sharp features and piercing green eyes. “Christopher. What are you doing here”? Catherine is talking very steadily, considering that her heart is going a million miles an hour. “Trying to run away? You knew the plan. Him or her.” He says. “I can’t do it. I love him” she explains. “I know I’m not supposed to. But I do”. Christopher doesn’t look angry, but he is. You can see by his face. He’s still talking his talk though. His smooth voice when put into words makes every girl take one step back but two steps forward. “It doesn’t matter if you love him or not. We had a deal. You needed to make him fall in love with you. Then you needed to break his heart. You need to kill him. And if you don’t I won’t pay and your sister will continue to die. Him or her?” Christopher says. “I can’t do it.” Catherine says. “Oh, but you will. Until then, Catherine”. And then he coldly kisses her on the cheek.
Heather explained that she changed the fact that her character’s parents were still alive in her first flash story, which then altered the ending. Elsa also discussed shifting the ending of her second flash fiction piece due to transmediating. Below is an excerpt from our conversation:

Elsa: Yeah, well my story is about a girl, I’m changing it from my rough draft by the way. My story is about a girl like it’s her birthday on Halloween and she thinks all her friends forgot about her and then at the end of the story I’m going to say surprise happy birthday, so it’s like a surprise ending so I’m having like Halloween plates and this, if I can open this again, it’s I’m going to put a best friends necklace in it and it will say, best friends, we’d never forget about you and then happy birthday.

Kathy: So all the different objects worked for you? Is that why you changed it to Halloween?

Elsa: Yeah, so my story, I didn’t really know how to continue it. It was kind of short. I’m trying to change it and write it by Wednesday and get that in.

Kathy: I wasn’t sure because I remember reading your story and it wasn’t about Halloween, so that’s a neat change.

Elsa attributed transmediating her story to changing the premise of her flash piece to revolve around Halloween, which also played a major role in her reworking the surprise party to fit the theme and how the story ended. When I asked her at the conclusion of the study how she felt about revising through transmediating, she explained:
It did help me a lot because it helped me explain in my story like more details about my object and how it related to my story, so it helped me to revise because I could tell what I needed to change, and what I needed to add to explain more in my story. It did make me realize more what I could put down on paper, and it made me realize what I actually was doing. It made it more concrete because I could actually see this is what I did, and this is what I didn’t do so then I could write it down.

Like several students, Alison chose to revise point-of-view. While some students switched back to their original perspective, like Joe who said, “I tried writing my story in first person but I liked it better in second.” Alison liked the changed point-of-view in her revised version. She also believed that it made it less confusing for the reader. Elsa agreed, noting she changed point-of-view in her first flash fiction story so “readers could understand it better.” Randy also changed viewpoint, commenting that it helped him write his story: “I switched my third person point-of-view, which gave me much more ideas and it was easier.”

Some students changed the set-up or technique they used. For example, Laura created a how-to brochure on mummification for her first transmediated object and decided to change the layout. She said, “I changed my entire piece to a TV show setting.” In this revised draft, she wrote as if it were on a teleprompter, rather than a how-to speech. Below is the original draft compared to the final (see Figure 20).
Holly decided to change her first story to include a self-created technique she called the “mistake technique.” She described it as this: “It is called the mistake technique and it is in second person. It is telling you all of the mistakes you are doing.” She attributes this change along with her other choices in revising because of transmediating. She noted that making her object “made me realize that I needed more detail. I needed to create an image for the readers. I needed to show, not tell. It has helped me see my writing in a clearer way because it helped me understand why she [main character] jumped, so I changed my technique.”
After three rounds of revising however, students began to change the notion of “change” in revising to include more minor alterations. For example, 12 students in the flash sci-fi round (the third round) discussed the C in change as noting that they either changed their title or changed their characters’ names. While these are not the holistic changes described earlier, they are certainly student-decided and student-driven. To them, changing the title could possibly be a holistic change. We discussed the power of titles at the beginning of the study in a mini-lesson that invited students to consider at least 10 different possible titles for their stories before they finalized one. Most students noted in informal conversations that they waited until revising their drafts to create a title. Overall, students noted that transmediating their writing into another sign system assisted their thinking about how to implement holistic changes, like point of view and setting and recreating endings to fit more of their thinking during transmediation.

Add

Students found that adding details, events, characters, and overarching ideas expanded their stories based on transmediation experiences in the three rounds of writing flash fiction. Addition of content became the most significant aspect of revision students worked with during revising by far, which stemmed directly from transmediating. For example, in the flash sci-fi writing, only one student out of 27 stated she did not add anything new to her story. Instead, she said she focused on change for her revisions. Looking at the reasons why students stated they centered revising time on adding revealed four distinct categories. They are discussed below and include: (a) students were able to visualize their stories by transmediating; (b) students included their physical
objects or developed characters by transmediating; (c) students added significant details and perspective by transmediating; and (d) students developed insight from transmediating, including developing a clearer picture of their story, looking at their story in a new way, or finding a deeper message in their story.

**Transmediating offers visualizing.** Several students commented that transmediating their writing into another sign system allowed them to visualize and see their writing concretely in front of them, which allowed opportunities for them to think about adding to their drafts while revising. For example, when Joe made his train clay sculpture scene for his first round of transmediating, he stated that creating this scene helped him tremendously because “by looking at it, it could help me get a lot more details like that I didn’t have then because I could just add them into my story ‘cause that’s how I pictured it but now that I can see it, I can just morph it into my story.” Pete agreed noting that his lion sculpture offered him a way to visualize the moment: “It helped me add more detail because I could like visualize it now that I made it, so it helped me add more detail.” He continued, stating, “You can like actually see your story instead of writing stuff down again because you can see it.” Like Pete, Darin noted that making his story into a 3-D model helped him see his writing. He said, “It helped me visualize my story better. It gave me more ideas to add to my story. Seeing my story in 3-D can help me describe things better. And it helped me make my ending stronger.” Kassie spoke about how transmediating helped her visualize her characters in the way they looked and acted in her story, which she then translated back into her revising. She said, “Making
my object helped me think about revising my rough draft because I further imagined how my characters would be and thought of more ideas I want to add in.”

Some students mentioned a direct correlation between working on their object and adding details to their object affected how they revised. For example, Dylan noticed that adding details to his object helped him add details. Carrie even mentioned that both the transmediating and the revising went hand in hand by assisting her in thinking about ideas to add based on designing the object during the moment of transmediating. She explained:

When I was making my object, I was actually searching for the pictures that I was going to put on my poster, and the pictures that I did find, made me actually want to add details to my story and they gave me better ideas. I saw this one image of a wedding dress that for some reason reminded me of this one mystery movie I saw that kind of reminded me of a whole bunch of details to add to make it better.

In this instance, Carrie explained that transmediating helped her add at least 150 more words to her story. Wayne also discussed how designing clay burgers in 3-D sculpture allowed him to think about what was missing from his story. Thus, he stated, transmediating helped him add those missing links into his writing, such as lines that he included about dropping food on the dirt beside the campfire and how to wipe off the food and eat it. This stemmed from him dropping his clay burger onto the classroom floor. He also included an entire paragraph about what to make for breakfast as an extension to the ending of his story. This idea came from him flattening out the burger
and his friend, a fellow Boy Scout commented that it reminded him of the “Scram” cakes they made one time at camp.

**Transmediating offers inclusion of items and characters.** Creating objects via transmediating also allowed students to think about incorporating their created objects into their story as either important to drive the plot or in developing character. For example, when Molly created a wheelchair she made out of Popsicle sticks, she noted, “I mean I put a whole paragraph in that is just about the object, so that definitely, like, helped me.” She reflected that creating the wheelchair made her realize that that was a pivotal part of her story and one that previously she did not know how to end her story with the revelation that her main character is in a wheelchair. Because of transmediating her thinking into the wheelchair object, Molly includes an additional paragraph at the end of her story. The last line reads, “As my mom comes to pick me up, I tell her all about my day and as soon as the door opens I roll my wheelchair into the back of the car and we drive away.”

Kari also noted that she inserted her created object into her plot line. Below is an excerpt of our interview where she discussed her second flash story:

Kathy: I really like your “before that” technique here. It was really great that you tried it. Did you think about things as you were creating your object?

Kari: I was really [emphasis added] thinking, ‘cause my object was kind of weird, like originally, the phone wasn’t in my story, so I kind of
added it in because I thought it would be cool if there was like a phone to like answer.

Kathy: Where did you add that?

Kari: I put it right here [pointing to section]. Plus, it worked for me ‘cause I’m always like dropping stuff and it’s always breaking, so that’s what I was thinking.

Furthermore, Susan added a new character to her flash piece after drawing images representing mass destruction stemming from poisoning the water supply of the world. At the end of the story, however, the reader discovers that the main character is not destroying the “real” world but rather, the world on a computerized video game simulation. She mentioned that she added an extra character based on her transmediating. She said, “I put in a new character. His name’s Albert, and he’s like a science geek who introduced the game to the main character.” Transmediation provided opportunities for students to examine their writing, as well as their object, which helped them add new insight into their revisions.

Transmediating offers new details, perspectives, and emotions. Students noted that transmediating into another sign system offered a way for them to add to their writing during revision through incorporating new details, perspectives, and emotions that surfaced from looking at their objects. For example, Susan, who created the drawing of the girl playing hide and seek for her first story noted, “I added a lot of details about the leaves under my feet and about the tree I was on. I also added more suspenseful moments throughout the story.” Some students added details to their character’s
description and experiences. Pete stated that he added details about the lion’s description from creating his lion out of clay. In his second flash story, he created another clay sculpture depicting a car crash in the snowy woods. He stated, “I think I revised the most on my second story with the car crash because I added a lot of details and I completely changed the ending of it.” When asked why he revised by changing the ending, he noted that originally he did not have a complete ending and that sculpting his scene gave him the idea of the person dying at the end because it would have been impossible to survive out in the woods he created (see Figure 21 below for his transmediated object).

![Figure 21. Pete’s clay sculpture entitled “Tradgedy.”](image)

Below is a comparison of his initial draft with his final draft. Notice the difference in the way it ends (see Table 12).
Table 12

_A Comparison Between Pete’s Initial and Final Drafts of his Second Story_

<table>
<thead>
<tr>
<th>Pete’s Initial Draft</th>
<th>Pete’s Final Draft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alone</strong></td>
<td><strong>Lost</strong></td>
</tr>
<tr>
<td>It’s been 3 days since your car rolled off that cliff in West Virginia. You were heading to New York for your annual skiing trip, before your dad, the driver, got distracted by his new phone, and sent the car tumbling off the side of a West Virginia mountain. Your brother, sister, mom, and dad died in the crash. You are alone. You were in panic. You sat there in the unknown wilderness waiting for someone to rescue you. However on the inside you knew no one would ever come. It’s the middle of January and you’re wearing a sweatshirt and a pair of jeans. The sun begins to set you start to worry about bears and coyotes, so you decided to fight through your despair and attempt to climb a tree. You fail miserably. Again you begin to sob for your believe there is no hope. You just try to run away from your problems. You run. You run till your weak bony legs can’t move any longer. Once again all hope is lost you just sit and wait your fate. You begin to tire. You wake up.</td>
<td></td>
</tr>
<tr>
<td>Lost</td>
<td>It’s been three hours since your car rolled off that cliff in West Virginia. You were on your way to your annual skiing trip up in New York; when your dad, the driver, got distracted by his new iPhone and sent the car tumbling off of the side of a West Virginia mountain. Your brother, Mom, sister, and dad all died in the crash. You are still in panic, frantically running around the forest crying without a clue what to do. You sit there in the unknown wilderness waiting for someone to come rescue you. However on the inside you know that no one will ever come to save you. You are completely alone. It’s the middle of January and all you have is a sweatshirt and a pair of jeans on. Your phone broke in the crash you are hopeless. The sun is starting to set and you start to worry about bears and coyotes or animal that could hurt you. You use your first instinct and insist on climbing a tree. You fail miserably, so miserably that you make it six feet up then fall and hurt your ankle. You decide to do the next thing that comes to your head. You begin to run as fast as you can. You run and run thinking you just outrun the night. Your weak bony legs can no longer carry you, so you accept defeat. You lay down under a tree that has a limited amount of snow. You slowly slip into a deep slumber even though you fear you will never wake up. To your surprise you suddenly awaken. But you are no longer in the frigid forest next to a mountain in West Virginia. You do no longer fear ferocious beats like bears and coyotes. It’s not dark anymore in fact it has never seemed brighter. You are once again warm like you were in your car before the tragedy. You look at your ankle that is once again healthy. You are just as lost as you were before. Then you think to yourself and know exactly where you are.</td>
</tr>
</tbody>
</table>
Alison also added descriptive details about her main character. She said, “I added more details about the bride, like, ‘She has rich skin the color of cocoa butter.’ I also added more details about Josie and Steve’s affair because before it was too subtle. I also put more details in about Josie’s feelings.” Additionally, Holly, who created the clay sculpture of the girl who fell from the window as seen earlier in Figure 3, noted, “I felt like my object was more detailed than the writing in my actual story so I needed to add more detail into like the imagery.” Holly included extra details in lines, such as the beginning sentence with the inclusion of the “little apartment with the red and white flowers in the window box outside. You live on the third story of the building …” She also includes the color and type of phone (“yellow cell phone”). Additionally, she experiments with new lines like, “You are so nervous you feel like your heart will jump through your shirt” because she wanted to add drama and suspense to her writing. To further enhance this dramatic effect, Holly also decided to include inner monologue referencing the series of mistakes the main character makes throughout the story. She explained to me that this was an intentional decision. She shows this through the inclusion of new lines, such as “Another mistake, don’t you know it’s impolite?”; “Mistake #3. Never be peaceful when you know someone is there.”; “Haven’t you learned by now? Don’t talk to the enemy.”; and “Nice try, trying to be brave.” Below is a retyped comparison of Holly’s initial draft to her final draft (see Table 13).
Table 13

A Comparison Between Holly’s Initial and Final Drafts of her First Story

<table>
<thead>
<tr>
<th>Holly’s initial draft</th>
<th>Holly’s final draft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jumped</td>
<td>Jumped</td>
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</table>

You are just sitting in your house alone watching Modern Family when you get the call. Yes, that’s right, you get the call that will forever change your life. You nervously pick up the phone. Bad move on your part. You are anxious to know who is calling you and what they could possibly want. You want to know how they got your number – your caller I.D. doesn’t recognize the number. Once you pick up the phone, it seems to take forever for the person on the other end to start talking. You think that they won’t start talking so you hang up. Your heart is beating fast now. You try to concentrate on the tv, but you feel unsettled. You get up and check the window for anyone that could possibly be watching. Satisfied when you see no one you go back to your show, peaceful now. You sit feeling safe, until the phone rings again. You check the number and see that it’s the same number that called. You reach to pick up the phone and answer. You decide that you will talk. You answer and blurt out what do you want and how did you get my number? You hear a deep voice on the other end talking to someone in the background. You listen closer and you hear the same voice say “What are you doing hang up the phone!” Then the line goes dead. The phone rings again and you answer without hesitation. The deep voice says to walk over to the window that is 3 stories up and jump to find out who it is. You jump, forgetting how high up the window is and that is your final mistake.

You are just sitting in your little apartment with the red and white flowers in the window box outside. You live on the third story of the building and you are all alone watching the season premiere of Modern Family when you get the call. Yes, that’s right, you get the call that will forever change your life. You are so nervous you feel like your heart will jump through your shirt. You pick up the yellow cell phone, bad move on your part. You are anxious to know who is calling you and what they could possibly want. The caller i.d. doesn’t recognize the number and you want to know how they got your number in the first place. Once you pick up the phone, it seems to take forever for the person on the other end to start talking. You think that they won’t start talking so you hang up. Another mistake, don’t you know it’s impolite? Your heart is beating fast now. You try to concentrate on the tv, but you feel unsettled. Your breathing is heavy and this is the most nervous you have ever felt. You get up and check the window for anyone that could possibly be looking in through the window. Satisfied when you see no one you go back to your show, peaceful now. Mistake #3. Never be peaceful when you know someone is there. But still you sit there feeling safe, until the phone rings again. You check the number and see that it’s the same number that called before. After 5 rings you nervously reach to pick up the phone and answer. You decide that you will talk. Haven’t you learned by now? Don’t talk to the enemy. You answer and blurt out “What do you want and how did you get my number?” You hear a deep voice on the other end. You listen closer and hear a voice. “If you mess this up I can promise you that you will never see daylight again. What you are calling? Hang up------” and then the line goes dead. The phone rings again and you answer without hesitation. Nice try, trying to be brave. But you don’t know who they are or what they want so another mistake for you. The deep voice instructs you to walk over to your bedroom window and jump. You jump and that is your final mistake.
Other students felt that transmediating inspired them to add details that could elaborate on confusing parts of their initial drafts. For example, Ben and Joe both agreed that there were “flat” parts to their co-authored story. Ben explained, “I realized that we, me and Joe, needed to add more to our story and add more detail. We added more to the end of our story.” Joe agreed that “making the object [drama] has helped get more details to help work out and get out some bugs.” Kassie also agreed transmediation assisted her with working on confusing parts. She said, “Because I made the book I think realized that I needed to add more to my story because I had to explain parts of the pictures and what they meant to most people. I added a middle section to my story because I jumped from the beginning to the end.” Tamara mentioned that making her object helped her realize that she needed to slow down on a section of her story. Below is an excerpt of our conversation:

Kathy: Tell me about how making the object of your watercolor with the tear impressions, has it changed your thinking about your rough draft for your story?

Tamara: Um, it made me want to kind of add more details to kind of make it like [pauses] ‘cause it kind of adds up but it goes really fast through the story, and I thought I would make it better through that part right there where it leads up to that part, to kind of slow it down to add more details, to kind of add more like examples of stuff and things like that.

Kathy: Was that because of making the watercolor crying?
Tamara: Yeah.

Students also gained perspective via transmediating. Maddie, who created a scene with an hourglass with red food dye and sand in it, described how she added a whole new angle to her second flash piece because of creating the object. She explained that at first she had the brother and sister die from a shark attack, but then she decided to add another perspective to her story; the perspective of the brother rather than just tell it through the sister’s eyes. When I asked her if that decision was from making her hourglass, she explained:

So I had the idea of the hourglass and so I wanted to add something about time and how time was more symbolic so that’s partly why and I think when I wanted to add time, it just kind of popped into my head to add another perspective, so yeah, I think that influenced me adding the other perspective.

Two other students shared that transmediating offered a new perspective on their characters’ emotions. For example, Laura, who created a letter as her transmediated object noted, “My object has really made me think about how I can transfer emotion in my piece. I might even add the author of the letter as a character.” Amy, who created the shattered mirror with bullying words embossed in red sharpie object, agreed. She commented that the object helped her add more feeling to her story.

Transmediating offers insight. Transmediation also offered students deeper insight into their thinking, which allowed them to reflect about how the story unfolded, creating a clearer overall picture. Insight also developed since transmediation
encouraged students to look at the story in a new way, which also stemmed from finding a deeper message contained within.

**Developing a clearer picture of story.** Two students commented that transmediating provided a way to help them think about the story in a clearer way, thus helping how the stories developed. For example, Lexi shared, “Making my object has helped me think about revising my latest rough draft because it has made me more comfortable with my story. Also, it even cleared things up for me and it gave me a clearer picture of my story, which makes me write better.” Kari agreed, noting that transmediating helped her imagine how to finish her story, since the initial rough draft was incomplete. She did not know the direction of the plot before transmediating. After creating her object, however, she stated, “Making my object has helped me get a better idea of how the story unfolds and ends. Also, it makes me push toward more details.” Erika attributed creating an object as her favorite aspect of the writing experience. She said, “I like that we can make stuff. Because everything became clearer and makes sense and before making something, well, you just wouldn’t understand.”

**Looking at the story in a new way.** Three students specifically noted that transmediating helped them revise, since it allowed them to look at their story “in a new way.” For example, Karen, who created the man trapped in the mirror with chains, explained, “Making my object helped me revise because I think that my object helped me look at my story in a new way and made me think more about what I should add, or delete.” Susan agreed that creating her drawings also helped her look at her writing differently: “Making my object I discovered things about my story that I hadn’t thought
of before, it showed me different things that I could add or change to my story.”

Furthermore, Maddie stated that creating her object helped her add something bigger to her story. She said, “It helped me look at my story in a different way, so instead of just going back in and changing a couple words, it helped me like really add something bigger to the story.”

**Finding the message in their story.** Four students shared that transmediating helped them look for a deeper meaning or message. Heather noted, “My object helped me think about revising because my object helped me go deeper into my story.” Holly agreed, “My object had much more meaning and made you think. My story didn’t have as much meaning, so I need to add more detail. I want my story to make you think and have your own meaning.” Amy concurred, “My object has helped me find the real message of my story.” Dave agreed, stating, “My object helped me think about my story in a deeper way.” When Molly created her wheelchair object, she realized that she wanted that to be the central meaning. She wanted the reader to not know her main character, a high school senior, was in a wheelchair until the last sentence, when it would be revealed at the prom. However, Molly realized that it would be more interesting for the reader if hints were included along the way, so she revised by including subtle hints throughout her piece, such as the beginning line, “As I go down the hall, I can see that everybody is starting at me.” Originally she had the word walk and realized that she needed to make this statement vague if she wanted to reveal that her main character was in a wheelchair. She included extra lines as hints, such as “This school is supposed to
have the best program for me...” She explained that making her object helped her think of adding these hints. Below is an excerpt from this flash piece (see Figure 22).

**Figure 22.** Molly’s revisions centering on adding.

Other comments worth noting regarding adding elements during revision include how transmediating allowed Jason to reconsider his point of view of his story after creating his 3-D burning building out of Popsicle sticks. He shared, “The object helped me revise my story because it made me realize that I need to describe the building from the main character’s point of view after they escape the building and are looking back.” Erika said that she wanted to include dialogue after making her object. And Dave noted
that the act of transmediation allowed think time. He stated, “Making my object gave me ideas on how to make it better and flow better because when I painted it, it gave me time to think.”

Whether it was because of think time, looking at writing in a new way, seeing the writing materialize in a different sign system, or physically including an object’s details or even the entire object into their stories, students expanded their initial drafts to include additional sentences and paragraphs, which are macro-level changes during revising. In fact, it seemed to be a combination of all the explanations mentioned above. Alison best summed up this systemic experience, explaining, “My object has helped me think about adding more details about the letters, and adding more details in general. It has also helped me add more feelings about the fan [character in her story]. My object has helped me really finish the story.”

Rearrange

Rearranging was the least used aspect of revision. For example, in students’ first flash round, only nine students mentioned that they considered rearranging during revisions. In interviews while students revised their first piece in class, none mentioned rearranging when asked how they reflected on revising. Practice with rearranging did increase for the second round of flash fiction writing, some 12 students shared ideas on what they would do to rearrange their writing. However, it decreased again to 10 students during their flash sci-fi round. When discussing rearranging informally with students, they said they found it the most complicated to practice. For example, Holly stated that “I’m not really sure how to rearrange. It’s complicated.” Maddie agreed, “It’s
hard to move big chunks around in your story.” Susan noted that she rearranges when she’s typing on the computer rather than in her writer’s notebook due to space limitation. Students’ concern with rearranging may stem from a lack of how to practice this type of revising in their writing. Students may not be given opportunities of what this looks like in writing done in school or in real-world writing situations outside of school.

Rearranging requires specific organizational instances where the movement of sentences and passages need to flow with what comes before and after the new placement material. Some students recognized this benefit noting that they rearranged parts of their writing because they wanted to make their writing “flow” or “make it better in another order.” Furthermore, transmediation may not have assisted students in rearranging their writing as much as it did when adding details and changing aspects of the story. The generative thinking brought forth from transmediating might have little to do with rearrangement of content.

However, the few students who practiced rearranging in their writing did so in a macro-structural way, similar to when they practiced adding and holistically changing their writing. Rearrangement occurred from moving around entire paragraphs or sections to moving dialogue sentences in conversations. For example, Molly noted that in her first story, she moved her second paragraph to where her third paragraph used to be. Dylan also switched paragraphs in his first story because he noted that he used the “Before that” technique and stated, “I wanted to switch my second and third paragraphs because I realized that you would probably mention the second before the third in a regular story.”
Below is an example of one student’s second flash fiction story where she moved a passage she had written in the middle of her piece toward the beginning (see Figure 23).

![Image](image.png)

*Figure 23. Holly’s rearranging during revising.*

While most students spoke about rearranging as switching paragraphs, some chose to rearrange the beginnings and endings and vice versa or even split the story into moveable portions. For example, Darin spent a great deal of time rearranging his second essay. He described the process of rearranging: “I took out most of the middle and reworked that and then split the beginning and end. It was together at first and then I split that up so it went from present to flash back to present again.” Moreover, a few students spoke about rearranging as making their stories completely different, similar to
the “change” technique. For example, Elsa said, “I rearranged some plot ideas, so when I finish, the story will be completely different.” Even though it was the least used and least mentioned technique, the students who did use it found that it improved the overall quality of their writing.

**Delete**

Because flash fiction has a maximum word count of 750 words, students routinely engaged in deleting in order to meet this requirement. For example, throughout students’ drafts, numbers appeared in columns alongside the writing. These numbers were based on line counting the number of words and then totaling them at the end of their drafts. Students attributed their deletion choices to their transmediating. For example, Alison questioned, “Should I delete some things based on my object?” Maddie noted, “The object has made it more clear some parts of my story and some parts I have taken things out to make it more clear in my story.” Students who “overwrote” the story found that they had to delete portions of their drafts, which meant they had to be more concise in their thinking. When I asked Alison if flash fiction was a challenge because of the word limit, she stated, “It was a challenge because I had over 150 words over, more than 150 over. It was pretty hard because you just feel like every little detail matters, so that’s why it was at least hard for me.” Randy also explained his going over the word limit. Below is an excerpt of our conversation:

Randy: So I think I’m going to delete a bunch of lines that were unneeded, like they were just useless space I think, like I deleted “you remember all the good times you had with your brother.” And I
just put, “He is nowhere to be found. You remember when he got
tired of playing.” Like, instead of talking about all the good times
he had instead.

Kathy: Nice.

Randy: I also deleted, “You remember where he could possibly be.”

Because that wasn’t really needed. Because next it says, “You and
your friend were looking for your brother. All you guys were
doing was playing hide and seek.” I love that line.

Kathy: Yeah, you gotta’ keep that line. And so the line before or after
might be redundant? Is that what you’re saying?

Randy: Yeah, the line after the beginning and then before “All you guys
were doing…”

Like Randy, most students decided to delete unnecessary details or parts because
either these sentences did not contribute to the story, they did not make the story “sound
very good,” or they “were confusing to friends” who read their stories. Holly explained
that she deleted a “big chunk” out of her second essay. I asked her if she missed the
chunk she deleted, and she responded, “Not really. I think it makes it better because I
wasn’t really sure about it. And I didn’t like it, so I just decided to take it out.” Sifting
through their revisions, I realized that many deletion examples included students “X”ing
or crossing out entire paragraphs that they no longer felt were necessary. For example,
below is Susan’s first page of her flash sci-fi piece where she “X”d out an entire passage
without returning to it again in her rewrite (see Figure 24).
Figure 24. Susan’s deletion technique in revising.

Furthermore, students’ processes were different when they chose to delete and possibly rewrite the section. Below are two examples of how students deleted passages but then reworked the writing (see Figure 25).
Figure 25. How two students differed in their deletion techniques.

The first image on the left shows how Jason liked to line out his deleted sentences, but then write over the lines. The second image shows Maddie’s deletion process where she also crossed out lines, instead writing in the margins.

Karen also noted that when she deleted something, she looked for a balance. She explained that for her first story, “I deleted a lot of extra details that might not have been needed. I made sure I took out enough, but not too much so the story wasn’t boring.”

Most importantly, these deletions stemmed from their internal decision-making processes. They ultimately made the decision on whether or not to keep something mostly because they “didn’t like it” or “it didn’t make sense” to them after they revised it. Deletions were self-selected and consisted of mostly sentence and paragraph deletions.
Few deletions occurred as word substitutions or word deletions. Instead, students centered their revisions on larger revisions that occurred beyond the word level.

Overall, students engaged in revising by incorporating holistic changes. Moreover, this holistic endeavor of revision became the discourse that enveloped the classroom while students shared and discussed writing. For example, Tamara described her process regarding revision of her first story. She stated:

I was thinking of possibly changing my character names because I don’t really like the character names; they don’t really sound good, and then maybe I might change it into first person, and one of my character’s being first person, then the other one being the friend, but I’m not sure, and then I was adding more details, and I need a better title. I can’t think of a title.

What the students did not emphasize is as important as what they did. Specifically, it should be noted that what did not appear in conversations centering on revision with one another or in thinking about their own revisions were the moments of commenting and noting micro-structural foci, such as misplaced commas, non-capitalized sentences, misspelled words, and grammatically-unstable sentences. There are no instances in the videotaped or audio-taped conversations where students chose to focus at all on these micro-structural details, commonly noted in the editing stage of writing. Instead, holistic conversations like the ones described above filled the classroom and their revising. In fact, one student, Jason, noticed this about his own thinking on revising. He reflected, “I am always so focused on the grammar, and now when I revise, I don’t worry about the grammar.”
How Transmediation Assisted Revision

Overall, students agreed that transmediating assisted their revising. They believed that translating their writing into another sign system allowed them to think about and understand the story better, which made the writing better. Tamara commented, “The object made my story come to life and helped me explain details that I didn’t know about when writing my story.” Elsa and Carrie agreed that creating their objects assisted them in better understanding their stories. Wayne also stated, “Making my object made me think a lot about my writing.” Furthermore, Jason noted, “It helped me know what I needed for my story.”

Additionally, students noted that transmediating also assisted revising by allowing them to gain more ideas and options to better tell their stories. For example, Sarah noted, “I like making an object to represent my writing because it gives me more options to add and stuff.” Joe agreed that creating his objects helped him gain more details for revising, which he stated made his story better. Molly agreed, stating, “It gave me more ideas to put in my story because sometimes you made the object and then it gave you something to put in your story and it helped me with my writing.” Randy commented that making his objects helped him make his writing more “sensible.”

Furthermore, transmediating offered comfort for students to revise. Lexi commented, “I’m more comfortable with revising than before and I feel that I’m more open with thinking about changing my writing.” Holly also noted comfort by realizing that revising is an opportunity to open up revising as a way to create something new. She
said, “I realized that you can change your writing and make it something new. And it makes it better.”

**Students Developed Changes in Writing Attitudes and Beliefs**

This section discusses students’ changes in their beliefs and attitudes toward writing, which accompanies the writing changes they made based on their experiences incorporating transmediation into the revision process. These findings are based on students’ discussions in group interviews during writer’s workshops, transcriptions of writer’s workshop video recordings, pre- and post-writing questionnaires, and post-study individual interviews. Overall, students believed that transmediation helped them become better writers for three reasons: (a) they could equate writing with play; (b) it helped students notice more details and sensory imagery through transmediating their thinking; and (c) students observed how they wrote more while also taking pride in their writing.

The concept of engaging in fun activities in school was important to some students because they felt it was something they had not experienced before, nor was it connected to the writing process. These students felt they could better engage in the writing experience if it was associated with play. For example, Randy admitted, “I wasn’t that big on writing, but now I think it’s a lot more fun.” Joe agreed that he’s a better writer because “I have more fun with it.” Dylan noted, “At first I was not excited about writing but now I am. I think that it is fun now and there are many ways to make writing fun.”
Students also attributed transmediation to becoming better writers because object creating allowed them to see details that they could not otherwise see before in drafts. For example, Alison stated, “This has made me a better writer, like definitely and extremely because before I wasn’t really, like, I didn’t really get down and dirty in the details, and now I’ll be able to revise my stories and all forms of writing.” Pete commented that this experience made him a better writer because “It helps me write in details more.” Sarah noticed that this experience helped her add details too: “I’ve been able to add things to my writing that I wouldn’t normally do.” Other students also noted that transmediating helped with sensory imagery. Heather explained, “This has made me a better writer because it helped me with sensory imagery, and I like making objects, and I like revising better.”

Furthermore, students also noticed that transmediation allowed for more writing and practice with writing, since revising encouraged students to write more in their notebooks. Ben believed this extra time helped him become a better writer because he practiced and “got to write more.” Holly recognized the volume of writing one day when she skimmed her writer’s notebook. She exclaimed, “One day I looked in my notebook and was surprised at how much I’ve written. I was like, Wow! I can’t believe how much I wrote.”

Overall, students found a sense of pride after revising with their objects because they were able to see growth and build confidence. Molly noted, “Before this experience I had to write stories but they were never good, and now I actually like my writing and I got to know myself better as a writer.” Lexi agreed, saying, “I love writing now. I can
write so much better than I used to. Before when I wrote, I would not want to read it again, but now, I’m like wanting to read it again and again and I’m like, Wow! I wrote that!” Wayne believed that the experience helped him write creatively. Darin now appreciates writing in general.

Students’ Biggest Surprise About Themselves

At the end of the study, students reflected that not only did they change their thinking about revising, which will be discussed in the next section, but they also noted that the biggest surprise stemming from their experiences with transmediation and revising was that they now believed that they could write. Maddie, for example, joined her school’s Power of the Pen team, which is an academic writing club that competes in local writing competitions statewide. She confided, “I never really knew that I liked writing so much. I mean, this influenced me to join Power of the Pen, so I did, and I can see myself writing more now.” Heather enjoyed writing before she entered seventh grade, but she commented that the experience made her better due to helping her generate ideas. She stated, “Well, I really liked writing before I came into this, but it just made me a better writer. Like I think, like I couldn’t really come up with ideas when I did write, like before I did this, and now I can come up with ideas really fast because of doing this.”

Other students were more apprehensive talking about their newfound positive identities as writers. They shared their identities as writers in terms of “not as horrible as I thought I was” and “I’m not awful like I thought I was.” For example, Pete’s comment, “My biggest surprise is that I’m not awful at writing and that I enjoy it better now”
reflects many of the students’ opinions at the end of the study. Elsa shared similar comments, stating:

My biggest surprise is probably that I’m not a bad writer when I actually get my thoughts down on paper because I can never actually write stuff down. Now, that I do write stuff down, I’m like, Wow, that’s actually not that horrible, so yeah, I think my greatest surprise is that I’m not a horrible writer.

Amy also said that she was not as bad as she originally thought, revealing, “I thought I was a really bad writer but it turns out I’m okay at it.” Ben agreed, “I didn’t think I was a very good writer, but now I think I’m better than I was. I will probably write more now that I have written more.” Dylan also noted that before September he was not confident, but he now views himself as a writer. Erika mirrored this statement: “I found out that I am a much better writer than I was in September so I think I am a writer.”

Other students revealed how they believed they are more creative individuals because of the overall experience. For instance, Randy noted that not only is he a better writer, but he is also more creative than he thought. Darin agreed, noting that he believes he has become more creative. Alison also said, “It has made me view myself as a pretty good creative writer.”

Laura’s reflection represents the overall changed perceptions the students had of themselves as creative individuals who became excited about the writing process, and in turn that excitement channeled into their overall views as a writer. She explained:

It has let me see that it’s not hard to write great stories and that writing isn’t just about essays in school. It has also made me realize that once I get inspired by an
idea I can write a really great story, and that I have more ideas than I thought. I have gotten so excited about a piece I have carried it around with me until it was done.

Reviewing their writing through transmediation possibly allowed students to reread their writing with deeper reflection, and this may have decreased students’ feelings of apprehension when it came time for them to revise. Furthermore, students’ thoughts on revision changed dramatically because of engaging in transmediation, and pre- and post-thinking will be shared in the following section.

**Changes in Quality of Writing**

In this section, I highlight how the quality of students’ writing changed from initial to final drafts through revising from transmediating. Throughout their drafting, I did not provide written feedback or grades on their initial drafts or revisions. Instead, they conferred with their peers and me through writer’s workshop. This was purposeful since I did not want my feedback to influence or steer their writing in a particular way. Rather, I wanted their writing to be based on personal decisions and possible guidance from their peers. I did, however, scan each draft on preselected deadline dates so that Ms. Smith could keep a running tally of student work completed and provide a completion grade in her grade book. While I would have preferred to make this process more student-led with self-selected deadline dates, Ms. Smith needed to provide parents weekly records of work completed in class in an on-line grade book. Additionally, she
had not experienced writer’s workshop in this manner and felt somewhat uncomfortable having students write at their own pace.

Overall, having students systematically turn in work gave me opportunities to routinely scan their initial and revised drafts, which allowed me to compare them throughout their revising process all the way to their finished drafts. I scored their finished drafts in rubric form with the following criteria: (a) title, (b) lead, (c) word count, (d) topic choice, (e) show, not tell, and (f) polished “final” draft conventions (editing-specific) (see Appendix G for the entire flash fiction rubric). These criteria were created based on my extensive research of flash fiction and what editors look for when considering flash pieces for publication (e.g., Masih, 2009; Moore, 2012; Thomas & Shapard, 2006).

For this section’s analysis, I mainly looked at their flash pieces they submitted to the class anthology. These stories were selected by students as their favorite essay they wrote over the duration of the study. They also represent a variety of rounds. For example, five students submitted their first flash fiction piece, eight students submitted their second flash fiction story, and 14 students submitted their flash sci-fi piece, written in the third round. Based on the rubric’s criteria above, improvements were seen from initial to final drafts which improved the quality of their writing for each category except for final draft conventions.

**Titles**

In flash fiction, titles should be brief and provide additional detail to the story, while also enticing the reader to select it out of a list of other choices in an anthology.
Appendix H displays the table of contents of their class anthology which lists the titles of their pieces.

Overall, the majority of these titles resemble the titles in the mentor texts they studied. Titles such as, “Lost,” “The Trap,” “Linked to a Star,” “30 Seconds, 30 Thoughts” piqued students’ interest. These titles connect well to their stories and are brief. In September at the beginning of the school year, students often struggled with titles and most students turned in their initial drafts without a title. Some would leave that section blank, while others placed a question mark as a placeholder for their title. After reading additional mentor texts, however, students began to notice how authors crafted their titles, and their titles in the appendix reveal this craft. Most titles are short, catchy words or phrases; some are alliterative, and some have extra information for the reader since every word counts in flash, including the title. While observing the students, I found that some students spent a lot of their writing workshop time focusing on titles. Below is an excerpt of a videotaped discussion in October of one writer’s workshop group’s talk about Lexi attempting to come up with a title and help her peers with their own since they deemed her the “queen” of titles for other people’s writing, but not her own.

Lexi: I think you should use that ending part for your title, because that, like, impacts the whole story.

Kassie: So what should I come up with?

Lexi: Like something, use something about the broken bridge?

Kassie: Like use the opposite word?
Heather: The Broken Bridge. Ooh, like that’s a good one, Lex.
Lexi: Thanks. I think of everybody’s titles. I’m helping everyone with their titles. I helped Maddie with her title... twice.
Heather: I don’t know what to do with mine.
Kassie: Um... Note for Nick?
Heather: Keep thinking.
Lexi: How about Broken Promises?
Heather: Yeah, I was thinking of doing something with tying in promise, something with promises.
Lexi: I like Broken Promises.
Heather: Broken Promises? Let me write these down.
Lexi: Guys, I’m going to take out the question, ‘I’m going to live? I ask.’ Because Maddie said I should.
Heather: So then what’s your last sentence?
Lexi: “Tears of joy. Tears of relief.”
Heather: Like so she’s... you don’t have to do that.
Lexi: I don’t know.
Kathy: What’s your title, Maddie?
Maddie: My title is Half a Pair of Matching Eyes.
Lexi: Thought of that one too! [laughs]
Title selection became part of their revision process, and in addition to conversations with peers, students also looked to their transmediated objects to seek out a fitting title. For example, Randy’s transmediated object, a board game, is titled “The Chase,” which he then made the title for his story. His original draft did not contain a title. Both Amy and Maddie also looked to their transmediated objects centering on broken mirrors to create their final titles, “Broken” and “Behind the Shattered Glass” respectively.

**Leads**

Flash leads drive the reader right into the action of the story. There is no room for the “weather forecast” lead, meaning writers should avoid the phrase, “It was a dark and stormy night” unless it is purposeful to the story’s beginning. Ideally, the lead should direct the reader to the possible setting, characters, and situation within the first few sentences of the flash piece and clearly start the story in the middle of action. For example, Laura began her flash sci-fi story with, “I should not be telling you this.” Originally, this line appeared at the beginning of her fourth paragraph in her original draft. In her revisions, Laura circled this line and starred it. In her final draft, she placed it as her lead because she wanted the reader to engage with her story quickly and identified that this one line could accomplish that during her revisions.

In Randy’s initial flash piece, he started with, “Once upon a time there” and crossed it out. He then continued with, “He didn’t know why he would make that mistake. He thought he had it all figured out.” In his final draft, he changed his lead to begin, “You don’t know why you did it. You thought you had everything planned out.”
For his transmediated object, Randy created a board game that would allow players to “become” his character and live through the actions and choices that his character made in his story. By making this game, he realized that his story would be better told in second person point-of-view. He found that playing the game made him want to become the character. He also included several details in the following sentences after the lead that were not in his story but were in his game, such as flashing police sirens, a getaway car, and gun shots fired at the character.

**Word Count**

The word count goal for students’ flash fiction in this study was not to exceed 750 words. They also had to have a “meaningful” ending, meaning they learned through mentor texts that flash authors did not end with “to be continued …” as students stated many of their creative writing pieces in prior years typically had. Students also realized that endings of great flash pieces are often ambiguous. They played with this technique in their revisions. By making purposeful decisions to eliminate sections that did not contribute to the body of their story, they were able to meet the word count. A few students, such as Alison and Maddie went over word count with each piece, totaling well over 1,000 words. They noted that they grew frustrated when deleting during revising because they did not want to get rid of their writing. Alison explained, “It was pretty hard [to delete] because you just feel like every little detail matters, so that’s why it was at least hard for me.”
**Topic Choice**

Topics in flash represent the human condition and center on deep, thematic issues that can be acknowledged and shared by readers. This is considered by flash authors to be one of the most challenging aspects of flash writing due to the word count and writing a complete “stand-alone” piece. Students attempted to share common thematic issues in their writing, such as death, loneliness, jealousy, survival, rebellion, acceptance, and revenge. Understanding these issues can grow with age and experience, and since these writers were between the ages of 12-13, the attempts to cover the human condition were appropriate for their age range. Friendship and family, love and heartbreak, and concrete situations such as technological takeovers and the end of civilization appear throughout their anthology pieces. However, some pieces, such as Wayne’s “How to Cook a Boy Scout Dinner” or Rory and Dave’s joint authoring of “Giant Kitten Attack” only scratch the surface of these deep, thematic issues they noticed in their mentor texts.

What is significant regarding topic selection and its connection to transmediation is that transmediation gave students the opportunity to view their writing differently, which then allowed students to abandon their stories and begin new stories after transmediating. This is especially noted during their third round of transmediation with technology. For example, Amy did not like her initial draft of her flash sci-fi piece. It told the story of a character who realizes that he repeats the same day every day. Her story did not flow and was choppy; the paragraphs contained one or two sentences and then moved to another thought. At the top of her writer’s notebook page she wrote, “Sorry this is really bad.”
The first day in the computer lab, Amy realized that she disliked her story even more when she began to transmediate it on the computer. Originally, she intended to make an iMovie of her story with her phone. She became frustrated as the period went on and talked with a friend who showed her a video clip on Youtube from the latest blockbuster movie, “Catching Fire.” A song lyric caught her attention, “Everybody wants to rule the world,” and she thought about changing her story to fit this notion. Amy did not write a new draft during the three days in the computer lab. Instead, she generated ideas of her new story while creating her transmediated object, a Glog. (Click here for a link to her Glog http://so69kg664.edu.glogster.com/flash). The opening line on the Glog reads, “Our leaders have decided [decided] to operate everyone into robots so we can rule earth because our planet is slowly dying.” Images of robots, battleships, and desolate cities surround single-lined statements. Her final draft entitled, “Metal” begins with, “Welcome to your new life.” This new flash sci-fi story is about a girl who discovers that it is her turn to become robotic and witnesses her mother go through the process. She runs away but is caught and has “become one of the metal shadows.” The story ends with the character realizing that she is on a spaceship to destroy the remaining humans on earth with the last line stating, “Everybody wants to rule the world and you get a chance to. You know that now it is over.”

Ben also noted that he revised due to transmediating with technology. He said that his story, “We Survived” had the most revisions out of his three stories because he wanted his Pixton comic to match his flash sci-fi piece. He said, “I had to revise a lot more because I couldn’t do everything in my story to fit Pixton, so I had to revise my
story to fit the comic better. I revised the story to make it more like Pixton because I couldn’t do everything that the story had in Pixton.” Ben found that creating his comic helped him with the ending of his story to depict that the main character was really the pawn in a game.

**Show, Not Tell**

In flash, details are used, but they are brief and purposeful. The reader should feel engaged and a part of the story through description. “Show, not tell” provides students with the reminder that description should be created through the senses and the character’s emotions rather than tell the reader what the character felt. For example, “The girl felt scared” is an example of telling. Instead, the writer could provide images and limited dialogue that could allow the reader to experience the sensation of “feeling scared” to convey that point.

Transmediation offered students a way to break through simplistic telling in their writing because they experienced feelings and sensations when transmediating their objects. They then carried these emotions and details into their writing by elaborating sections in their stories with details and images from their transmediated objects. In writer’s workshop, Susan explained that her drawing of the little girl lying on the tree branch (see Figure 2 again) inspired her to add the following passage to her first flash piece entitled, “The Trap:”

I quickly jumped down from the lowest limb of my tree. Landing on a particularly loud patch of dead leaves, making the forest fill with snaps and crackles. I cursed under my breath and waited silently for my heart to return to its
normal pace. I wouldn’t let it go. Not a second time. Slowly, carefully I started walking towards my prey, avoiding leaf piles when I could.

Maddie also found that transmediating gave her options to “show, not tell” through the concept of perspective. Maddie’s second story revolved around a shark attack. Originally, she wrote the story through a single character’s perspective, a sister. She created an hourglass filled with sand, water, and red food dye to represent the gore present in a shark attack (see Figure 26 below).

Figure 26. Maddie’s 3-D art entitled, “Shark Attack.”

Maddie noted she made the most revisions to this story due to adding a second perspective. She said, “At first, I just had the brother and sister die from the shark and stuff, but then I added the perspective of the brother, so I kind of added a lot to that one.” When asked what caused her to make those revisions, she stated,
So I had the idea of the hourglass, and so I wanted to add something about time and how time was more symbolic, so that’s partly why, and I think when I wanted to add time, it just kind of popped into my head to add another perspective, so yeah, I think that [making the hourglass] influenced me adding the other perspective.

Below is an excerpt of Maddie’s revised perspective that was not included in her initial draft (see Table 14).

### Table 14

**Maddie’s Additional Writing (Not in Initial Draft) Inspired From Transmediating**

```markdown
… I lock eyes with my brother, who is laying in the hospital bed half unconscious. I can tell he is trying to hide his fear, but his expression goes blank when he sees the tears rolling down my cheek.

The last seventeen years of my life seem to flash by in an instant. All I feel is pain. All I see is blood. I am lying in a hospital bed being rushed through a hallway with panicked doctors and nurses surrounding me. I can’t remember much, but I do remember the pain. Oh, the pain! The pain in my arm, as the giant, sharp teeth jabbed into my skin and ripped my arm almost completely off. The pain in my bloodshot eyes; the sight of the large, gray monster circling beneath me. The pain in my heart, I already knew life would never be the same after this, but I felt for those just finding out. My family. My sister. The thought of her made me fight even harder to get back to shore, determined to survive for her. Now, as I am still struggling to stay conscious, I make eye contact with her. I stare into her beautiful green eyes everyone says are identical to mine. I try my very best to comfort her with my eyes, to somehow tell her everything is going to be all right. Then, just as the hospital doors slam shut, I see something on my sister I’ve never seen before. Tears rolling down her cheek.
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**Polished Conventions (Editing-Specific)**

Conventions were scored based on final draft readings. Therefore, if grammatical issues confused the content of the writing, points were decreased in this section on the
rubric. Overall, since conventions did not become a focus for students during revisions, little classroom time prepared students to conduct a final reading in search of proofreading errors with peers. Therefore, grammatical errors were found in students’ final drafts, especially in the anthology. However, they did not deter from the understanding or enjoyment of the story. If students were provided more time to conduct another reading with their writer’s workshop groups, valuable editing opportunities could have been created. Instead, the semester’s end approached, and Ms. Smith felt pressure to begin a novel unit in order to incorporate more reading instruction before upcoming report cards were due.

**Research Question 3**

*In what ways, if any, does transmediation enhance seventh grade students’ thinking about revision, specifically, regarding their attitudes and perceptions of revision?*

This section describes the results of the research question by examining students’ attitudes and perceptions regarding revision. It is separated by students’ attitudes and perceptions pre-, during, and post-study. Included are students’ definitions of revision and how they transmediated these definitions through sculpture. Students also identify the easiest moments and most challenging aspects of revision. Furthermore, this section addresses how students began to see revision’s purpose and process differently. This section ends with their overall views of revision, and how students think teachers should teach revision, including their thoughts on both transmediation and the CARD technique.
Students’ Attitudes and Perceptions of Revision Pre-Study

During the first three days of the study in early September, I wanted to know more about student experiences and thinking about revision and how they integrated it into their writing in previous school years. I also wanted to know how they defined revision and what they thought the easiest part of revision was as well as the most challenging aspects. To gain this information, I asked students to respond to an open-ended questionnaire, giving them the option to call into iPadio.com, an online service that houses recorded conversations. I also had students write their revision definitions on an index card. With this definition, I introduced the concept of transmediation to them during the first week of the study. I handed out individual containers of clay, explaining that I wanted them to represent their definition through clay sculpture. I kept my details purposely vague because I did not want to influence their thinking about how to interpret their definitions. From these activities, I learned how students viewed revision before beginning work on revising with transmediation.

Students’ definition and purpose of revision. Overwhelmingly, students equated revision with editing-specific decisions in their definitions. Of 26 students, 22 mentioned spelling, punctuation, and capitalization in their definitions noting that revision included finding “errors” in their writing, or “fixing” and “correcting” grammatically incorrect aspects while “double or triple checking” the paper. Here, students also included the term “editing” as part of their definitions. Even more, when students transmediated their definitions into clay sculpture, many represented editing symbols as shown in Figure 27 below.
In fact, three students included objects associated with editing and spell checking into their definitions, such as “red pens” and “computer.” Furthermore, Amy commented that revision was done to papers “in school” while Wayne included the “teacher” as part of his definition. Below is his definition card along with his transmediated clay object representing his thinking (see Figure 28). His definition reads, “The teacher telling you what you did wrong in writing. Writing your paper all over again. Getting something (sic) wrong in the new copy.” His clay sculpture represents a computer.
In addition to Wayne’s notion of redoing writing, Sandra also defined revision in this manner. She wrote, “rewriting, rereading, and redoing.” While three students commented that revision was “boring,” “not fun,” or “hard,” eight students included that revision centered on improving writing or making the writing better. For example, Kassie wrote at the end of her definition, “Everything can be revised.” However, out of these eight students, only one student, Rory, did not also include editing comments as part of the definition. Rory wrote the only description that included revision as a holistic process: “Revision is vision, improvement.”

Students’ perceptions of the purpose of revision then were not far from their definitions of revision. They included terms like, “check,” “fix,” “correct,” “find,” and “edit” negative things that they could easily identify, like grammatical fixes. Students included statements about “wrong”ness as well. For example, Randy stated, “The purpose of revision in writing is, um… to like correct everything that is wrong in your writing.” Jason agreed, “The purpose of revision is to find mistakes such as misspelling, capitalization, and punctuation.” However, half the class noted that revision’s purpose is to make the writing better or as Kassie stated, “…make sure it is the best that it can be,” but their thinking usually attached fixing and correcting errors in order to accomplish this purpose.

**Students’ past experiences and process of revision.** Students described past experiences with revising in generic descriptions. Three students identified specific instances in which they revised. For example, Ben noted, “Last year we wrote summaries of people and had to revise it.” Heather reflected, “Last year, Mrs.
[Anonymous] had us revise a lot and I think it helped a lot because I had to fix a bunch of errors, and I ended up getting a really good grade on my paper.” Maddie reflected on her experiences overall, noting, “When I’m in class and if I finish early in a writing assignment, my teachers usually ask me to go back and revise my paper.” Students’ vague comments about their past experiences did not include specific actions regarding how they revised. Instead, comments such as “I take out the paper to be revised and revise it” or Karen’s statement, “I usually go back through all my writing and make sure it makes sense” do not get to the heart of the revision process. It could be that students were not specifically taught how to revise. In fact, some students mentioned apprehension with revising when sharing information about past experiences. Darin, for example, noted that he was “not good at it.” Jason commented that revision scared him, and Amy and Pete bluntly stated that they did not like revision.

When asked specifically how they revised, students’ processes shared a similar goal: to fix errors. For example, Carrie created a checklist for me of how she revises. Here are her steps:

Step 1: Check for grammar errors; Step 2: Check for spelling errors; Step 3: Make sure I have good punctuation; Step 4: Make sure my story makes sense.

Overall, Carrie’s response mirrors how others thought about how to revise. They begin by checking for spelling and punctuation, sometimes they note taking a break, and then rereading it over again to see if the writing makes sense. Two students noted asking an adult, like a parent, for instance, to go over their writing and help “check” it. Three students shared that they include symbols to remind them where to return to their writing.
after reading it. For example, Dylan said he reads through his draft, underlining any part that he feels he needs to delete. Heather shared that she uses symbols to mark her paper as she reads it. She noted, “First I go through my whole draft and mark with symbols that I know, so I know how, like know what to do when I revise it and come back again and fix the errors.” Susan circles items in her writing, explaining, “When I revise I read and mark things that I feel might want to be changed and circle things that might have to be spell checked and then I go over that and write it by hand and type it up when I’m done and make sure it’s all correct.” Two students commented on specific rituals, like reading backwards. For example, Ben wrote, “I read it backwards to make sure it is spelled correctly, and then I make sure it has good grammar.” Jason also noted this technique. He said, “To revise my writing for punctuation, capitalization, and grammar errors, I read the paper through three times. Then to focus on the spelling, I read the paper backwards.” Regardless of how students revised in the past, the overall consensus determined that revision meant tedious hunts for errors and grammatical mistakes, rather than focusing on the quality of the content and ideas.

Students’ easiest aspects of revision. When students talked about the easiest part of revising for them, again, it focused on grammatical errors, particularly spelling corrections. However, other interesting notions about the easiest aspects were also mentioned. Therefore, I created three categories based on metacognitive difficulty in writing to represent revision’s easiest facets. For example, the first category represents 15 student comments that the easiest part of revising is to “finding spelling errors” or “correcting my punctuation.” Spelling overwhelmingly ranked highest in terms of ease
in their view of revising, with 12 students specifically mentioning spelling. For example, Susan stated, “The easiest part of revision is checking for spelling because, in my opinion, I feel like I’m a pretty good speller.” Karen agreed, “The easiest part of revision is to make sure that I’ve spelled all the words right and capitalized things.” Three students also referred to punctuation as the easiest part of revision. For example, Darin noted, “The easiest part of revision is putting in periods and punctuation and some grammar parts.”

The next category encompasses four students who believe that rereading their writing is the easiest part of revision. Their focus centered not on changing or reworking their writing, but rather, on the act of reading their papers to see if they made sense. Joe stated, “The easiest part of revision for me is reading through it so I know it makes sense.” He does not extend his thought, nor does he provide the ease of how he revises if something does not actually make sense. Tamara also noted that revision for her was “making sure it makes sense.” Elsa specifically focused on the act of reading, noting, “The easiest part of revision for me is reading because I like reading.” Molly followed this line of thinking: “I think the easiest part is probably going over things, like reading it over.”

The last category includes ideas that are more metacognitive-challenging during revision, like getting more ideas, adding details, and improving the writing overall. Five students noted ease of revision that fit this thinking. For example, Holly spoke about the easiest part of revising: “I just like changing it, like including more stuff, like when I read over it, I get more ideas, because the ideas just come to me.” Laura shared that she thinks
adding details is the easiest part, and Kari agreed, stating, “I add details to my story and then I make sure everything is correct and good and sounds eloquent.” Kassie also said this, commenting, “The easiest part of revising is probably adding interesting things because it’s fun and I like doing it.” Finally, Rory provided a holistic view of revising, noting, “The easiest part is probably improving your writing.”

**Students’ most challenging aspects of revision.** In contrast, 15 students noted that “fixing errors” and “mistakes” were the most challenging aspects of revising. This time, however, the errors did not center on spelling, but rather on punctuation. For example, Joe said that the most challenging part of revising centered on “doing the punctuation because I don’t know what to do sometimes.” Rory, who commented earlier about improving writing as the easiest part noted that the most difficult aspect of revision was “catching every error in grammar.” Dylan agreed, noting that “The hardest part is comma placement.” Additionally, two students regarded revision in terms of having to “start all over.” For example, Lexi talked about how revising equates with “Start[ing] all over again and that takes a lot of time.” Erika also thought of revising this way, noting that she thought the most challenging part was “rewriting the paper without making the same or new mistakes.” Darin, noted that he tended to forget to revise his paper at all stating, “It’s hard to revise just to remember to do it, ‘cause I’m always excited to turn it in and stuff.”

Other students noted that revising is adding detail. Holly explained that “Finding a good place to put in the stuff that I like think about and like then finding a good place to put it in my story is probably the hardest part for me.” Pete also commented that adding
detail was difficult. Molly best expressed this notion, revealing, “The most challenging part of revision is when you have to add things in, and you can’t think of anything, and it’s not the easiest thing to do.” Kari extended adding during revision to include adjectives, as requested by her former teachers: “The most challenging part is finding things that are adjectives to describe my nouns, which the teachers always told me to do.”

Overall, students’ comments, whether describing the easiest or most challenging aspects of revising centered on grammatical concerns, which are micro-structural changes and do not affect the meaning or content of the writing. Deeper thinking about making writing better appeared in glimpses, especially centering on adding details. Students expressed their apprehension, worrying whether decisions would make their writing “correct.” They did not focus on ideas and general meaning for themselves or to the reader.

The next section shares students’ reshaping their ideas of revision and how transmediation greatly affected their thinking regarding how to revise and what revision does for them.

**Students’ Attitudes and Perceptions of Revision During-Study**

During the study, students shared their thinking about revision to their peers and me during writer’s workshop, as well as journaling on their thinking about revision in notebooks. When students started working on their first round of revisions after transmediating, I asked them to tell me how their current views on revision compared to the first day of the study when they talked about revision in their open ended questionnaires. Their responses showed a newfound, emerging understanding of revision
as more holistic than they previously thought. Most responses were structured as “I used to think … but now I think …” Carrie, for example, shared, “Well, I used to think revision was like grammar and stuff and punctuation and spelling, but now I think of it as adding details and making it less confusing or whatever.” Tamara revealed: “I used to think of revision as like checking over it adding periods, adding capitals, maybe changing some words around, but I never thought of it as changing the whole story like point of views, names, like I never really thought of it like that.” Other students changed their views of revision, instead of seeing it as boring and tedious. Erika noted, “I used to think revision was kind of hard and boring, but now I like it better.” When I asked Erika why she likes it better, she responded, “because it helps me look at my writing differently.” Holly explained, “I used to think it was like kind of boring at first, but now it’s like kind of like good because now you can fix like what you want or like go through and delete stuff and change stuff to make it more interesting.” Joe noted that his changed views actually helped his writing, claiming, “Yeah, it’s a lot different [his views] because usually I would just go through and find all the mistakes, but now I’m just like adding more and making it a better story and everything, so it’s all getting better and it’s helping me with my writing a lot.”

Since these responses showed an initial change in how students look at revision as developing writing through more macro-structural changes than previously imagined, I continued to follow their thinking throughout the rest of the study. I next followed up with students after they handed in their final draft of their first flash fiction piece and asked them to tell me their thoughts on revising their rough drafts overall. From these
reflections, four categories emerged. Students found revising to be (a) helpful, (b) an enjoyable aspect of writing, (c) much more difficult than they expected, and (d) a way to look at their writing differently.

**Revision is helpful.** Seven students noted in their reflections that revision is helpful, a way to help expand their writing. Heather reflected that she used to not like revising and actually “dreaded it,” but now, “I kind of like it because it really helped expand my piece.” Other students noted that revision helped them develop. Joe noted that revision “helps me understand what I can do as a writer and what I can work on.” Maddie agreed that revision has helped her become a better writer. Molly echoed this thinking, stating, “I actually like revising my drafts now because it makes my writing better.” Other students thought revision helped them think of new ideas or that it improved their story. For example, Pete commented, “I think revising is very helpful because it improves your story a lot.” Holly explained, “When I revised my rough draft it helped me because I could take out some parts that I wasn’t sure about and add new and better ideas.” Rory noted that there is always room for improvement, stating, “I like revision because it is a great way to make your story better even if it was already pretty good.”

**Revision can be an enjoyable aspect of writing.** Five students expressed feelings that revision has become an enjoyable act. Tamara compared how she learned revision in the past to how she experienced it so far in her writing this year, noting, “I liked how we revised. It made it much more fun than how we revised last year.” Randy claimed, “It was fun and gave me more creative ideas.” Darin agreed, writing, “Revising
was fun, mixing, adding, and taking out parts.” One student noticed that she understood the process of revision better, which she attributed to her feelings of it being more engaging. She reflected, “At first I disliked revision, but now it is really fun, and I know what to do.”

**Revision requires deeper thinking.** A shift in thinking from grammatical issues to deeper holistic changes in writing enacts the difficulty associated with this new exploration of what revision means to their writing. For five students, they experienced and commented on the difficulty of having to revise since they might have been used to going on “error hunts,” which not only took less time, but it also took less deep thinking. For example, Elsa shared her feelings about how this round of revision had been challenging, revealing, “Revising my rough draft was difficult. I had to change most of my story, so it was harder than normal.” For Alison, transmediation allowed her to generate new thinking, which made her rewrite her story. She noted, “I thought revising my rough draft was challenging because I wasn’t exactly sure what to do. Then I came up with an idea that changed my whole story.” Dylan spoke about the difficulty of not wanting to change the writing from the first draft. He said, “I think that revising is hard because you don’t want to take out or add things sometimes.” Additionally, one student commented that she wanted more time to revise. She stated, “I would have liked to have had more time to mess around with my rough draft.” This shift in believing that revision is more than grammatical work has given students pause in thinking about the actual complexity of the process of revision.
**Revision is a way to look at writing differently.** For four students, revising expanded their thinking about the act of writing, as well as being a writer. Susan noted that she enjoys revising now because “It gave me a chance to look at my writing not from my writer’s point of view, but as a reader. It’s cool to see my story like that.” Lexi shared similar thinking noticing that revising gave her comfort, explaining, “It [revising] has taught me that I can be comfortable in my writing because I can also change it.” Erika noticed that revising helped her look at her story differently, while Jason shared that his perspective has changed on the task when he revises. He wrote, “It [revising] actually made it a better piece because I am always so focused on the grammar, and now I don’t worry about grammar.” In a later reflection in October, he noted, “Before, I used to only revise for grammar, but now I actually revise the writing in the story.”

When students submitted their second flash fiction story in final draft, I asked them to talk about revising in their writer’s workshop. Their conversations were audio-taped via cell phones to iPadio.com. Overwhelmingly, students spoke about changed views toward revision, which stemmed from them not understanding what revision was or what the process of revision looked like. Below is an excerpt from a writing group’s discussion.

Alison: At first I thought revising was kind of hard, and I didn’t really know what it was, and I was thinking it was a grammar point of view, and so I thought that was really hard and then she explained it and then I’m like, oh my god, I get this now. And so I thought it was pretty cool when I started revising.
Heather: Yeah, I thought revising [pauses] kind of the same as Alison. I thought it was editing, and didn’t really have a purpose at first.

Sandra: I think I appreciate revising because I didn’t know what it was at first, and I really think it helps my writing.

Kari: Well, I knew what revision was kind of [groans and laughter from her group]. No, really, I did, but I didn’t know you could like change everything, so then was I like, Whoa, you can change everything?, so I liked changed stuff, and it made my story like so much better and cooler.

For many students, this changed view also related to creating transmediated objects. Dylan shared with his group, “I like revising because at first I didn’t really understand revising that much, but then when we started talking about it, I understood it better, and when I made my object, it made me change my point of view and my characters and stuff.” Carrie also agreed, saying, “It helped me put more details in the story and seeing the object helps you understand how to write the story better.” Joe started thinking about the benefits of revision for his future, explaining, “I like to revise since it helps me make my story better, not just for like getting a grade, but in case I wanted to become an author one day, you know? I’d like to revise to get my writing published and stuff.”

Overall, students’ thinking about revision transpired over the course of transmediating and revising in three rounds of writing flash fiction. Students gained a deeper sense of revision as a way to study writing and focus on how to make it clearer,
not only for content, but also for how it makes them appreciate the story. In the next section, student attitudes and perceptions of revision at the completion of the study will be compared to their initial thinking to reveal how their views of revision are at a much deeper level than they originally considered.

**Students’ Attitudes and Perceptions of Revision Post-Study**

At the conclusion of the study in December, students were given the same open-ended questionnaire they answered in September. The only question that differed was regarding their past experiences with revision, which was omitted for this concluding survey, since I already received their responses to this question earlier. Furthermore, I asked students to provide a definition of revision again on a note card and had them transmeditate their definitions via clay sculpture as they did in September. They were not given reminders or images of their previous definitions or sculptures. Definition comparisons and transmediated representations show significant changes in thinking, and therefore, this section is arranged in categories similar to the earlier section describing student attitudes and perceptions regarding revision pre-study in order to compare their earlier thinking to their current views.

**Post-definitions and purpose of revision.** Students defined revision drastically differently than their original definitions. Most noticeable were the eliminated elements of grammatical concepts previously included in their earlier definitions. This time, only two students incorporated notions of editing as part of revision, whereas before, 20 students included grammar as part of their definitions. Pete currently defines revision as “Changing and editing a story or essay to improve it,” and Carrie also included grammar-
related items in her definition, noting, “Revision is to change, add or delete, and to correct grammar, punctuation, and spelling.” However, other students specifically included elements of what revision is “NOT” in order to provide contrast in their definition. For example, Susan wrote, “Revision is the changing, adding, rearranging, or deleting of a part in writing. Revision is NOT editing, you don’t look for spelling, grammar, or mechanics in revision.” Alison agreed, exclaiming, “Revision is when you change your story/draft. This is not editing (grammar, etc.). This is making your story/draft better than before.” Below is Alison’s definition card along with her clay transmediation depiction. She compared revision to fashion design, where the designer creates a dress out of a cloth of fabric, and then through revision, changes the style of the dress by adding, rearranging, and deleting pieces of fabric. She also notes the CARD technique to identify each part of her design with a carved C, A, R, or D into each clay piece (see Figure 29).

Figure 29. Alison’s transmediation of her definition of revision.
Additionally, 13 students identified the CARD technique as a component in their definition of revision. Dylan stated, “Revision is when you change, add, rearrange, or delete elements of a piece of writing.” Molly wrote, “The process of going back over a piece of writing and changing it, adding things to it, rearranging things in it, and taking things away from it.” Elsa also included CARD aspects to her definition, but she also noted that revision is done during the act of writing. She wrote, “Revision is the act of changing, adding, deleting, or moving parts of our story. You revise while you write.” Furthermore, 15 students identified revision as bettering or improving writing, and 11 students identified holistic terms in their definitions. For example, Kassie defined revision as “A way to improve or look over your writing that will benefit the piece.” Holly added, “You change the content and quality of the piece.” Maddie also noted improving the writing to assist the reader. She said, “Revision is going back and changing your writing so it is more clear or more pleasant to the reader.” Below is Sandra’s definition card and transmediated object of a light bulb, representing a new idea or new way of looking at writing (see Figure 30).

Figure 30. Sandra’s definition of revision and depiction of a light bulb.
Most importantly, the way students began to view revision as a way to benefit themselves in their writing increased, along with the sophisticated notion that revision is a personal endeavor, rather than a teacher-directed instruction in the writing process. Below is Laura’s definition, which reads: “Revision is a way to improve your literary piece by playing with different elements of the piece until it is the way you want it.” To Laura, revision was complete when the writing felt good to the writer, rather than for extrinsic motivations, such as a grade, or for the teacher’s viewing. It is also important to note the way she processed this thinking through her transmediation. She sculpted a series of ways to take a piece of clay, such as a beginning stick of clay, as represented in the first image on the left-hand side, and then she reshaped and molded the clay piece into other forms, such as a flat figure, a 3-D figure, an infant sitting, or a person with hair and a face (see Figure 31).

![Figure 31. Laura’s definition of revision and series of changes in clay formation.](image)

From pre-to post-definitions, students’ transmediated pieces contained more abstract representations of their definitions in their post-creations. Initially, when
students were asked to transmediate their thinking of revision in clay formation, they were hesitant and unsure how to represent their thinking. Mostly, students recreated their definitions using iconic images, such as if their definition included spelling corrections, students would sculpt the word “spelling” or sculpt a misspelled word and place an “X” over it. For this post-definition activity, student transmediations were more abstract, using more symbolic representations, such as Laura’s image above, or Sandra’s light bulb, or Alison’s thinking that revision is similar to a fashion designer’s creations.

Students showed transformations in their thinking about the purpose of revision in their writing as well. Overwhelmingly, 17 students stated that the purpose of revision was to make writing better. Tamara now believes the purpose “is to make your writing better and to work on things that you weren’t certain whether you liked them or not.” Kari agrees, explaining, “I think the purpose of revision in writing is so you can better your writing and um, I think it’s to get into writing more and get a better understanding of it.” Students identified purposes that reflected on their writing intentions rather than on teacher intentions. For example, Darin noted that the purpose of revision is “to help it sound how you like and make it clearer.” Holly also noted personal ownership of revision in her purpose statement. She commented, “The purpose is to go back over your story to see if there’s anything you don’t like.” Furthermore, three students commented that the purpose of revision is to allow the writer to look at their writing differently. For example, Karen stated, “I think the purpose is to make sure your writing makes sense and that you can understand it and you can also look at it in a different way.” Erika agreed, stating, “The purpose is to see your writing in a different way.”
**Process.** Initially, students’ process of revising consisted of adults checking their work, reading it over for misspelled words, fixing punctuation, and reading it backwards. Post-study responses transformed these notions. They described their process of revising in terms of the CARD technique, as well as having peers read their work, which did not appear in their original thoughts. Sandra noted, “I use the CARD method after reading it through. After that, I have a friend read it for feedback.” Amy’s stated, “First I read it aloud and then I fix the things I want to fix and change stuff and delete stuff and then I have friends read it so they can help me decide on things that I cannot decide on.” Susan describes her revision process:

> When I revise my writing, I read through it and underline parts I don’t like and then I like circle them or underline them and then come back to them when I’m done reading the story. I will then shoot them out or change them and then I reread the story. Then, if I like it, I keep it.

Below is an example of five students’ changes pre- to post- in their revision process (see Table 15). Overall, this table shows that students’ original revising focused mainly on grammatical issues, while after the study, the students’ ideas regarding revision centered on what they wanted to change by adding details, deleting portions, and thinking about writing in a deeper, more personal manner than before their experiences with transmediation.
Table 15

*Students’ Processes of Revision in their Writing Both Pre- and Post-Study*

<table>
<thead>
<tr>
<th></th>
<th>PRE</th>
<th>POST</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lexi</strong></td>
<td>The process that I use when revising my writing is I go through and make sure there are no spelling errors and grammar and then I try to add in things like figurative language or like details and stuff that I can do.</td>
<td>First change the title which makes me think about the story which gets me going and think about the story and then I will delete things and then add, and change words, and then, I’ll add before all that, I’ll rearrange.</td>
</tr>
<tr>
<td><strong>Joe</strong></td>
<td>I revise my writing by correcting any punctuation mistakes and capitalization errors and lastly I read through it and make sure it makes sense.</td>
<td>I make sure I like it. Then I change it to make it better.</td>
</tr>
</tbody>
</table>
| **Alison** | When I revise my writing I usually read through it first and then if I see any apparent mistakes if I skim through it that are easily noticeable like spelling, I would change it then and then I’ll actually read it and fix my commas and apostrophes and my periods. And then I will usually ask my mom to check it as well. | I …
1. look to see good details to add.
2. delete a **bunch** of words.
3. change a couple of things.
4. and sometimes rearrange. |
| **Erika** | I revise my writing by reading over my work, check for spelling and grammatical errors and rewrite it. | I read over my story and change the things I want changed. |

Combining transmediation with revision allowed students to think about their writing in a deeper way. Sandra explained, “I think of the deeper meaning or the detail
that I brought out in my object creation and bring it out in my story.” Lexi agreed, sharing, “I’ll think of the object which makes me revise and think about it all.” Amy also commented that transmediation allowed her to better understand her story, saying, “It helps you evaluate the meaning of your story and adding specific details in your story.” Tamara agreed, revealing, “When you create your object you kind of think of your story in a whole new way, something that you can touch and feel and stuff.” Rory said that his objects inspired him to revise: “Your object can help you see your story in a new way and give you great ideas. It can help you revise a lot.” Below Maddie shares her thinking about transmediating and revising:

It’s helped me a lot because the object has made it more clear some parts of my story and some parts I have taken things out or added some things to make it more clear in my story.

**Post-easiest and most challenging aspects of revising.** At the beginning of the study, students’ comments on ease of revising centered on grammatical issues, but at the end, students focused on the aspects of revision that were easiest to them. The two most stated aspects of revision that were easiest to implement were add (n=12) and change (n=9). Kassie stated that adding details has been the easiest part of revision for her because “There’s always endless possibilities about where you can go with your story and what you can add.” Adding details in their writing could be considered easy for students due to working with their writing via transmediation. By working in another sign system, students could possibly feel their ideas and visually see their writing in this other mode, which could have assisted students in including extra details that they might
not have thought about in their previous writing mode. Change also became a common factor in ease of revising. Holly said that changing things was the easiest part of revising for her, saying, “There’s a lot of things that I think they’re really good and then I look back and say, Why did I do this? And so I change a lot of stuff, and then I go, Oh, there needs to be something there to explain that.”

A few students commented that deleting was the easiest part of revising, while Molly believed that revising is easiest during the first attempt. She shared, “The easiest part is the first time you revise because there’s always so much to do. It’s never perfect. The first time you do it.” Molly’s comment also suggests that students revised continuously over a long duration of time rather than have them revise during a portion of class time, which is ultimately what many teachers ask students to do. Like in Maddie’s comment earlier noted in this chapter, her past experiences with revision were her teacher telling her to “check” her writing if she finished early. This hasty check could also lead to students searching for quick fixes rather than concentrating on the deeper content-level meaning, like they shared in this study.

In contrast, students shared that their most challenging part of revising included deleting and rearranging. Elsa shared that she found deleting challenging because “I don’t want to get rid of my work.” Amy agreed, explaining, “It’s kind of hard to let go of sentences that you thought were good.” Tamara also focused on deletion, noting, “The most challenging is probably deleting because I always like what I write but I know some things aren’t needed, and that I also need things to take their place because it just gets kind of confusing.”
Furthermore, students claimed that rearranging was a difficult concept for them to practice and one that few students routinely included. One reason for this could be that students did not necessarily know how to implement the process of rearranging. Holly shared, “The most challenging part is rearranging because I don’t really like know what to rearrange because sometimes I think my writing is in a really good order and so I don’t really know what could be moved, so I’m not really sure how to rearrange yet.” Kassie agreed, saying, “The most challenging part of revision is rearranging because I think it’s kind of hard to pick out parts you want to change and all that.” Overall, students’ thinking about the ease and challenges of revising indicate they are thinking about revising in a holistic manner. Below is a comparison chart detailing students’ overall thinking noted in their pre- and post-thinking about their most challenging aspects of revising (see Table 16). This table reflects that students’ initial challenges included grammatical concerns, while later reflections include more overall thinking about the intent and purpose of revision.
Table 16

Students’ Most Challenging Aspects of Revising Quoted From Pre to Post-Study

<table>
<thead>
<tr>
<th>PRE</th>
<th>POST</th>
</tr>
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<tbody>
<tr>
<td>• Grammar (n=7)</td>
<td>• Deleting, because I don’t want to get rid of any work (n=10)</td>
</tr>
<tr>
<td>• Comma placement (n=4)</td>
<td>• Rearranging passages (n=7)</td>
</tr>
<tr>
<td>• Spelling (n=4)</td>
<td>• Having your story make sense (n=5)</td>
</tr>
<tr>
<td>• Punctuation (n=2)</td>
<td>• Making sure there is enough detail (n=3)</td>
</tr>
<tr>
<td>• Catching every error (n=3)</td>
<td>• Making my story really good (n=1)</td>
</tr>
<tr>
<td>• There, their, they’re (n=1)</td>
<td></td>
</tr>
<tr>
<td>• “Rewriting the paper without making the same mistakes” (Erika)</td>
<td></td>
</tr>
<tr>
<td>• “If it’s completely wrong, you have to start all over again” (Lexi)</td>
<td></td>
</tr>
<tr>
<td>• “When you have to add things in and you can’t think of anything to do” (Molly)</td>
<td></td>
</tr>
<tr>
<td>• “It’s hard to remember to do it” (Darin)</td>
<td></td>
</tr>
<tr>
<td>• “Reading it to make sure it makes sense” (Amy)</td>
<td></td>
</tr>
</tbody>
</table>

Overall Views of Revising and the Teaching of Revision

This final section shares students’ views of revising along with how they believe revision should be taught. Four categories emerged and were based on students’ post-interviews with me and final reflections that occurred in December.

Change is good. As one of the culminating views presented in student thinking regarding revision, they now believe that revision can include change, which to students, means that there is a feeling of experimentation in writing. For example, Lexi commented that she feels more comfortable with the entire writing process because she knows she can revise later on in the process. Darin also noted change in his thinking,
explaining, “It has made me a better writer in seeing what you put down as a draft won’t always stay.” Rory also noted the idea of change for the better, revealing, “I like revision a lot better now. You can turn something you don’t like into something great.”

Revising helps writing. Students also believed that this experience helped them see that revising can be helpful. For example, Pete noted, “I think revising has become more helpful to my writing than it was before this experience.” Holly stated, “It made me realize how important revision is to a story. It makes you think about your story, and I like revision more now.” Dylan also noted the importance of revision, saying, “I now believe that revision is more necessary in my writing. It helps me improve my stories and I feel more confident and happier.” Susan agreed, revealing, “I now think revision is really good. Before it was annoying and now I see how it helps and add to the final copy.” Heather also noted that revision has helped her writing, explaining, “I used to not like revision but now I don’t mind it that much, and I feel that it definitely helps my stories.”

Revision is a re-seeing of writing. Students such as Karen and Erika now view revision as a way to reexamine and re-see their writing. Karen noted that “Revising helps because I am looking at my story in a different way,” while Erika reflected, “I figured out that revision isn’t showing all the mistakes you make, but it lets you see your writing in a new way and make it better.” Pete agreed, noting transmediation helped him see his writing in a physical manner, which allowed him to revise. He said, “With the mode, you could like actually see your story instead of writing stuff down again, and you could like see it.” It is important to note that when I introduced the concept of CARD with students,
the idea of revision as re-seeing was not mentioned to students. The students above made this connection on their own. Additionally, when asked what advice they would give to a friend who needed help in revising, Erika stated, “I would tell them that revising is looking at the story in a new way.” Maddie agreed, suggesting that her friend make an object since that helped her look at her story differently. She said, “If I had a friend, I would tell them to make an object, something that inspired them [from their writing], that would help them revise it because that helped me a lot when I revise ‘cause it helped me look at my story in a different way, so I would suggest that to them.”

**Revising can be enjoyable.** What is interesting is how students changed their views of revision to more of a fun experience. While some students noted that they did not “mind” revising now, other students commented on the fun revising can bring to the writing process. For example, Elsa now regards revision as “Fun, hard, and entertaining.” Molly agreed, saying, “I actually like revision.” Kassie commented that it has improved her writing and she “enjoy[s] it more now.” Furthermore, Laura pointed out that she now views writing as an experience that can be done outside of the classroom, admitting, “Writing isn’t just about essays in school, and revision can be fun.”

However, it should be noted that one student commented that he still does not like revision. Although he noted that revision was important to the writing process, he viewed revising as boring, concluding, “I don’t like revision because I think it is kind of boring even though it is an important part of writing.” When I asked him what teachers could do to help him enjoy the revising process more, he said he did not know what could change his mind.
Teaching Revision

With teachers in mind, I asked students if they thought the way they paired transmediation with revision in this study could be a viable way to teach other students to revise. All students agreed that transmediation helped them with revising by thinking of their writing in a new way. Darin commented that it helped him think about his story more than he had before this experience, explaining, “I really think it helped me think of the story in a different way and helped me think of things to add and maybe things I could make better or take out.” Pete agreed noting, “Yeah, I think it’s really helpful for like adding details in your story and looking at your story in a new way.” Students also claimed that learning revision in this manner was fun. Amy said that this experience made revising more enjoyable overall, while Elsa shared that she wished other teachers implemented this into their teaching. She explained, “I think it really helped me, and if more teachers did it, I think it would be pretty awesome, and it’s fun too, and it’s not like you’re just doing boring work. It’s fun.” Ben and Heather also believed that revision taught in this way is fun, since it is more “hands-on.” For example, Heather shared that she believes teachers should teach revision like this “Because then like a lot of kids like hands-on activities, like I really like hands-on activities, ‘cause if I get to do [emphasis added] it, I comprehend it more.” Ben agreed, saying, “Yeah, because it’s more fun than just going through and revising your story, and it’s more fun to make something with your story.”
Summary

This chapter addressed three research questions regarding revision paired with transmediation by presenting the findings for each question based on data from students’ artifacts, such as object creations, multiple drafts of writing, questionnaires, and interviews that included audio-taped and videotaped transcriptions. Findings for the first research question show that students worked in multiple sign systems based on their feelings of comfort and availability to the sign system. Findings for research question two reveal that students revised their writing using macro-structural changes in their writing, rather than focusing on grammatical errors that they previously had done when teachers asked them to revise their writing in school. Findings for research question three revealed student dislike for revision before beginning the study, along with preconceived notions that revision consisted of tedious, mindless, error hunting for grammatical mistakes. Both during the study and at the conclusion, however, students explained that they viewed revising as helpful to their writing. Incorporating transmediation in the revision process allowed them to view their writing in a new way. In the next chapter, discussions and implications of the findings are related to the literature. Additionally, recommendations for future research are made, along with suggestions for how future implementation of revision paired with transmediation can become accessible for students in schools.
CHAPTER V
DISCUSSION AND IMPLICATIONS

This naturalistic inquiry study investigated what takes place when transmediation (translation between and among sign systems, such as drawing, music, drama) is a part of the revision process. Seventh grade students were immersed in a flash fiction unit of study approach toward writing over a 15-week period. Multiple drafts, transmediated artifacts, interviews, questionnaires, and observations were analyzed to determine why and how students revise when transmediation is part of the writing process.

In this chapter, discussions and implications of the findings are related to the literature. Recommendations for future implementation of transmediation as part of the revision process are provided, and I conclude with some final analysis.

Introduction

The study examined seventh grade students’ possible changes in both writing and perceptions of revision when transmediation is central to the writing process. More specifically, the research questions were:

1. What particular sign systems do seventh grade students choose during revision, and why do they select these sign systems?
2. How does seventh grade students’ writing change based on revision strategies after engaging in transmediation?
3. In what ways, if any, does transmediation enhance seventh grade students’ thinking about revision, specifically, regarding their attitudes and perceptions of revision?
Results revealed that students selected sign systems based on comfort and availability. In addition, students focused on macro-structural changes rather than centered on superficial changes that are more specific to the traditional editing process. Students attributed these revisions to transmediation, which enabled them to view their writing in a new way. Furthermore, student attitudes and perceptions in the pre- to post-questionnaire demonstrated that while they initially believed revision to be more editing-specific, at the end of the study students shared that revision should be more holistic, centering on transforming content and ideas in an effort to produce stronger writing.

Several discussion themes emerged based on the findings, and these themes will be discussed in the following categories: (a) literal and imaginative transmediation’s blurred lines; (b) technology’s impact on transmediation; (c) choice, socialization, and opportunities to engage in “flow” create transmediational classrooms; and (d) transmediation’s affordances encouraged deeper understanding of revision.

**Literal and Imaginative Transmediation’s Blurred Lines**

In this study, students engaged in transmediation with multiple sign systems. However, many students produced representations of aspects, such as plot moments, characters in action, or key objects described in their flash pieces. For example, Erika’s clay backpack, Laura’s how-to brochure, Dylan’s wordless picturebook, and Joe’s recreation of the car/train wreck out of clay are all examples of representations of their stories. According to Suhor (1984), semiotics, the study of signs and sign processes, includes three branches: semantics, which is the meaning of signs; pragmatics, which is the inference of signs; and syntactics, which is the structure of signs. In this third
category, syntactics, he describes two possible forms of transmediation: literal and imaginative. Suhor (1984) provides the example of the differences below:

Literal transmediation is involved in, say, making a raft like the one described in *Huckleberry Finn*; writing a paraphrase of a poem read in class; making a slide show to illustrate a short story; or doing a mime that parallels the action in a narrative poem. Imaginative transmediation ... is involved in a collage based on a book; a critical review of a film; a role-playing exercise based on the theme of a story; or a free writing exercise in response to an instrumental music recording.

(p. 250)

Other researchers have commented on these differences, stating that reproduced texts are less likely to be used as thinking devices and do not allow for generative meaning to fully take place (Berghoff et al., 2000; Loretto & Chisholm, 2012). Berghoff and associates (2000) maintain that literal transmediation is nothing more than a representation, while metaphorical notions are created with imaginative transmediation. Loretto and Chisholm (2012) argue that literal transmediation does not allow students to engage in the dialectic process, and the reproduced texts cannot be used as “thinking devices” (p. 140). Therefore, this implies that imaginative transmediation will only produce new understanding that literal transmediation cannot.

Many of the students’ objects at first glance, as noted in chapter four could be classified as literal. Looking over the students’ objects from the first round, for example, if I had to label students’ objects as literal or imaginative, I would count 10 as literal and 17 as imaginative. What is interesting is that most of the literal transmediation includes
sculpture (80%, n=8). They are literal because they are replicas (representations) of students’ objects from their stories. For example, in addition to the objects mentioned above, Dylan’s boat representing Gustavo’s voyage to his exile on the island, or Holly’s clay replica of the girl who fell out of her window with her cell phone next to her could also be considered literal. However, I would consider these objects thinking devices for the students since they allowed them to rethink their writing and thus revise at a deeper level. Even though the students produced literal transmediation, they still revised in macro-structural ways. For example, Wayne included an additional paragraph and new ending to his revisions after crafting a clay burger; Joe added sentences to include the sights, smells, and what the characters heard after creating his clay train wreck scene; Holly produced inner monologue and a new technique (the mistake technique) in her story. They commented that they were able to see their writing in a new way because of recasting their writing into another sign system, such as sculpture. It is clear through discussions with these students that generative meaning took place. Dylan explained that creating the boat allowed him to think about his story differently, adding details about what happened to his character when he stepped onto the island. Holly shared that creating her clay sculpture enabled her to understand why her character jumped. Erika stated that her creation of the clay backpack gave her more ideas to include during revisions.

Moreover, this study reveals that transmediation of any kind is valuable. The overall significance of seeing one’s work in another sign system could have the power to transcend thinking beyond literal meaning, even if it was initially a literal representation.
A literal transmediation has the potential to create metaphorical thinking. The act of recasting thinking from one sign system to another may generate new ideas and connections, while also supporting reflection. Not only can literal transmediation lead to higher order thinking and creation and recreation, but it can also ask the learner to reconsider original intention. It is the engagement that matters, not the perfunctory brand of transmediation attempted. This deep contextual thinking allows students to be reflective, not only during the act, but also afterward. Dewey (1934) recognized the importance of aesthetic engagement in the following quote:

What is even more important is that not only is this quality [intrinsic feeling] a significant motive in undertaking intellectual inquiry and keeping it honest, but that no intellectual activity is an integral event (is an experience), unless it is rounded out with this quality. Without it thinking is inconclusive. In short, esthetic cannot be sharply marked off from the intellectual experience since the latter must bear an aesthetic stamp to be itself complete.” (p. 40)

Students perceived their initial drafts in their minds and then translated this content through their imagination in an aesthetic way. They could see it and touch it, thus experience it. Connecting aesthetics to the intellect encouraged deeper revisions in which they could externalize their ideas through representation in another mode. Eisner (2002) regarded representation as an integral part of experience. He wrote, “Representation enables one to share one’s ideas, one’s feelings, one’s aspirations, one’s images with others” (p. 238).
Additionally, the overlap between literal and imaginative transmediation in this study might be because students have a deeper connection to the source material because it is their personal source material. They are not recasting ideas from a mentor text or someone else’s writing, as in previous studies that noted this significant difference (see Loretto & Chisholm, 2012; Siegel, 1995; Smagorinsky & O’Donnell-Allen, 1998; Suhor, 1984). Instead, students are considering their original ideas: their invented rough drafts. In this way, students initially created literal objects in their minds as ideas in their writing, such as the ship in Dylan’s story or the car crash in the woods in Pete’s flash piece, which are nonexistent texts except in their own minds. Perhaps considering the creation of rough drafts as literal objects and then moving to other sign systems negates the discrepancy between literal and imaginative objects as the secondary sign creation.

Perhaps the division between the types of transmediations does not have an effect on returning to the original sign system and thinking how to revise it. There seems to be a discrepancy and one that deserves further attention on the difference between literal and imaginative transmediation. This study reveals that there is more of a blurred space between literal and imaginative transmediation. The categories are not as stringent as Suhor and others (e.g., Loretto & Chisholm, 2012) have noted. This study has shown that transmediation is a powerful tool in student thinking regarding revision, and it goes beyond the two categories that scholars have created.

**Technology’s Impact on Transmediation**

In today’s 21st century classroom, many teachers have not embraced the notion that the use of technology in the classroom can be a powerful way to cognitively engage
students in content learning (Applebee & Langer, 2011). While many teachers state their reasoning is because standardized testing does not appear in computerized format, it could also be that their school district did not encourage (or even allow) technology access in the classrooms (Applebee & Langer, 2009). Moreover, school districts may not be equipped with technology, or if they are, they might not know how to implement it. For these reasons, students are asked to use word processors as “powerful typewriters” (Applebee & Langer, 2011, p. 23). In a 2007 study conducted by Applebee and Langer (2009), only 26% of eighth-grade students reported that they almost always use a computer when they begin writing a first draft, but 44% of students reported using a computer for editing purposes, such as spell-check. In a later report, Applebee & Langer (2011) noted, however, 75.8% of the English teachers reported that students used a word processor for final drafts.

The third round attempted to embrace technology in a meaningful way by connecting it to science fiction, and it attempted to link more of students’ out-of-school literacies to the classroom. Furthermore, I incorporated the use of technology in order to investigate how students transmediated in a different way, a multimodal way, using “nontraditional” sign systems. However, this round found that transmediating with technology produced the least revisions overall compared to students’ revisions in rounds one and two. However, students still revised in macro-structural ways, but produced less of them. Additionally, the technology round revealed this round contained the most “do-overs” in revising; meaning, students started an additional, original draft of flash sci-fi. On the initial day of transmediating in the computer lab with their chosen software
programs, four students commented that they were going to go home and rewrite their entire stories. They noted they had to include aspects of their computer-generated transmediations to better connect to their stories. Darin explained that while working with Goanimate.com, he realized that he did not like his story. This occurred to him while transmediating. He felt that he needed to go home and revise. However, the next day in the computer lab, Darin noted that he wanted to work more on the scenes in Goanimate in order to help him think differently about his story. He said, “I’m going to make a scene and base the story off that scene.” When he finished, Darin went home and rewrote a flash sci-fi that originated from the scene he worked on that day.

With Amy’s flash sci-fi, technology also influenced her to change the story. She gained inspiration by watching a YouTube video of a song from the movie *Catching Fire* called “Everybody Wants to Rule the World.” When I asked her why she wanted to completely rewrite her first draft, she explained, “Well, I don’t like my original one, and Kari showed me this song and I was like, ‘Wow’ and then I got an idea.”

**“Digital Natives” Prefer “Traditional” Sign Systems to Technology**

As “digital natives” (Prensky, 2005), students today are accustomed to literacy as a multimedia event (Semali, 2002). An increase in technology has fused multiple sign systems together, such as image, design, and language functions. Surprisingly, given the emphasis on the Millennial student fascination and reliance on technology, round three revealed that technology was not popular with students (only 7 students, 26%, preferred this way of transmediating to the “traditional” sign systems). Four students mentioned
that they would rather not use technology at all to transmediate. Instead, they preferred working in their previous sign systems.

Several factors could have inhibited this process, including accessibility. For example, students, like Molly (Animoto) and Kari (Prezi), complained about transmediation with technology because they lacked experience with the selected computer program. Others found that using technology actually took too much time, like Wayne (Pixton comic) and Joe (Goanimate), who requested additional time in submitting their technology transmediations. Jason, who created a Pixton comic stated, “At first it was confusing and took me 30 minutes to do a mediocre slide.” Even worse, Randy, who created a Goanimate video, created a corporate account instead of a student account, and therefore, his entire video would not save. After numerous attempts to save it in another program or on a flash drive, he had to videotape the animation before deleting it.

With an already bulging curriculum in schools, the concern for time is at the forefront of teachers’ planning. Allowing three days in a computer lab to transmediate was a reasonable expectation, given that the school contained one computer lab for students across all grade levels to share. The computer lab had been reserved early in the semester to ensure that the students would be able to use it. Looking back, if students were introduced to the programs on a Friday and then given the weekend to peruse and examine the software and then return to begin transmediation on Monday, that might have resolved students’ feelings of not having enough time to work on their objects.

However, data revealed that although time and lack of understanding how to navigate the software could have had an impact on students’ transmediation experiences
overall, students’ comments suggest that the greater concern for lack of revisions was due to finding difficulty in gaining new meaning and insight because the software limited the way they intended to represent their thinking. Student comments, such as “If you had a deeper meaning, it was harder to find it on the computer”; and “I couldn’t just make an object. You had to go along with the computer’s rules” highlight the restrictive nature of the programs. Instead of creating an image, students had to choose between existing images that they did not create, or in some instances, had to improvise and use an image that did not relate to the story. This occurred in Dylan’s Goanimate transmediation where he had to include the use of menacing bunnies with vampire teeth to represent the evil faction who had wanted to take over the compound in his sci-fi story. He said it annoyed him that he had to include bunnies to portray the villains, but the software did not contain any other animated character that could be fierce and indicate evil. Moreover, the program would not allow him to make his own character.

Furthermore, some students did not believe school was a place where they could produce technological products in the way that they wanted. For example, Joe initially wanted to complete a movie but felt that he would be hindered by the lack of space in the school in which to film his movie as well as the limited technology the school provided to produce the movie. This meant having to work out of school to accomplish what should be an in-school task. There is still a discrepancy between in-school and out-of-school modes. Short and Kauffman (2000) note that when students encounter discomfort with sign systems, it is due to a lack of exposure and use of those sign systems in schools. Short and Kauffman (2000) stated: “If our students were immersed in all of these systems
in the same ways they are surrounded with language throughout the school day, they would be able to use these systems in more powerful and meaningful ways in their lives” (p. 44).

Short and Kauffman’s statement above may also connect to the notion of today’s “Digital Divide” (Norris, 2001) in schools. However, due to the district’s affluence, all 27 students noted that they not only had computer access at home with Internet, but many students also had their own iPad and iPhone which could enable them to work on transmediating at home. Instead, it seems that students felt that the majority of the work should be done at school rather than at home. This was observed when over three-fourths of the class on the third and last day of the computer lab felt rushed, cramming in every last detail they could before the bell rang. Most did not want to work on their objects at home. Even though they were experiencing a literacy event that could be considered out-of-school, students still made the determining factor that it may not warrant “home”-work time.

**Technology’s Limitations in this Study**

While this study implemented technology with transmediation in round three, one limitation is that technology did not occur throughout the entire writing process. In this instance, students employed technology only to type final drafts for easier reading and submission to the class anthology. There are many reasons for this intentional decision, however. First, I was not sure whether computer carts would be readily available on a daily basis. Second, I did not want to risk students deleting original thinking when they revised. In order for me to fully analyze their revisions, I needed to see how they
processed their thinking on paper in journals. This process allowed me not only to visually examine what students revised, but also examine how they revised.

Unfortunately, for some students, paper revising became a challenge. Three students commented that they had difficulty revising on paper since they were more apt at making changes on the computer while typing. For example, Kari explained that revising in her writer’s notebook felt limiting because she needed more space to include her written revisions and thoughts on how to revise. Instead, she said, “When I’m typing is when I really work on adding details that aren’t necessarily in here [pointing to her writer’s notebook].” Ben also insisted that he works best revising while typing on the computer and included few revision examples in his writer’s notebook on his original drafts. In fact, when co-authoring his second story with Joe, they used Google Docs. Watching them work together one day, I noticed that both had gone through and made suggestions to revise to each other because they were in different font colors. Looking at Ben’s and Joe’s writer’s notebooks, revisions in this second flash piece are not as evident as they are on the computer screen.

These few students explained that they felt more comfortable revising via computer rather than in written notebooks. Therefore, handwritten drafts revealed little revision compared to the notebooks of their peers. However, when reading their original draft in their journals compared to their typed, final submission, these students had substantial changes. They explained that their thinking regarding revision occurred while in the moment of redrafting while typing. This makes me wonder, how might revision
look in student writing when classrooms become digital classrooms in a paperless environment?

This section identifies a much-needed conversation to occur in schools. If technology is going to be an integral part of literacy, students must have access and opportunity in order to transmediate with it in a way that provides freedom to represent their thoughts.

The Transmediational Classroom: Establishing an Environment Built on Choice, Socialization, and Opportunities for Inquiry and “Flow”

Short and Kauffman (2000) revealed that students learned multiple sign systems in an environment that allows three opportunities: the engagement of “doing” the sign system, learning about the sign system, and learning through the sign system, which was borrowed from Halliday’s notion of meaningful opportunities for language learning with, about, and through language. Students were provided these opportunities in their classroom environment and outside of class time. For example, students were given full class periods to engage in their chosen sign system(s). Materials were provided, and they were able to practice and navigate through the sign system’s needs with assistance from two adults, in addition to peers. Furthermore, students had opportunities to learn more about their sign system through “how-to” books I provided in class regarding each sign system. They also benefited from YouTube videos and me modeling my own work in various sign systems, such as drama, music, and art. For technology transmediation, models of work in their computer programs and time needed to explore each computer program also assisted their learning. Finally, students learned through the sign system by
returning to their writing and acquiring any new insight gleaned from work during transmediation.

It is through this environment that revealed three essential components to produce classrooms that promote transmediation opportunities: choice, socialization, and opportunities for students to engage in inquiry and be in “flow.”

**Choice of Sign Systems Encouraged Transmediation**

Research shows that multiple sign systems provide choice, which is essential for students to engage in transmediation (Albers, 2001; Berghoff et al., 2000; Gallas, 1991; Short & Kauffman, 2000; Short, Harste, & Burke, 1996). Students learn more and understand better when allowed to use multiple sign systems (Semali, 2002). Data in this study revealed that students engaged in a variety of sign systems throughout all three draft rounds, which encouraged students to experiment and “play” with sign systems, especially ones that were new to them, such as 3-D art or computer software. Ultimately, students primarily chose sign systems that were comfortable to them due to experience with that sign system, they believed they would have fun with the sign system, or they modeled their sign system use after one employed by their peers.

In the first round, drawing and sculpture primarily dominated with 52% (n=14) of students utilizing these sign systems. While the remaining students incorporated multiple sign systems in their transmediated objects, nine out of the 11 objects included writing. This suggests that students felt the need to communicate their thinking by including some form of documentation. This is no surprise since students become more dependent on language as their primary means of communication as they progress in the school system.
Humans rely on the sign systems they know best (Berghoff, 1993). Curricular models centering on multiple sign systems, such as Short, Harste, and Burke’s (1996) and Short and Kauffman’s (2000) were developed in order for students to routinely engage in and become familiar with multiple sign systems. However, neither the middle school nor the teacher in this study implemented a sign systems-based model of curriculum. Therefore, many students stated they had not experienced transmediation in their education previously, which may account for their need to communicate and translate their thinking with a sign system in which they felt most secure and what has worked for them in the past. Round two allowed students to let their guard down a bit and venture into new sign systems, but would they continue to rely on language as their primary way of translating their thinking?

The second round encouraged more exploration with sign system use with 78% (n=21) of students choosing a different sign system than in round one. 3-D art and found art dominated (41%, n=11), with sculpture and drawing following second (30%, n=8). Three students centered their sign system use on writing; in fact, all three used various forms of letter writing. What is interesting to note is that other than the three letters, writing was not a significant sign system. Outside of the three letters, only 15% (n=4) of students incorporated some form of writing into their transmediated objects. Furthermore, the move to 3-D art is an interesting choice, since it was not offered as a model for students in round one, and thus, it was not found in students’ artifacts, except for Maddie’s shattered glass image with the ballerina drawing. When students viewed
“how-to” videos featuring 3-D art, they seemed to want to think more creatively during their second round of transmediation. Furthermore, peer interaction sparked modeling. Students gained fresh insight into how to formulate their thinking based on observations of their peers’ transmediation. For example, the replication of shattered glass in Kari’s and Amy’s objects possibly stemmed from Maddie’s object, which became a “mentor text” for students to emulate in their own transmediation.

Overall, round two encouraged students to make adjustments to how they worked with language and other sign systems. Students were more aware of what transmediating felt like and what it could do for their writing. Furthermore, students became aware of the creativity sparked in themselves and their peers’ work. Students stated that they were impressed with their objects during this round, noting that they looked better. They also noticed the excitement in the classroom that this line of work produced in their peers during conferencing days and sharing days.

Additionally, data revealed that students did not gravitate toward certain sign systems, such as music, dance, and drama. Accordingly, students may have lacked confidence in these alternative sign systems. Berghoff et al. (2001) found that students expressed a strong preference for using some sign systems over others and experienced discomfort when they had to express themselves in others. Berghoff and colleagues (2001) also note that if a child does not gravitate toward a sign system or may be limited in access or use of that sign system, then that particular sign system will not be an impactful way for the student to make meaning. Students in the study might have lacked
experience with dance and drama, but an earlier survey noted in chapter 4 revealed that many students were either enrolled in music classes, band, or chorus.

Furthermore, for the two students who attempted drama (Ben and Joe), Ben did not feel comfortable throughout the performance aspect of the sign system. As stated earlier, he eagerly participated in the planning, the drafting of the script (language), and the creation of props, but when the time came to perform in front of his peers, he became reserved and monotone in his voice and mannerisms. However, the preparation of the creation of the script is what enabled both Joe and Ben to transmediate more than the actual act of the dramatic performance. Both commented that this was the least effective way out of their three rounds to help them revise.

The reason why could be that not all modes of communication are equal in terms of communication. If this were to be true, then other sign systems would become extinct due to redundancy (Chisholm, 2011; Siegel, 1995; Suhor, 1984). For example, music can communicate things that language cannot, and vice versa. Berghoff and colleagues (2000) recognized that because each sign system has a particular way to represent the world, and therefore is unique, there may not be equivalencies between sign systems.

Overall, this study found that by providing a variety of choices in which students could engage, students transmediated in a comfortable setting, providing ease of use, which then allowed them to best represent their thinking. While some individuals noted they did not believe they were good at drawing, for example, they found something they were good at and took pride in the results. Choice allowed opportunities for students to delve deeper into other ways of thinking.
The Social Nature of Transmediation

Sign systems offer multiple perspectives to explore the world and are complimentary (Berghoff, 1993). Meaning is generated by this complimentary function through transmediation. A sign does not act as a transmitter of meaning, but rather as a mediator. For example, human understanding is not passed through sign use; rather signs help humans collaborate and share knowledge to make meaning (Siegel, 1995; Suhor, 1984). Therefore, sign systems are human creations based on one’s specific culture (Deely, 1990). According to Berghoff and associates (2000), transmediation works best in a social setting. This is no surprise since “learners come to understand that all meaning is negotiated and that the meaning attributed to signs depends on the context and social interaction” (Berghoff et al., p. 3). Social interaction helps children construct personal understanding, which is then shared and agreed upon by a community (Rowe, 2001). This means that meaning develops between an individual and the culture’s (social interactions) transaction with the sign.

For example, a sign only works if it is understood by the community and they have accepted the new meaning. In the study, students found it easier to collaborate with one another in writer’s workshop during times of thinking about their revisions and seeking input from their peers when their transmediated objects were in front of them. Peers were then able to visually see each other’s interpretation of the story and assist with ideas because they could also experience their thinking as art. They explored each other’s thinking through multiple sign systems since students could not only read their peer’s piece, but also examined and experienced the story as art. For example, in writer’s
workshop during the second flash fiction unit, Heather read her story, but her peers found the ending puzzling. She then revealed her object, a sealed letter with an engagement ring in a box. The others collectively oohed and aahed and asked her to open the letter so that she could read it to them. After reading the letter, all three students provided comments and suggestions in order to help Heather with the ending.

This study follows Siegel’s argument that transmediation should move from a general cognitive process to more of a socio-cultural perspective. Siegel (as cited in Harste, in press) wrote, “Art positions the user differently in the world and in so doing alters the social practices that surround both the ‘reading’ of the sign and the ‘reading’ of the sign maker vis-à-vis others” (n.p.). For the participants, both their writing and transmediated objects (art) are understood by them, but then their peers (the audience) also learned to accept these new signs and new meanings associated with them. This was especially revealed during author’s chair, when students read their final drafts in front of the class while presenting their transmediated object on the document camera for all to view.

**Modeling.** The social nature of transmediation also encouraged modeling in their language sign system (writing), while also serving as models for other modes of communication. Vygotsky (1978) noted this when he stated, “Human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them” (p. 88). Berghoff and colleagues (2001) agree that learners borrow understanding from the sign systems used around them. In this study, students’ personal explorations of their chosen sign systems became areas of interest and
fascination among their peers. This could be why students such as Amy (shattered mirror) and Kari (shattered cell phone) modeled their sign systems after Maddie’s shattered ballerina depiction. This was also evident when Laura and Heather used their objects as extensions of their stories, first used by Lexi in round one when she created a letter sealed inside a laced envelope.

**Appearance.** The object’s appearance also took precedence in students’ work with transmediation. Students were told that they would not be receiving a grade on their objects and that their object creations were for their personal use. However, soon after transmediating in round one, students recognized that their peers took notice of their work. Peers asked questions about their transmediated objects during the process of crafting it but then also afterward, where they shared their objects in writer’s workshops. Because of the public display of the artwork, students took pride in their appearance of the objects. As noted in chapter 4, students who spent little time on their first transmediated object significantly increased their time in class to transmediate their second object during round two, adding finishing touches on their objects, such as bows, another layer of glitter, flames painted on the side of car doors, or Popsicle sticks painted from top to bottom. This personal attention given to the objects in the second round could have assisted the contact time with the act of transmediation, which in turn increased reflective moments to examine their thinking and place it in their revisions.

**Audience.** Furthermore, students commented that their favorite aspect of the overall experience was sharing their stories and objects and then seeing their peers’
reactions. For example, below is an excerpt of a group interview of four students sharing their favorite part overall:

Alison: My favorite part was sharing all the stories and hearing everybody else’s great work of literature and art and when I saw their objects, I’m like, oh my God, it really explains or it really expands the story so that is why it’s my favorite part.

Heather: Yeah, I agree. Sharing ideas and their stories and listening to other people’s stories because I like to see their objects and I like to see their reactions when I read my stories.

Sandra: My favorite was my second story when I completed my object because I really liked my second object and I thought I was very creative on that. I also enjoyed hearing everyone else’s stories.

Kari: I liked writing stories and then sharing and making the objects.

In a recent review of elementary writing research, McQuitty (2012) stated that social interactions during writing, especially surrounding peer conferences, increases the motivation to write for many students and assists them in incorporating suggestions made by their peers. Even though this is representative of grades K-5, social interactions with writing also seems to have consequences for middle school students. In this study, students engaged in transmediation through a talk-write scenario during writer’s workshop moments in class. McQuitty (2012) argues that restricting peer talk with writing in the classroom might restrict the sense-making that students acquire during writing, as well as the written work they can produce. By sharing and discussing their
thinking about possible revisions they made in their drafts, students talked through their thoughts about what they gleaned from their objects and how to recast this meaning back into written form. In essence, students were thinking about their stories even when they were not writing. Learners were also able to reconsider the original meaning of their writing when sharing.

**Dialogue.** According to Greene (1995), multiple sign systems enable students to engage in lively discussions and search for alternative perspectives. This study revealed that students developed deeper thinking that carried over into their discussions in writer’s workshop because of examining each other’s work in multiple sign systems. The dialogue created in the classroom centered on revision in a holistic manner, which according to researchers, emphasizes a need for a metalanguage in revision (see Dix, 2006; Humphris, 2010; Myhill & Jones, 2007). For example, the CARD technique offered classroom discourse regarding writing that is not linear, but rather one that engages the writer in a recursive, holistic fashion. The dialogue students engaged in during this study cultivated relationships and encouraged collaboration in their writer’s workshops and beyond the groups (Chisholm, 2011). Students were able to talk to one another about their revision decisions through a shared understanding, such as changing, adding, rearranging, and deleting.

Throughout the study, during times of transmediating and revising, students not only sought advice from their peers in their writer’s groups, but they also moved around the classroom to other peers to share their work or to seek advice. More importantly, multiple sign systems through dialogue with each other assisted learning. For example,
additional and unintentional transmediation occurred through students writing and sharing their potential thinking of what they intended to revise to their peers, and their peers returned the transaction by helping the writer think through multiple possibilities of how to revise. This was effective due to witnessing the transmediated object and discussing revision possibilities through CARD.

**Opportunities to Engage in Inquiry and “Flow”**

**Inquiry.** Beginning thoughts on revision before the study did not center on using the words “enjoyable” and “revising” in the same thought. Pre-study, students referred to revision as “boring” or “tedious”. For example, Erika stated, “I used to think revision is kind of hard and boring.” Holly agreed, “I thought revision was kind of boring.” Therefore, it could be that transmediating their thinking of writing into a new sign system and then returning to writing in order to revise, continued the notion of “play” in their writing, which allowed them to better engage in the revision process, while still thinking about and visually seeing their finished transmediated objects.

The notion of play and fun begin early in childhood and are acceptable forms of activity in the early childhood curriculum. However, as students increase with age, play seems to become reserved to outside class time, such as in recreational activities or on the playground during recess (which many middle schools have eliminated from the school schedule). However, students could be missing a fundamental learning opportunity by engaging in the concept of play, especially with writing. Since play may connote instances of non-educational experience to a person outside the field of education, instead
of using the term “play,” Short, Harste, & Burke (1996) suggest thinking of it as “inquiry” in an educational setting. They wrote,

> Often as learners think about their inquiry questions through other sign systems, whole new dimensions of the topic present themselves. Inviting children to represent what their topic looks like in another sign system put them in touch with qualitative dimensions of a topic, many of which they may not have considered before. (p. 341)

Rethinking play as inquiry recognizes that deeper understanding can be obtained by students’ self-driven understanding through multiple ways of knowing. Through these instances of inquiry, students in the study were better able to inquire about themselves as writers, ways in which they wanted to think about revising their writing, and more importantly, how they wanted to position themselves during semiotic acts of transmediating.

**Flow.** Video footage and field notes reveal that during transmediation in class, students experienced what Csikszentmihalyi (1997) calls being in “flow.” This flow experience occurs when the creative mind or body is stretched voluntarily to the limit of experiencing something engaging and challenging at the same time (Gardner, 1993). Students abandoned their chairs and opted to stand while transmediating. They began on-task from the beginning of class and focused their attention on their chosen sign system(s) until the reminder to clean-up before the bell, where often, students ran over time. According to Csikszentmihalyi (1997), students are less self-conscious during moments of flow, experience less distractions, and feel an internal sense of
accomplishment. The class became playful. Students laughed with one another, and they engaged with one another. Students became interested in each other’s objects, questioning and wondering what happened in their stories. They negotiated meaning while inquiring with each other about their objects, and in turn, constructed a shared sense of transmediation as a whole. This interaction became meaningful literacy events that translated to their written work, especially during writer’s workshop.

**Transmediation’s Affordances Encouraged Deeper Understanding of Revision**

This study utilized the power of aesthetic and narrative inquiries in order to assist revision processes in students’ writing. Kendrick and McKay (2004) explained that “Aesthetic, narrative, and reflective inquiries using the arts help children attain new conceptual language to organize and express their learning, and serve as an instrument for acquiring knowledge” (p. 124). Students developed new meanings in their writing due to transmediation. Students noted that transmediation allowed them to envision more details in their stories. This also extended to the concept of touch. For example, Dylan explained that he wanted to physically touch and feel his thinking when making his main character escape to the island on the boat. For many students, thinking in print and then perceiving it visually, assisted them in transforming the original work (writing) into something new, thus allowing revision to take place at a deeper level. Students invented a connection between the two or more sign systems they employed (Siegel, 1995), which helped them “re-see” their writing when they returned to it. By recasting their thinking from writing to another mode of communication (primarily other than language), students developed new insights. They gained the ability to step back and examine their work
differently. Leland and Harste (1994) noticed that when students concentrated “on the new rather than the known, they naturally set themselves up for more learning” (p. 343).

Eisner (as cited in Kendrick & McKay, 2004) believed that “becoming literate means more than being able to read, write or code; it means acquiring the ability to use a variety of representative forms for conceptualizing and expressing meaning” (p. 110). In this study, students experienced a variety of sign systems in order to express meaning in another expressive plane. While research determined numerous benefits of transmediation, such as expanding creative and critical thought processes (Eco, 1976) and allowing students to think generatively and reflectively (Siegel, 1995; Suhor, 1984), this study extends the many affordances transmediation provides, such as developing personality, promoting intertextuality, and encourages abduction in the writing process.

**Transmediation creates art personalities.** Creating across various modes allowed students to develop an “art personality.” Harste (in press) refers to this as a signature. In interviews, both Erika and Susan referred to themselves as a “good drawer,” displaying pride in their artwork. Susan reflected that because of this art personality, she knew that transmediating with drawing would work best for her. Berghoff and colleagues (2000) stated, “By being able to move to alternate sign systems, children can ‘wiggle’ the system to have it make more personal sense to them” (p. 7). This “wigging” also enhances students’ signatures in their sign system creations, allowing them to “make a mark” on their work such as the pride Maddie took when students responded so favorably to her shattering a mirror. This became her unique stamp, which her peers regarded as creative. Thinking “outside the box” carried over to
Maddie’s other two object creations as well, which were the hourglass filled with sand and red food dye and her iMovie, all of which were unique compared with the work of her peers.

**Transmediation promotes intertextuality.** Working with multiple sign systems also encouraged intertextuality, which refers to the process of making connections between other texts to facilitate constructing meaning of new texts (Semali, 2002). In a multimodal stance, a text can mean any mode of communication, such as a play, a song, a piece of art, or a dance, for example. In this study, intertextuality means that each sign system used achieves individual meaning, but also represents meaning as part of a bigger picture (Smagorinsky & Coppock, 1994). For example, Heather extended her written story to include her object (written note and engagement ring in a box) as a critical part of her final draft. Lexi also extended her story with her first two objects; in round one, she wrote a sealed letter as her object explaining, “I didn’t want to finish my story. I wanted it to be a cliff hanger, but I still wanted people to know why and like the object to tell why.” For round two, she created a medical chart, complete with her main character’s medical history in order to represent an earlier part of her story that was not included in her final draft. Intertextuality created a holistic picture by using both the writing and the object to complement one another. Unfortunately, teachers may not value students’ intertextual connections that they bring to the classroom from outside of school even though they might be the most accessible text for students in which to learn (Semali, 2002).
Transmediation encourages abduction in the writing process. According to Danling Fu (2012), “We don’t require student writers to put much thinking into their writing” (p. 427). She argues that teachers place emphasis on the correctness of writing, rather than helping students focus on logic and deeper meaning. Transmediation in the writing process alleviates this dilemma, since transmediation asks students to naturally pause and through reflection, immerse themselves in deeper thinking. For example, when Kari stated, “I was really thinking …” when I asked her if she thought about things as she created her box containing the shattered phone, she described that making her object ultimately gave her the idea to symbolize the idea of the crashing phone into her characters’ dilemma as described earlier in chapter 4. Because of the deep thinking that occurred through her object creation, Kari not only included an additional section to her initial draft to signify the phone call for help and then its crash, but she also changed her title to reflect the symbolism of the crash as well as include additional details to create a more descriptive picture of the quaint household outside contrasted with the abuse occurring inside the home.

Berghoff (1993) regards transmediation as recursive in nature since it creates a link between the known and the unknown. This idea of making the unknown known is referred to as abduction. Abduction is the process of reasoning by creating a new concept based on an existing concept, also referred to as a “hunch” (Colapietro, 1989; Danesi, 2000a). Abduction is associated with thirdness, one of the three levels of meaning (see Table 1). Thirdness is the most abstract level of meaning and is culturally mediated. This means that thirdness is dependent on the learner's identity and preferences, as well
as life experiences and prior knowledge. Transmediation creates thirdness, in which abduction plays a significant role. With thirdness, students “are encouraged to think and reflect creatively and to position themselves as meaning makers and inquirers” (Short, Kauffman, & Kahn, 2000, p.170).

This study revealed the significant role abduction played for many students when returning to their written drafts. For example, Maddie stated that transmediated allowed ideas to “pop into my head.” Susan agreed: “Making my object I discovered things about my story that I hadn’t thought of before.” Lexi noted that it “cleared things up for me.” Holly said that transmediation allowed her to “think.” Tamara commented that transmediating allowed her to think about details that she did not know or contemplate when writing.

While the writing process has been regarded as inductive and deductive in nature, transmediation could encourage writing from an abductive viewpoint. Harste (in press) notes that abduction’s focus on insight and intuition is different than the induction and deduction focus on data and facts. He states that writing in a linear fashion brings forth inductive and deductive logic in the writer’s mind. These forms of logic allow writers to examine their thinking on paper, thus seeing an argument unfold with greater access to revise and reformulate the argument. Murray (2004), who referred to the act of revision as rewriting, noted, “Rewriting is thinking: a process of combining memory, ideas, questions, answers that don’t yet have questions, facts, observations, research, theories, ideas in ways that produce a meaning” (p. 5).
However, this study demonstrated that via creative writing and using transmediation to recast their thinking into other sign systems, students could override the inductive and deductive logic. The process encouraged them to re-examine and imagine their narratives in new ways and at a meaningful level. This deeper thinking and abductive insight produced a different way of interpreting their original compositions. This is noted in the following statements: Tamara said, “The object made my story come to life and help me explain details that I didn’t know about when writing my story.” Molly noted, “It [transmediation] gave me more ideas to put in my story because sometimes you made the object and then it gave you something to put in your story and it helped me write my story.” Carrie concurred, “It [transmediation] helped me put more details in the story and seeing the object helps you understand the story better.”

**Transmediation Encouraged Revisions Based on Personal Choice and Reflection**

**Choice.** This study revealed that middle school students were able to make revision decisions based on personal choice and intentions rather than appease the teacher or make revisions based on the teacher’s suggestions. Research shows that oftentimes students make revisions because of the teacher’s input rather than their own feelings or input about their writing (Beason, 1993; Haar, 2006; Mlynarczyk, 1996; Olson, 1990; Patthey-Chavez, Matsumura, & Valdes, 2004; Sze, 2002; Yagelski, 1995). Instead, since I, as their teacher, did not comment on their initial drafts, the revisions were intrinsic and self-driven. Students cared about their work and what they wanted to say. They revised for those reasons, rather than revising to improve their grade.
For example, students’ initial responses to what is the purpose of revision in writing included ideas centering on correction and fixing mistakes, which are quantifiable outcomes, primarily so that their score might be high. Post-study responses revealed more intrinsic notions of revision purposes, with students identifying other ideas, such as helping the writer understand his/her purpose and meaning better. Susan’s comment displays this growth: “I like revising because it helps me and it makes me able to change things that I don’t like.” Her twin sister, Elsa agreed, “I love revising because it really helps me to understand my story better and it helps when I’m confused about what I’m writing because I can change it all when I revise so I can understand it better.” Students also shared that they would create revisions based on personal decisions, such as Erika who stated, “I change the things I want changed.”

Reflection. In this study, revision allowed for reflective moments in understanding one’s own thinking about a subject or event (Haar, 2006). In a recent interview, Danling Fu (2012) stated, “Revision is the core of writing. That’s what separates it from speaking, because revision is rethinking, reorganizing our thoughts, re-revising our presentation, and rewording or re-finding our expressions” (p. 427). Revision encourages reflection and metacognition, emphasizes meaning-making and clarity in communication, and creates for students a better sense of themselves as writers (Haar, 2006). These ideas are mirrored in the final reflections the students authored. For example, Erika explained, “I always thought writing was hard, but now I think it is easier now that I know how to do it well.” Susan agreed, “I liked revising because it gave a
chance to look at my writing not from my writer’s point of view but a reader’s [point of view].”

**Students Developed Deeper Understanding of Revision**

Research demonstrates that when students learn revision strategies, providing specific instruction and guidance in how to revise, students revise more (Baer, 2008; Fitzgerald & Markham, 1987; Flower et al., 1986; Kindzierski, 2009; Olson, 1990; Patthey-Chavez, Matsumura, & Valdes, 2004; Yagelski, 1995). However, overwhelming evidence shows that when students revise, the work is often done at the micro-level (Bridwell, 1980; Crawford, Lloyd, & Knoth, 2008; Faigley & Witte, 1981; Fitzgerald & Markham, 1987; Graves, 1979; Sommers, 1980). Changes are grammatical and surface level, which does not alter the meaning of the text. It does not help that students may view the revision process as a strict guideline of grammatical rules, such as spelling and punctuation rather than a generative practice (Flower et al., 1986; Mlynarczyk, 1996).

However, this study revealed that when students understand that revision is more than grammatical catches in their writing and share a discourse that engages revision in a holistic manner, they enjoy the revision process. They appreciate revision because misconstrued notions are alleviated, they know the ways in which to talk about the craft, and they see it as a creative facet. More importantly, they understand the revision process, see its purpose, and comprehend that it can be purposeful, ultimately making their writing better. By the end of the study, students viewed revision as enjoyable, in stark contrast to the beginning of the project. For example, when asked if teachers should teach revision in this way, students unanimously agreed that revision should be taught
this way primarily because working with transmediation in the revision process was personally gratifying. Ben noted that it was more enjoyable to make something with his story and that “it’s more fun than just going through and revising your story.” Throughout the study, Ben did not hide his dislike toward revision. He routinely stated that he viewed revision as boring. However, Ben later viewed it as enjoyable because he began to equate revision with transmediating and generating new ideas, which he felt were enjoyable tasks.

Research has noted that many students regard revision as boring and tedious (Smede, 2000). If understood deeply, revision is far from boring. Instead, it can be a creative and recursive act, occurring across the writing process. This study revealed that Ben and his peers began to see revision as a creative act. Revision assisted them, which then provided the students with a better sense of their writing and different view of themselves as writers. Drew noted this change when he said, “This experience was really fun for me and it helped me become a better writer because it has me appreciate revision.” Heather stated, “This experience has made me a better writer because it helped me with sensory imagery, and I like making objects, and I like revising better.” Lexi agreed, “I’m more comfortable with revising than before, and I feel that I’m more open with thinking about changing my writing.”

Research also shows that inexperienced writers have difficulty determining the overall meaning of their writing, affecting how they diagnose problems, which then inhibits them from choosing successful strategies in order to correct those problems (Flower et al., 1986). Sommers (1980) concluded that students lacked “a sense of writing
as discovery – a repeated process of beginning over again, starting out new” (p. 387). In this study, students were able to feel this sense of discovery since they were able to reexamine their writing in another sign system. Moreover, the CARD technique became not only a common discourse, but a successful strategy that assisted students in thinking about revision. Transmediation sparked the ideas and rethinking that led to deeper macro-structural changes, while the CARD technique provided the discourse in the act of revising. Elsa noted that she felt creating the object gave her insight and ideas she had not recognized previously. The CARD technique gave her specific suggestions and instruction on how to revise. She said, “It made it more concrete because I could actually see what, this is what I did and this is what I didn’t do so I could write it down.”

At the end of the study, students commented that their biggest surprise about themselves was that they could write and identified themselves as writers. It is unclear how much of an impact mentor texts, peer conferencing in writer’s workshops, or writing for an audience attributed to this identification and belief in themselves as writers, since that was not the focus of the study. However, what is clear is that students were able to gain new insight from transmediation and revise from it. Whether it was by adding details, characters, changing point-of-view, rewriting endings to stories, or even rewriting entire stories (as seen in the technology round), transmediation provided and supported these additional suggestions, which helped them revise. Students gained positive experiences with revising because of knowing what and how to revise through engaging in the revision process in a reflective manner. Reflection occurred during the act of transmediation as well as during invitations for students to write about their revisions in
their writer’s notebooks. Critical reflection encouraged confidence in their writing (Baer, 2008; Muldoon, 2009).

Furthermore, students began to attribute revision in a positive manner because they recognized that they improved their initial drafts. This translated into associating feelings of success to the writing process, especially when it centered on revision. Previous encounters with revising in earlier school years precluded students from gaining a better awareness and understanding of their writing as well as the way revision can improve the writing because of their associations with revision as merely grammatical scavenger hunts. This is noted in Carrie’s statement: “Before I used to think revising was like grammar, punctuation, and spelling, but now I realize that I can add details and change it.” Ultimately, transmediation with revision in the writing process gave students the confidence to believe in themselves as writers and to discover that “writing is a natural, attainable, enjoyable, and highly productive way of spending one’s time” (Smith, 1981, p. 798).

**Implications**

Today’s educational system is mostly viewed through a verbocentric lens (Short & Kauffman, 2000). Siegel (2006) stated that “schools [are] being held to a monomodal, autonomous view of literacy” (p. 75). Research suggests that school systems are excluding and isolating many students whose cultural backgrounds do not emphasize language as the primary sign system for communication (Sumida & Meyer, 2006). Studies also suggest that when students use multiple sign systems, they are able to transform labels they acquired throughout their schooling into positive identities, so that
they are no longer labeled as “struggling,” but rather as “talented” and “knowledgeable” (Clyde, 1994; Fueyo, 1991; Siegel, 1984; Smagorinsky & Coppock, 1994, 1995). In order to reach all learners, initial steps are needed to change the culture of the education field today. Eisner (1997) wrote, “Schools serve children best when their programs do not narrow the kinds of meanings children know how to pursue and capture” (p. 353). This begins with the classroom teacher. Incorporating multiple sign systems and viewing the arts as more than an extra add-on has numerous benefits for both the teacher and students.

To start, a classroom with multiple sign systems and transmediation is situated in the arts. According to Wolf (2006), the arts provide cognitive work and imaginative play. As Eisner (2014) explained, “The arts make vivid the fact that neither words in their literal form nor numbers exhaust what we can know. The limits of our language do not define the limits of our cognition” (n.p.). Furthermore, Wolf (2006) noted that the arts should not be tossed aside as children simply having fun, which instills a notion that the arts does not equate with learning. On the contrary, numerous studies have revealed that the arts can increase student achievement, especially when integrated with academic instruction (Eisner, 2002; Harste, Burke, & Short, 1988; Reilly, 2008). Berghoff and associates (2003) argue that teachers can benefit from classes taught via arts-infused curriculum. “They [lessons] are the kind of transformative lessons teachers need to learn if schools are going to create a culture of people who think and care” (p. 361).

Leland and Harste (1994) note there are numerous benefits for students when transmediation is an integral part of learning. For example, students develop greater
chances for learning via risk-taking. Additionally, using multiple sign systems encourages the classroom not only to be a safe place to take risks, but it also instills a more democratic learning environment that supports inquiry and diversity (Leland & Harste, 1994). Furthermore, a classroom environment that nurtures student strengths and interests will increase participation and engagement (Sidelnick & Svoboda, 2000). Semali (2002) argues that when literacy is rooted in multiple sign systems and transmediation, students will no longer be passive in their learning and encourage students to make deeper connections when meaning-making occurs. Overall, transmediation has the potential to expand students’ personal goals, far beyond what the teacher had in mind.

Greene (1995) wrote that “Teachers must emphasize the importance of persons becoming reflective enough to think about their own thinking and become conscious of their own consciousness” (p. 65). Transmediation provides opportunities for students to have moments of reflection that may alter their perceptions regarding meaning-making. These moments can become what Rosenblatt (1978) suggested as lived-through experiences. Eisner (1997) stated, “The task of the teacher is to create the conditions through which the student’s thinking … can become more complex, subtler, more effective. In a word, more intelligent” (p. 351). Through these lived-through experiences, students can better understand their writing when paired with multiple sign systems and transmediation. A semiotics-based approach toward writing can help students look at their meaning in multiple forms and contexts.
Similar to the importance of the arts in literacy, but without recognition in the newly adopted Common Core State Standards (CCSS) (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010), revision is also underrepresented in the standards. For example, the CCSS include standards specific to writing, but only one standard of revision, and it is paired with editing, planning, and rewriting. In effect, revision occurs throughout the writing process, and CCSS places editing and planning on par with revision, when planning typically occurs at the beginning and editing occurs at the end. If successful writing researchers such as Donald Graves (1983) and Donald Murray (2004) believe revision is critical in the writing process, but there is only one standard briefly hinting at revision (without actually defining what it is or could be), students and teachers have an indication of how high stakes testing assessors view the writing process and may continue to misperceive revision, or worse, ignore it altogether.

Writers need choice. This is especially important with revision. Students will only be invested in revision if it provides them something in return (Murray, 2004). Dix (2006) found that students work in different ways to revise and draw from different literacy experiences. Calkins (1980) regarded revision as an organic, highly personal process, one that will grow if children are given the freedom to experiment with their writing. According to Haar (2006), choice is a central tenet in whether students will revise. She noted, “When students have little power to make choices, when they sense the limited range of a closed, predicable form, and when they are not part of the decision-making process about how and when to revise, they lose interest and passion” (p. 17).
This interest and passion is what is needed in making revision a foundational aspect for writing instruction in schools today.

According to Berghoff and associates (2000), “How we think about education affects what we do in the name of education” (p. 15). Educators must envision what the future can look like before there is hope in creating it. Teachers can envision a new way of teaching revision in the writing process with transmediation. Eisner (2002) states, “It is important for teachers to recognize that nonlinguistic and nonquantitative forms of representation should be a part of the programs that they design” (p. 205). Numerous studies have shown that when teachers value multiple sign system use in the classroom, students raise their level of consciousness in what each sign system can provide as well as create opportunities to invent new signs and metaphors to extend their thinking (see Berghoff, 1993; Gallas, 1994; Leland & Harste, 1994; Short, Kauffman, & Kahn, 2000; Siegel, 1995; Smagorinsky & Coppock, 1994). Dewey (1938) argued that teachers should create a learning environment that extends students’ thinking by raising anomalies. Teachers that pedagogically believe in the inclusion of multiple sign systems can bring about a future that encourages students to better understand themselves as learners, thinkers, and meaning-makers of literacy.

**Implications for Future Research**

A number of future studies might complement and develop from this project. Further research is needed in revision paired with transmediation, and I look to fellow scholars to assist me in delving deeper into this connection. To begin, a longitudinal study could be conducted based on how students continue to revise during their
schooling. A researcher might study whether students use transmediation as a part of revision in future writing assignments.

Additionally, I wonder how this process would look with nonfiction in other content areas. For example, if students were to research an historical event and then write about this event through flash non-fiction, what would transmediation look like in this instance, and how would the process differ from fiction writing for students? Would students seek other modes of communication in comparison with fiction in order to reflect on an actual event? What ways of revising would be invented by transmediating real versus imaginative works of literature?

Furthermore, this study could be replicated with younger students, since revision is primarily studied with high school and college students. Extending to other populations, I wonder what this study would look like with experienced writers, such as Stephen King and others who write about writing. For instance, could there be communication between writers and students who go through this process together, through a blog, for example?

Murray (1978) noted that revision is, “one of the writing skills least researched, least examined, least understood, and – usually – least taught” (p. 85). More research is needed on the revision process of middle school students in general. In a technology-driven millennia, the push for more computers and technology use in the classrooms is imminent. Future studies might analyze the revision process via computers as the primary writing space. For example, how might this affect revision and the possible study of revising, perhaps through examining track changes? Others might assess what
transmediation looks like via technology. As noted earlier, students found working with technology challenging for a variety of reasons, such as lack of time, difficulty with their chosen program, and finding it difficult to gain new meaning from transmediating in this mode. If transmediation with technology were the only option for students, and a longer duration of time were provided for students to explore their writing with technology, would students gain a deeper connection to their work? Furthermore, how would a researcher examine the signs within each frame on the program to address how to code the multimodal events simultaneously interacting with one another? A new style of research analysis for multimodality and transmediation is then needed.

Additionally, further research is necessary in examining revision via sign systems the students did not employ, such as music, dance, and other forms of artistry. If they transmediated into other sign systems as done in this study, would the revision process look the same?

Finally, literal and imaginative transmediation categories need further examination. This study found that there were blurred spaces between these two distinctions as previously noted in other scholars’ work. Identifying why and how these blurred boundaries occur when students transmediate their work from their original work needs greater exploration.

Overall, these suggested studies have become a part of my future line of inquiry to examine revision and transmediation not only with different populations, but also in different ways. I look forward to contributing to the education field in both revision and transmediation.
Summary

This study investigated seventh grade writers’ sign system use, changes in writing, and attitudes and perceptions regarding revision when transmediation was included in the revision process. The results revealed that students selected sign systems based on comfort and availability. Macro-structural changes became the focus of students’ revisions rather than centered on superficial changes that are more editing specific. Students attributed these revisions to transmediation’s ability to allow them to see their writing in a new way. Furthermore, students’ attitudes and perceptions pre- to post-survey revealed that while they initially believed revision to be more editing-specific, at the end of the study students shared that revision should be more holistic, centering on content and ideas. In this chapter, discussions and implications of the findings were related to the literature. Additionally, recommendations for future research were made.
APPENDIX A

OPEN-ENDED PRE/POST QUESTIONNAIRE
Appendix A

Open-Ended Pre/Post Questionnaire

Reconceptualizing Revision in Seventh Grade Writers: A Look at Transmediation in the Revision Process

Questionnaire (Student):

1. What do you think is the purpose of revision in writing?
2. Walk me through the process of how you revise your writing.
3. What have been your past experiences in classes when the teacher asks you revise your paper?
4. Tell me about the easiest part of revision for you.
5. Tell me about the most challenging part of revision for you.
6. What would you say to a friend who needed to revise his/her draft but didn’t know how?
APPENDIX B

SEMI-STRUCTURED INTERVIEW QUESTIONS (STUDENTS)
Appendix B

Semi-Structured Interview Questions (Students)

Reconceptualizing Revision in Seventh Grade Writers: A Look at Transmediation in the Revision Process

Verbal Semi-structured Interview Questions (Student):

1. Tell me about your flash fiction essay?

2. What sign system did you use, and what made you use this sign system over others?

3. How did your new sign system influence your rewriting?

4. What specific writing decisions did you make in revising your draft based on working in another sign system (e.g., added detail, moved paragraph, deleted sentences, etc.), if any? Be as specific as possible, citing lines, paragraphs, pages of your writing that you altered due to thinking about your writing in another mode.

5. What are your thoughts on using other sign systems to assist revision in writing?

6. Now that you have seen the ways that your classmates have transmediated their flash fiction pieces, what is an additional way/ways you could have transmediated your piece aside from the mode you already chose?

7. What would you say to a friend who wanted to use transmediation when they revised their writing?

8. Is there anything else you’d like to tell me about your flash fiction essay and object or something you think I should pay close attention to?

9. What didn’t I ask you that you would like to share?
APPENDIX C

RECRUITMENT SCRIPT FOR STUDENTS
Appendix C

Recruitment Script For Students

Reconceptualizing the Recursive Nature of Revision in Seventh Grade Writers: A Look at Transmediation in the Revision Process

Recruitment Script:

Good morning. My name is Ms. Batchelor, and I will be working with your teacher, Ms. Smith, on a research project. In class, Ms. Smith has plans to with you on writing and writer’s workshop this year. She would like to include a new genre of writing called flash fiction as one of your components. Over the next few weeks, she and I are planning to show you samples of flash fiction stories called mentor texts, and we’ll explore these stories, noting what they have in common and the various crafts writers use in this genre.

Then, you will have an opportunity to write a flash piece of your own during your in-class writer’s workshop time. After completing your rough draft of your flash fiction story, you’ll be asked to think about your writing in a new way; a way that involves another mode (such as, music, sculpture, drawing, etc). I would like to take photographs of your completed objects so I can remember what mode you used. After working in this new mode, you will return to your rough draft and revise it. During this time, I will want to interview you and ask you questions about your thinking about how you revise, and the decisions you make while revising your draft. These will be video-taped and audio-taped so I can ensure that I hear and see everything you say about your writing and revising.

At the end of the flash fiction unit, I would like you to fill in a questionnaire that specifically asks you about this experience writing flash fiction and studying revision in this way. The information I receive from you, including your drafts of your flash fiction stories, along with your thinking in another mode will give me new insights and help me think about how to teach writing to middle school students.

If you would like to participate in this study and are interested in me using your work, please read and sign the consent form and return it to Ms. Smith. Also, since you are under the age of 18, my university requires that you get permission from your parent or guardian. This form is attached to your student consent form. Please take both forms home and read them over with your parents. I will need both forms signed and returned to Ms. Johnson before we begin teaching this unit. Remember, this is optional and will not affect your grade in this class. For those of you who do not wish to participate, you will still complete this component as part of a requirement for your writer’s workshop portfolio, but I will not use your work in my research.
If you or your parents have any questions, please feel free to call me or my advisors at the numbers listed on both forms.

Thank you for your time.
APPENDIX D

INFORMED CONSENT/ASSENT DOCUMENTS (STUDENTS)
Appendix D

Informed Consent/Assent Documents (Students)

Assent Script:

Study Title: Reconceptualizing Revision in Seventh Grade Writers: A Look at Transmediation in the Revision Process

Procedure for obtaining assent from children:

1. Hi, [child's name].

2. My name is Ms. Batchelor and I am trying to learn more about the choices that you make when you revise in your flash fiction writing unit project that your class is working on this first nine weeks.

3. I would like to work with you during this writing unit and watch how you write and revise your flash fiction pieces as well as ask you questions about how you feel while writing and thinking about your writing between drafts. I would also like to record our conversation when we talk about your project.

4. **Do you want to do this?** [If the child does not indicate affirmative agreement, you cannot continue with this child].

5. **Do you have any questions before we start working together on your writing and revising?**

   [Clarify if necessary].

6. **If you want me to stop working with you at any time just tell me.**
Informed Student Consent

**Study Title:** Reconceptualizing Revision in Seventh Grade Writers: A Look at Transmediation in the Revision Process

**Principal Investigator:** Katherine E. Batchelor

You are being invited to participate in a research study. This consent form will provide you with information on the research project, what you will need to do, and the associated risks and benefits of the research. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision. You will receive a copy of this document to take with you.

**Purpose**

It is important to understand how students review and analyze their writing, specifically focusing on the revision process. Researching how students incorporate transmediation (transferring thinking of a topic into another sign system, such as art, dance, music, etc) as one opportunity to work with revision in their writing will allow teachers to identify effective actions teachers can take when teaching revision during the writing process. This information may be presented at professional conferences, in teaching, educational meetings, or published in professional journals in print and online.

**Procedures**

I will look at your original written flash fiction drafts and your revised drafts during our flash fiction unit of study. I will ask you questions that will be video-taped/audio-taped and
transcribed for me to go back and read what we discussed regarding your thinking about changes and revisions you made to your original draft. I will give you copies of our transcribed work. I will ask you to talk about your transmediated objects and how this has affected your writing decisions when you return to revising your work. Finally, I will administer a post-reflection survey to you at the end of our time together.

**Benefits**

This research will not benefit you directly. However, your participation in this study will help to better understand thinking about ways to teach revision writing in schools.

**Risks and Discomforts**

Risks or discomforts associated with this study are no greater than everyday life.

**Privacy and Confidentiality**

Your study related information will be kept confidential. Any identifying information will be kept in a secure location and only the researcher will have access to the data. Research participants will not be identified in any publication or presentation of research results, both online and in print.

**Voluntary Participation**

Taking part in this research study is entirely up to you. You may choose not to participate or you may discontinue your participation at any time. You will be informed of any new, relevant information that may affect your health, welfare, or willingness to continue your study participation. Participating or not participating will not affect your course grade for Ms. Johnson.
**Contact Information**

If you have any questions or concerns about this research, you may contact Katherine E. Batchelor at (330) 672-2580, Dr. William P. Bintz at (330) 672-0658, or Dr. Denise N. Morgan at (330) 672-0663. This project has been approved by the Kent State University Institutional Review Board. If you have any questions about your rights as a research participant or complaints about the research, you may call the IRB at 330.672.2704.

**Consent Statement and Signature**

I have read this consent form and have had the opportunity to have my questions answered to my satisfaction. I voluntarily agree to participate in this study. I understand that a copy of this consent will be provided to me for future reference. I understand that this study is for research purposes. The information gathered from this study may be presented at professional conferences, in teaching, educational meetings, or published in professional journals in print and online.

________________________________________
Participant Name

________________________________________
Participant Signature  Date
Appendix E

Informed Consent Documents (Parents)

Informed Consent to Participate in a Research Study

Study Title: *Reconceptualizing Revision in Seventh Grade Writers: A Look at Transmediation in the Revision Process*

Principal Investigator: Katherine E. Batchelor

Your child is being invited to participate in a research study. This consent form will provide you with information on the research project, what your child will need to do, and the associated risks and benefits of the research. Your child’s participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision. You will receive a copy of this document to take with you.

**Purpose**

The purpose of this study is to gather student writing samples, artwork, and reflections of seventh grade writers during the writing process at Chagrin Falls Middle School, focusing on their revision strategies. By researching students' revision moments using transmediation (transfer of knowledge between sign systems) to generate new thinking about their writing topic in a different mode, middle level learners might revise at a deeper holistic level looking at their writing in an affective, intrinsic way rather than creating the surface level revision changes commonly referred to as copy-editing. How students transfer their writing into other sign systems will allow teachers and researchers in the field of writing to identify possible strengths and areas for growth for reconceptualizing the revision process in schools. The information gathered from this study may be presented at professional conferences, in teaching, educational meetings, or published in professional journals in print and online.
**Procedures**

Your child’s participation will require him/her to read flash fiction short stories noting intentional decisions writers make while writing in this genre. Your child will be required to complete writing assignments centering on flash fiction during the first quarter. Steps will include rough draft writing, thinking of their writing using another sign system, and revision toward final draft completion. The duration of this unit of study will be in first nine weeks, during a narrative writing unit. We will be saving copies of your child’s drafts as well as their objects they created in another sign system about their writing and looking at them specifically to notice trends that students in the class refer to as important aspects of thinking about revision during their writing process.

**Audio and Video Recording and Photography**

This project will also require your child to be interviewed, in which this interview will be video-taped/audio-taped for transcription purposes only. These interview questions will consist of open-ended responses focusing on his/her intentional decisions during the revision process and how working in another sign system (e.g., drawing, sculpture, music, etc.) affects his/her attitude toward writing. Interviews will last no more than 10 to 15 minutes.

**Benefits**

This research will not benefit your child directly. However, your child’s participation in this study will help to better understand ways to incorporate a new way of thinking about writing and the revision process in schools.

**Risks and Discomforts**

Risks or discomforts associated with this study are no greater than everyday life.
Privacy and Confidentiality
Your child’s study related information will be kept confidential. Any identifying information will be kept in a secure location and only the researcher will have access to the data. Research participants will not be identified in any publication or presentation of research results, both online and in print.

Compensation
Participation or non-participation will have no effect on your child’s grade in Ms. Johnson’s class.

Voluntary Participation
Taking part in this research study is entirely up to you and your child. You and/or your child may choose not to participate or may discontinue your participation at any time. You will be informed of any new, relevant information that may affect your child’s health, welfare, or willingness to continue participation in this study.

Contact Information
If you have any questions or concerns about this research, you may contact Katherine E. Batchelor at (330) 672-2580, Dr. William P. Bintz at (330) 672-0658, or Dr. Denise N. Morgan at (330) 672-0663. This project has been approved by the Kent State University Institutional Review Board. If you have any questions about your rights as a research participant or complaints about the research, you may call the IRB at 330.672.2704.

Consent Statement and Signature
I have read this consent form and have had the opportunity to have my questions answered to my satisfaction. I voluntarily agree to grant permission for my child to...
participate in this study. I understand that a copy of this consent will be provided to me for future reference.

Child’s name ____________________________________________

_________________________________  ______________________
Parental Signature                  Date
APPENDIX F

AUDIO/VIDEO CONSENT FORM
Appendix F

Audio/Video Consent Form

Audiotape/Video Consent Form:

_Reconceptualizing Revision in Seventh Grade Writers: A Look at Transmediation in the Revision Process_

Katherine E. Batchelor

I agree to allow my child _____________________________ to participate in an audio-taped/video-taped interview about decisions he/she made during the revision process as part of this study and for the purposes of data analysis. I agree that Ms. Katherine E. Batchelor may audio-tape/video-tape this interview. The date, time and place of the interview will be during Ms. Johnson’s classroom time.

________________________________________  ______________________________________
Signature                                      Date

Ms. Katherine E. Batchelor may / may not (circle one) use the audio-tapes/video-tapes made of my child. The original tapes or copies may be used for:

___X___this research project ___X___publication ___X___presentation at professional meetings

________________________________________  ______________________________________
Signature                                      Date

Address:

___________________________________________________________________________
APPENDIX G

FLASH FICTION RUBRIC FOR STUDENTS’ FINISHED DRAFTS
## Appendix G

### Flash Fiction Rubric For Students’ Finished Drafts

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<th>Level Two (+2)</th>
<th>Level Three (+3)</th>
<th>Level Four (+4)</th>
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<tr>
<td><strong>Title</strong></td>
<td>I completely forgot to title my piece.</td>
<td>I included a title in my piece but it doesn’t seem to connect or have any relevance to my piece. It also may not immediately stand out among other titles in order to grab my reader’s attention.</td>
<td>My title does have power, but there’s nothing unique about it. It grabs my reader’s attention anyway.</td>
<td>My title is powerful and essential. It adds information to my piece. It grabbed my reader’s attention even before they started reading. It was unusual and appealing to my reader.</td>
</tr>
<tr>
<td><strong>Lead</strong></td>
<td>My lead did not contain any “Wow” factor that made my reader want to read on in my piece. It was a sentence like any other sentence in my piece. It did not stand out. It lacked energy and clarity about what was happening in my piece.</td>
<td>Although I attempted a lead, it did not grab my reader’s attention with enthusiasm. It took a couple more reads for the reader make sense of what was happening in my piece.</td>
<td>My lead is attentive to my reader. However, with more revision I could make it more forceful and powerful. I maintain a level of energy throughout my lead, which allows my reader to notice subtle hints regarding my setting and characters of this piece.</td>
<td>I drove my reader right into the action of the story. The first sentences capture my reader’s attention and make them ask questions about what is happening in my piece. My lead directs my reader to a possible setting, situation, and who my character is within the first lines of my piece.</td>
</tr>
<tr>
<td><strong>Word Count</strong></td>
<td>I completely forgot that I had a limit of words in this style of writing. It’s either way too large or I undersold it.</td>
<td>I went over my limit of 750 words by at least 300 words, making it more of a “sudden fiction” piece instead of a “flash fiction” piece or I didn’t write enough length to get my message across.</td>
<td>I went over my limit of 750 words by only 100 or so words. I could have met the guidelines if I had narrowed down my word choice and edited various sentences that could have been eliminated.</td>
<td>I was successful in meeting the guidelines of not exceeding 750 words. It ended clearly and concisely and it didn’t feel rushed. I also didn’t write too little in my piece to make the reader want more.</td>
</tr>
<tr>
<td><strong>Topic choice</strong></td>
<td>I chose the wrong topic for a flash fiction piece. There is no way to pull depth or thematic issues from what I wrote.</td>
<td>I am still learning about how to choose the right topic in flash fiction. I need more guidance.</td>
<td>My topic is strong and it has moments of depth. I could have gone even deeper in my connections or themes in my piece.</td>
<td>My topic represents the human condition, and despite the word count limitation, depth is achieved throughout my piece.</td>
</tr>
</tbody>
</table>
Show, Not Tell

| I only state information, which makes my piece thin in plot and uninviting to my reader. I am “telling” in this piece, thus forcing my reader to regurgitate what he/she read, not interpret. My reader is a passive participant in this piece. There’s no connection to the story, no feeling or empathy. | Although I may “tell” in some parts of my piece, I attempt to practice the art of showing in some places. With more practice on this craft, I can continue forward in my writing. | I am usually showing emotion and details throughout my piece, but I occasionally pull back and write just facts and statements. With a little more fine-tuning of these parts, I will be on my way to mastering this craft. | I use details and emotion of the characters’ experiences to allow my reader to become an active participant instead of a passive one. I am descriptive throughout my piece, and my reader feels as if he/she is there within my story based on my practiced craft of showing, not telling. |

Polished “Final” Draft

| I am not using punctuation in my writing. I have many grammatical errors, which interfere with the enjoyment of reading this piece. I need a great deal of editing in order to make it cohesive for my reader. | I have not tried to use advanced punctuation in my piece. Many grammatical errors could have been caught with another reread. Many errors make it fairly difficult to understand my piece. | Although there are some errors, it does not interfere with the enjoyment of reading my piece. I am making an effort to edit my paper before turning it in. Advanced punctuation is attempted, but may not be used accurately. | The reader can see my close attention to detail and that I care a great deal about this piece. It shows that I have reread and edited this piece. Errors, if any, do not interfere with the reading of this piece. Conventions are used purposefully and accurately. |

**Total Score:** __________/ 24 points
APPENDIX H

SEVENTH GRADE STUDENTS’ CLASS ANTHOLOGY TABLE OF CONTENTS
### Appendix H

**Seventh Grade Students’ Class Anthology Table Of Contents**

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