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Reading Graphically: Examining the Effects of Graphic Novels on the Reading Comprehension of High School Students

Michael Cook
Clemson University, mpcook@clemson.edu

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READING GRAPHICALLY: EXAMINING THE EFFECTS OF GRAPHIC NOVELS
ON THE READING COMPREHENSION OF HIGH SCHOOL STUDENTS

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A Dissertation
Presented to
the Graduate School of
Clemson University

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In Partial Fulfillment
of the Requirements for the Degree
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by
Michael P. Cook
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Accepted by:
Dr. Lienne Medford, Chair
Dr. David Barrett
Dr. Beatrice Bailey
Dr. Sean Williams

ABSTRACT

There have been few empirical studies investigating the uses of graphic novels in education, fewer still in English Language Arts (ELA). As a result, there remain misconceptions about possible uses and potential benefits of graphic texts in ELA classrooms. The purpose of this study was to investigate the effects of graphic novels on the reading comprehension of high school students in English classrooms. The study specifically examined the potential benefits and effects of a graphic adaptation of the Edgar Allan Poe short story, "The Cask of Amontillado." This study explored the effects of the graphic adaptation in two ways: one, as a replacement for the traditional classroom text; and two, as a supplement to the traditional text. The research design for the study was a quantitative, factorial Analysis of Variance (ANOVA). There were three independent variables, each with multiple levels. First, method of instruction had three levels: Control, Experimental Group 1 (E_1), and Experimental Group 2 (E_2). Second, Grade Level had four levels: ninth-grade, tenth-grade, eleventh-grade, and twelfth-grade. Third, Gender had two levels: male and female. The dependent variable of interest was students' scores on the reading comprehension test. At the conclusion of the primary analysis, two supplemental analyses were conducted. First, post-interviews were conducted with both students and teachers to elicit the perceptions of interacting with and using the graphic texts. Second, a post hoc item analysis was conducted on the reading comprehension test to calculate a coefficient alpha and to assess the quality of the test instrument.

Findings from the study indicated significant main effects of all three independent variables. First, method of instruction had a significant main effect. The students in both experimental groups scored significantly higher on the test than their peers in the control group. Second, grade level had a significant main effect. Students in tenth-, eleventh-, and twelfth-grades scored significantly higher than students in ninth-grade. Students in twelfth-grade also scored significantly higher than students in tenth-grade. Third, gender had a significant main effect; females scored significantly higher than their male schoolmates.

Findings from the supplemental analyses are shared as well, the limitations of the study are discussed and implications for future research shared.

DEDICATION

To my family, whose love and support made all this possible.

The value of a dedicated support system is beyond measure.

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I would like to first thank the members of my committee: Dr. David Barrett, Dr. Beatrice Bailey, and Dr. Sean Williams. Each of you has done a great deal in preparing me and in helping me get to this point, and I owe you each an acknowledgment.

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an education, and when I lost sight of my purpose and belief in myself, you were there to hold my hand. Sara, thank you for the encouragement and the support, and for allowing me to vent when it was necessary. Your belief in me has kept me upright and moving forward. You see things in me that I often do not recognize in myself.

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CHAPTER ONE:
INTRODUCTION

As teachers, we must challenge ourselves to continue to see beyond traditional
notions of literacy and to embrace the visual.
—James Bucky Carter (2007, p. 52)

My Connections to Graphic Novels

The idea for this study grew out of my fascination with graphic novels, images, and art. As a high school student, I was rarely, if ever, motivated to read the texts assigned in my English classes. I was, however, motivated to show up every day and interact with visuals in my art courses. Something about the opportunity to make meaning and express myself in my own way through art attracted me to school like no other experience. To be completely truthful, art is what kept me in school; art was ultimately a catalyst for my graduating and eventually becoming a teacher. I enjoy interacting with visuals.

My love of art and all things visual eventually pushed me to graphic novels. As a young adult, I read graphic novels about superheroes and intriguing super-villains. As an adult, I still read graphic novels, although I've expanded along with the graphic novel universe, and now I read graphic memoirs, graphic poetry, graphic novel award winners, graphic adaptations of canonical literature, and the occasional graphic tale of those with super powers.

When I became an English teacher, one of my first priorities was to put together a classroom library to encourage students to read independently. As I looked at the faces of some of my students, I saw myself as a teenager, and I quickly made several graphic titles available to students. Sometimes a student would pick one up and ask me what kind of comic book it was. I always suggested they read it and tell me what type of

comic it was, if it was in fact a comic at all. Through what must have been a stroke of good luck, word spread that I had "fun" books in my class, and more and more students picked them up, scanned them, borrowed them to read, and never brought them back.

Aside from independent reading, I've taught the graphic novel in two different ways. First, graphic novels were always included in my semester reading circles, so all students had the opportunity to interact with and respond to these non-traditional texts in book discussions, focused essays, and group projects (both traditional and multimedia). Second, I incorporated graphic novels in each of the summer school courses I taught. These students were generally stuck with me for a portion of the summer because they were unable, for any of a number of reasons, to engage with class texts. For these summer warriors, graphic novels provided a safe and comfortable way into texts. I was always pleased with the results from these non-traditional summer school classes.

The idea behind this personal introduction is simply to paint a picture, a picture of the importance of graphic novels in my life, and in the lives of some of my students. It was my experiences as a reader and as a teacher of English and literacy that provided the spark that lit the fire under this study. My hope is twofold: first, I hope to make sense for myself the ways in which graphic novels can benefit my future students; second, I hope to contribute to the research available on graphic novels in education and in the English classroom.

Context of the Problem

Several factors affect and directly influence the context of reading instruction, students' interactions with texts, and current literacy levels. Among these factors are the

new Common Core State Standards (CCSS), an ever-evolving concept of literacy, reading comprehension, and students' struggles with canonical texts.

The CCSS

The introduction of the Common Core State Standards (CCSS), meant to prepare *all* students for college or career, has begun to alter the literary and rhetorical values in the English language arts classroom. The CCSS, with much of its focus on literacy, places emphasis on more than just traditional reading and writing; the focus is now also on language, speaking and listening, viewing, and all areas of 21st century literacy. Within this new focus on literacy, the standards require students to closely read and examine texts by engaging in rich tasks with various forms of communication (i.e., text types, genres, and disciplines).

The reading standards themselves place emphasis on four specific areas. First, students are required to discern from and make fuller use of texts. Second, students should make inter-textual connections from multiple texts. Third, students must consider and use a wide range of evidence from texts. Fourth, students should demonstrate mastery of critically examining texts.

One important idea behind the CCSS is the concept of vertical alignment of standards. The standards for high school English function, in part, by building literacy and reading instruction on the instruction students receive in previous years, and in previous English classes. As students progress through high school, they work toward mastery and literacy, or what the standards term "College and Career Ready." Because of the CCSS formatting, students are expected to become better readers and more adept at

comprehending information as they move through their four years of high school and receive more instruction and more opportunity to practice and build reading skills.

A second area of major change brought on by the CCSS is the emphasis on media. Students are expected to be both producers and consumers of media and are required to analyze and create both print and non-print texts. As much as any other change associated with the CCSS, this shift to standards-based media inclusion is affecting the way English is taught (the texts and technologies used) across the country. An important point to remember is that the CCSS do not prescribe for teachers how the standards should be taught and met, leaving teachers the autonomy to use their knowledge of their own students to make important pedagogical decisions.

Multiple Literacies

The ways in which we define literacy and what constitutes a literate person have evolved drastically over the past few years. Traditional forms of reading and writing, while still important and still present, no longer monopolize communication and the sharing of information. Mixed in with these traditional modes are a multitude of media and modalities through which adolescents engage with "texts." The question for education then becomes: How do English and literacy teachers incorporate these new forms of literacy into their classroom instruction to ensure that students are fully literate?

Garcia (2012) states that because the concept of literacy no longer consists of only paper and ink and traditional interactions with texts, teachers and teacher education programs are challenged with reorienting literacy education (from the classroom to the educational policy level) to more accurately match students' future social and career contexts. Regardless of the many changes society has experienced as a byproduct of

globalization and digital media, the English classroom tends to "focus primarily on tools that—while foundational—disregard the kinds of products students will be expected to interpret, produce, and improve in the future" (p. 94). Part of the problem may be that both teachers and students tend to see literacy and communication as two separate skills, which may result in the move away from media literacy in education (Young & Daunic, 2012).

Shultz and Hull (2002) suggest that as we broaden our definitions of literacy and what we consider to be literate activities, our entire environments—our homes, our workplaces, our communities—become sites where we engage in literacy activities. With these changes in literacy practices, and environments, and the ever-increasing number of multimodal texts adolescents interact with, teaching students to critically consume information is essential (Park, 2012; Thomas, 2012). To critically consume multimodal texts, Thomas (2012) points out, "Reading digital media requires learning to read and negotiate the meanings of the visual, aural, spatial, and graphic, then synthesizing all this information while assessing its validity" (p. 131). This critical literacy instruction can help students to create deeper and more complex meaning from texts of all types (Park, 2012). To do this, teachers must first redefine literacy and literacy instruction in a way that values students interacting with multiple text types and supports students' acquisition of multiple literacy tools (Garland, 2012; Park, 2012).

What is Reading?

While an adequate mental representation of a passage is crucial to comprehension, it is important to note differences between the process of comprehending and the product (mental representation) of comprehending (Davey, 1988; van den Broek & Espin, 2012).

"The importance of learning to read has stimulated considerable debates—theoretical, practical, and political—about which teaching methods and materials are effective" (Afflerback, Pearson, & Paris, 2008, p. 364). Van den Broek and Espin (2012) note that being able to comprehend the texts one reads "is an essential component of successful functioning in our world. Accordingly, the assessment of children's…ability to read and comprehend texts receives considerable attention, in both school and research settings" (p. 315).

Comprehension is not a unitary skill, but instead requires several components to work interactively and independently of one another (Davis, 1968; Hall, 1989; Miller & Faircloth, 2009). Goodman and Goodman (2009) state, "there is no reading without comprehension" and "learners need access to authentic written materials appropriate to their language, interests and experiences" (pp. 92-93). Miller and Faircloth (2009) argue that comprehension may vary as a function of several factors, including gender, grade level, and SES. This complexity with comprehension has been a catalyst for over one hundred years worth of research into understanding comprehension as a process (Fisher, Lapp, and Frey, 2011). As Roller (2009) points out, "currently, much of the work being conducted in reading comprehension is heavily influenced by a skills-based tradition…from special educators and cognitive psychologists" (p. 663). There is an obvious need for reading comprehension research conducted by English educators in English classrooms if we are to begin to fully understand not only how adolescents comprehend what they read, but also the ways in which teachers can scaffold and support these processes.

Reading the Canon

My experiences as a classroom teacher have opened my eyes to a number of important realizations. One such realization is that students tend to struggle when reading classic texts from the canon. Because this study utilized the work of Edgar Allan Poe, I have framed this discussion around my classroom experiences teaching his work.

Traditionally Poe's work, whether his poetry or his short stories, tends to be taught in ninth- and eleventh-grades. I, myself, have taught Poe to both freshmen and junior level students. Texts such as those authored by Poe can be difficult for students to comprehend for multiple reasons. First, Poe's diction and language use are for the most part not just unfamiliar to students, but are also non-existent in contemporary society. Much of the vocabulary used in his writing is complicated, foreign, and archaic to 21st century students. Likewise, the macabre and often dark nature of Poe's writing and the images he uses are difficult for students to visualize, as these settings and concepts are not part of students' background knowledge and schemata.

Because of the reasons listed above, and myriad others, my experiences teaching these texts, to a variety of ninth- and eleventh-grade students (from low achieving through honors level) have been plagued with difficulty and frustration. Short of telling the students what each, individual line means, I have, for the most part, been unsuccessful helping students to closely read Poe's work and exhibit strong comprehension of his stories and poetry.

More importantly, my students have felt overwhelmed with frustration and failure as they attempted to interact with Poe. This is extreme cause for concern, in my opinion, for two main reasons. First, my students, and all students, deserve instruction that meets

them where they are in terms of comprehension and text familiarity. They require well-planned scaffolding to assist them with schema construction and building a knowledge base. Instruction should seek to bridge the comprehension successes and struggles students have. Second, students deserve the opportunity to engage with and make meaning from the texts our society deems foundational. As one of the fathers of the American short story and the gothic movement in American literature, Poe most definitely falls into this category. While I recognize that my students are worlds away from Edgar Allan Poe, I also recognize my duty to do whatever is required to help them interact in personal ways with his texts.

<div align="center">**Statement of the Problem**</div>

Reading Comprehension

One of the major pieces of the problem addressed by this study is reading comprehension. At the heart of this lie the difficulties students have with comprehending the texts they read. This section will offer a brief look at current and ongoing reading comprehension issues students face in classrooms across the county. Further and more comprehensive information on comprehension is provided in subsequent sections of this chapter as well as in chapter two.

Golinkoff (1975) states, "reading comprehension requires an active, attentive, and selective reader who, to some extent, operates independently of text to extract meaning from it" (p. 656). Some of the common problems students have with comprehension include a lack of reading strategies and practice with a very limited range of texts and text-types (Biancarosa & Snow, 2006). In reality, however, good and poor readers differ in a number of ways. For example, "most older struggling readers can *read* words

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accurately, but they do not *comprehend* what they read, for a variety of reasons" (p. 8; italics in original). As another example, Golinkoff (1975) found that good and poor comprehenders differ in decoding skills and text organization processes as well. A third and equally important example involves background knowledge. Zhao and Zhu (2012) argue that readers who have existing linguistic schemata, but who lack the necessary cultural background knowledge are still unable to comprehend a given text.

Skilled readers and comprehenders are able to make meaning in multiple ways simultaneously; using context to derive understanding and integrating numerous types of information (e.g., semantic, schematic, graphophonemic, pragmatic). Poor readers struggle using both contextual and simultaneous levels of information (Hall, 1989). Yet another reason for students' issues with comprehending lies with vocabulary accumulation. Zhao and Zhu (2012) suggest this problem exists because struggling readers lack a strategy for understanding and memorizing words. To assist struggling readers, Wu and Hu's (2007) findings suggest teachers should (1) aid students in establishing textual schema, (2) enhance students' ability to use vocabulary, and (3) strengthen the reading motivation of students. To compensate for limited literacy in students, teachers can modify routines, use adaptations, and integrate technology (Torgesen, 2006). Other noted instructional elements for poor comprehenders include the use of models and scaffolded instruction (Biancarosa & Snow, 2006).

Graphic Novels

A second, and equally as important, piece of this problem lies within the literature and popular opinion of graphic novels as instructional tools. To this point, the research published on graphic novels in education is scant at best. Even fewer studies investigate

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graphic novels in the English classroom, especially at the secondary level. And even

fewer approach the use of graphic novels through the lens of reading comprehension.

The gap in the literature, then, is enormous. Chapter two provides the findings from a

detailed review of the literature on graphic novels and offers a representative look at the

current, fledgling state of research on graphic novels in the English classroom (and for

that matter, in education).

Another issue with graphic novels is general popular opinion and educators'

perceptions of these texts. In the initial phases of planning for this study, I spoke with

other doctoral students, with professors, and with classroom teachers. Interestingly

enough, the consensus seemed to be negative. Multiple times I was asked a version of

the question: Why are you researching picture books? Other times, after asking follow

up questions, I noticed that the perceptions tended to be negative because of unfounded

assumptions—they had never read a graphic novel or seen one taught in a classroom, so

they *must* not be educational. Classroom teachers, on average, fell into this group. They

discussed their hesitancy to teach using graphic novels because either they were too

unfamiliar with them to feel comfortable teaching one or they feared their administration

would question their practices or they weren't sure how graphic novels would work

within the CCSS (after all, there are none on the list of text exemplars).

Most (if not all) of the previously mentioned issues with graphic novels can be

responded to by further research into the uses of graphic novels in classrooms. Perhaps

then, teachers, teacher educators, and researchers alike would begin to better understand

the potential benefits and constraints of utilizing these visual texts.

Literacy Dichotomy

The third piece to this problem puzzle involves the noted differences in students' in-school and out-of-school reading practices. The concept of literacy and what is required to be a literate person have been rapidly evolving over the last few years. As new technologies are invented and become available to the masses, the literacy needs of society change accordingly. Biancarosa and Snow (2006) point out, "literacy demands have increased and changed as the technological capabilities of our society have expanded and been made widely available; concomitantly, the need for flexible, self-regulated individuals who can respond to rapidly changing contexts has also increased" (p. 9).

Technological change leads to a division between the literacy needs in school and those needed out of school. Schultz and Hull (2002) note the large differences between students' home and school literacy practices. These new forms of information and literacy are significantly altering the nature of education (Fisher et al., 2011), and Skilton-Sylvester's (2002) findings suggest the importance of creating a bridge between students' out-of-school literacy strengths and their in-school academic literacy. It has been demonstrated that literacy connects in multifaceted ways with the learning students do outside of school. Within this view, out-of-school literacy activities are of equal value as those used in school and have a noticeable impact on comprehension (Fisher et al., 2011; Hull & Schultz, 2002 a.). Kress and Van Leeuwen (1996) discuss this radical evolution of literacy by stating, "language is moving from its former, unchallenged role as *the* medium of communication, to a role as *one* medium of communication" (p. 34; italics in original). Recent literacy research suggests that students' out-of-school reading and

literacy activities are much more diverse than their in-school experiences; therefore, educators should alter their pedagogical practices to include these important and non-traditional literacy environments (Hull & Schultz, 2002 b.).

Purpose of the Study

The purpose of this study was to investigate the effects of graphic novels on the reading comprehension of high school students in English classrooms. Specifically, this study examined the potential benefits and effects of a graphic adaptation of a traditionally-taught Edgar Allan Poe short story on students' reading comprehension. Within this investigation, the Poe graphic adaptations were explored in two ways. First, I was interested in the effects of the graphic adaptation as a replacement for the traditional text. Second, the graphic adaptation was examined as a supplement to the traditional text.

Significance of the Study

Reading

The comprehending of a text is a highly active process and is impossible without a knowledge component (Kintsch, 2005; Torgesen, 2006). To supplement this knowledge component, adolescents require a "wide range of [literacy] interventions" including increasing motivation and using diverse texts (Biancarosa & Snow, 2006, p. 8). "Too often students become frustrated because they are forced to read books that are simply too difficult for them to decode and comprehend simultaneously. Learning cannot occur under these conditions" (p. 18). Alvermann (2002) reported that less than three-percent of eighth-graders are able to extend and analyze information they read. Sharing National Assessment of Educational Progress (NAEP) data from 2005, Torgesen (2006)

points out that only 32% of tenth-grade students read at or above grade level. Similarly, in 2009 students in twelfth-grade did score two points higher than in 2005, but these 2009 scores, however, were four points lower than in 1992. Only 38% of high school seniors nationwide scored proficient or higher in reading; there was no significant difference from prior assessments. In fact, according to the National Center for Education Statistics, this score was two percentage points lower than in 1992 (NCES, 2009). Luke et al. (2011) point out, "recent reviews of U.S. data have indicated that high stakes testing and accountability systems have failed to close and, in some states, increased gaps in achievement" (para. 12). As Biancarosa and Snow (2006) state, "clearly, there is a need to improve adolescent literacy, and this need is all the more pertinent because of the rapidly accelerating challenges of modern society" (p. 9). With that said, it is equally important to consider the possibility that graphic novels may offer both benefits, by helping adolescents to meet 21st century and global literacy demands, and consequences, by placing greater emphasis on multimodal literacy skills than on the traditional skills associated with reading and writing. Because of this, studies investigating the benefits and constraints of multimodal texts, such as graphic novels, are needed.

The issues with and the debates over students' reading scores, reading abilities, and reading practices go much deeper than simply looking at the static national data would suggest. As mentioned previously, the texts students read and the types of literacy activities they engage in play a part as well. Hull and Schultz (2002 a.) note that the gap between good and poor readers and writers has continued to widen, and has no doubt widened even more in the years since 2002. Thomas (2012) reminds that students come to class with different backgrounds, interests, languages, and strengths and weaknesses.

Students often lack the appropriate knowledge and skills to analyze and make sense of digital media or popular culture texts because opportunities to practice and develop these skills are rarely provided in school.

Research suggests that many students labeled 'struggling,' 'below grade level,' and 'reluctant' readers are successful outside of school in their efforts to navigate various print and sign systems (Vasudevan & Wissman, 2011). "Today's youth are failing to meet measures of traditional literacy, but they are quickly and easily acquiring skills using new tools for communication" (Young & Daunic, 2012, p. 70). Sharing data from national studies from 2007 and 2008 (see NCES, 2007; NCES, 2008; Lenhart et al., 2008), Young and Daunic (2012) point out the disparity between measures of literacy. The 2007 NCES study found that only 24% of high school seniors scored proficient in writing. Similarly, in 2008, NCES found that just 38% of seniors scored proficient in reading. Contrasting these two figures, Lenhart et al. found 85% of teens use new communications technologies; that percentage has no doubt grown over the previous four years, as both technology and access to technology have evolved and grown tremendously. Given the changes stemming from technology and globalization, Fisher et al. (2011) point out the need for further inquiry into reading comprehension in an attempt to develop lifelong and independent readers.

New Literacy

Students' realities in classrooms often do not align with their realities in the outside world. "In classrooms, monomodal texts such as classic novels and standardized test passages often dominate what adolescents are expected to read and comprehend" (Serafini, 2011, p. 348). Vasudevan and Wissman (2011) argue that maintaining the

current dichotomy between students' in-school and out-of-school literacy practices will be detrimental to our ability to co-construct educational spaces with them. Vasudevan and Wissman also point out the importance of attention to the literacy practices students engage in while outside-of-school:

> Studies that inquire into the distinctions between the literacy cultures inside and outside of classrooms illustrate the ways in which the institution of school itself, whose practices of labeling and categorization coupled with missed opportunities to really know youth, plays a significant role in the bifurcation of youths' lives and literacies in and out of school. (para. 15)

This doesn't suggest that traditional literacy skills and practices be abandoned for a new approach made up solely of interactions with multimodal texts. In fact, no researcher or educator (at least one truly committed to providing high quality and meaningful instruction to students) would make that argument. With that in mind, however, it is important that students understand the importance and value of each (Skilton-Sylvester, 2002; Young & Daunic, 2012).

Alvermann (2002) noted that the literacy skills of adolescents are not on pace with the rapidly changing demands of a globalized society. The contrast between the literacy practices students engage in while in and outside of school contribute to this. In fact, recent research documents this contrast between students' intellectual accomplishments outside the classroom and poor performance in school (Hull & Schultz, 2002 b.). Hull and Schultz (2002 a.) also point out that to understand this dichotomy, it is important to remember that cultural funds of knowledge and individual ability help to explain the existing division between in-school and out-of-school language and literacy

practices. It is equally important to consider more traditional literacy concepts (e.g., audience, purpose, use, etc.) as one examines the delineation between students' interactions with texts. For example, outside-of-school, students often have a clear sense of utility and audience (Vasudevan & Wissman, 2011). Luke et al. (2011) also point to the fact that "a wave of research on youth and digital culture has documented new patterns of agency, identity, and exchange, remixing and reappropriation of texts" (para. 4). Students are now interacting with new text-types and in new ways, which suggests that the skills required to be fully-literate have evolved greatly and include new approaches to authorship and text-interaction.

Visual Literacy

McCloud (1993) argues that our culture is increasingly becoming symbol oriented, and within the twenty-first century, visuals and icons can serve as the foundation for the idea of universal communication. As is mentioned in global literacy conversations, and elsewhere in this paper, the idea of literacy no longer refers to the process of making meaning in one way or from one type of text; now we acknowledge the idea of multiple literacies (Eisner, 1998). Kress and Van Leeuwen (1996) suggest that the analysis of visuals and visual communication should be a vital portion of literacy in all disciplines. Eisner (1998) takes the idea a step further by suggesting that the cognitive development of students is affected by all forms of representation:

> What we ought to be developing in our schools is not simply a narrow array of
> literacy skills limited to a restrictive range of meaning systems, but a spectrum of
> litera*cies* that will enable students to participate in, enjoy, and find meaning in the

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major forms through which meaning has been constituted. (p. 12; italics in

original)

In similar fashion, Albers, Vasquez, and Harste (2011) point to the fact that

scholars have argued that "the ability to understand how visual literacy influences and

constitutes one's cultural and linguistic experiences must be part of the school's everyday

literacy practices" (para. 1). Language is now but only one mode through which meaning

is conveyed and created by "readers" (Eisner, 1998). Other scholars promote this idea as

well. Albers et al. (2011) suggests the expansion of knowledge forms, from traditional

verbal and written language to a much more inclusive idea of communication (e.g.,

visuals, musical, dramatic, etc. texts). This expansion may in fact allow students a

broader range of text and media options to better express themselves and demonstrate

learning and knowledge (Albers et al., 2011).

Visuals and Visualization in Education

Visualization has been a part of over 25 years of research into reading

comprehension strategies (Park, 2012). Visuals offer a wealth of opportunities and

potential benefits for reading instruction and students. Bruce (2011) suggests that visuals

like graphic organizers and storyboards and images aid in visualizing texts and serve as

scaffolds for students' interpretation of texts. Likewise, Park notes the importance of

having students visualize the texts they read, as visualization can serve to bridge reading

instruction and critical literacy, which in turn can lead to learning. "As the data illustrate,

visualizing can support students to becoming more wide awake…It can also become a

springboard for discussions on literary character[s]…and for inquiry into readers'

theories" (p. 637).

Over the last few decades, "the increasing immersion of society in visual images from advertising/marketing have all contributed to a decrease in the 'verbocentric' quality of Western society" (Sipe, 2011, p. 246). Zoss (2009) thus argues that a stark contrast exists between the traditional text-over-visual reading adolescents do in school and the rich reading experiences, combining image and language, they engage in outside of school. For students (and for teachers and society as a whole), images play a central and significant role outside school walls (Kress & Van Leeuwen, 1996). "Literacy teachers can use [these] visual images more often and strategically to bridge reading comprehension and critical literacy" (Park, 2012, p. 638). In fact, Kress and Van Leeuwen argue the fully literate person has the ability to treat composition (whether writing or reading) as a visual medium.

Research Questions

For the purposes of this study, the following research questions were addressed through the study design:

1. Is there an effect of method of instruction on students' reading comprehension test scores?
2. Is there an effect of grade level on students' reading comprehension test scores?
3. Is there an effect of gender on students' reading comprehension test scores?
4. Is there an interaction between method of instruction, grade level, and gender on students' reading comprehension test scores?
5. What are student perceptions of working with graphic texts? Additionally, what are teachers' observations and perceptions of students working with graphic texts?

Research Design

This study utilized a factorial design to examine the effects of a graphic novel on students' reading comprehension levels. There were three factors (independent variables) used in this study, each with multiple levels. The first factor, method of instruction, has three levels: control (C), experimental group 1 (E_1) and experimental group 2 (E_2). The

second factor, grade level has four levels: 9th grade, 10th grade, 11th grade, and 12th grade. The third factor, gender has two levels: male and female.

Procedures

The purpose of this study was to investigate the effects of graphic novels on students' reading comprehension. To assess reading comprehension levels, and to provide the dependent variable, a reading comprehension test was used at the conclusion of an instructional unit, developed by the researcher, on Edgar Allan Poe and his writings. Students were provided with texts corresponding to their grouping within Method of Instruction. Students in the Control group received the traditional text only. Students in group E_1 received the graphic adaptation only. Students in group E_2 received both the graphic and traditional versions of the text.

Data Analysis

Data were analyzed using a three-way (3x4x2) Analysis of Variance to test for main effects of each factor as well as any interactions between individual factors. When factor interactions were found, data were tested for simple effects. A Tukey test was conducted to determine where individual differences in means lie.

A supplemental qualitative analysis was conducted as well to provide situational and contextual information about the study. Randomly selected students from groups E_1 and E_2 were interviewed at the conclusion of the study. Student interviews were designed to elicit students' perceptions of their experiences interacting with the graphic text. Students selected from group E_2 were asked four additional questions, to examine their experiences interacting with both text types. Similarly, all teachers involved in this

study were interviewed at the conclusion of the study to elicit teachers' perceptions of student engagement and experiences interacting with the graphic text.

Design Rationale

It is important for all design choices made with regard to a given study to be justified and reasonable and to offer a useful look at the problem under investigation. A rationale for the design utilized for this study is provided below.

Within this study, I tested for two overall things: main effects of each factor, and any interactions between factors. Again, the factors used within this study are (1) method of instruction, (2) grade level, and (3) gender. It was important to test for each of these for a variety of reasons.

First, the three methods of instruction used are purposeful. The group receiving only the traditional text provided a control group against which to test the experimental methods. The group receiving only the graphic text allowed me to examine the comprehension benefits these texts can offer on their own. The group receiving both text types (traditional and graphic) allowed me to investigate the effects of the two text types supplementing one another.

Second, it was important to include students from all high school grade levels for this study. Both reading and comprehending are practiced skills. The popular belief is that students become more proficient readers and more adept at comprehending texts as they continue to practice and receive instruction. This portion of the research design allowed me to examine the effects of the graphic texts on comprehension at all four levels of a traditional high school student's high school career.

Third, gender differences provided an additional useful lens for this study. One stereotype of graphic novels is that they are "boy" books. This, no doubt, stems from the birth of graphic novels from super hero and other stereotypical male constructs. Despite the stereotype of being books only boys like, graphic novels often engage girls as well. The concept of gender is not static; it is, in fact, fluid and varying. Including gender allowed me to further examine this notion within the context of this study, within the context of adaptations of canonical literature, and within the context of traditional literature instruction. This exploration of gender can be useful to English teachers and to adolescents by potentially breaking down this stereotype and by helping teachers to better understand the types of literature that may appeal to and connect with their students.

Finally, because there are so many contributing and confounding factors with regard to reading and learning, it was important to examine possible interactions between the factors. There is ultimately very limited research on graphic novels and reading comprehension. Thus, this design was intended to examine all the possibilities and contexts/relationships at play in high school English classrooms—across all grade levels.

Definitions of Terms

Definitions for Reading Comprehension

Although Zhao and Zhu (2012) define reading comprehension as "an interactive process which works between the text and reader's background knowledge" (p. 113), and Davey (1988) defined comprehension as "the construction of an adequate knowledge representation of text, based upon the interaction between reader variables and text cues" (p. 74), Kintsch (2005) points out that the concept of comprehension is in fact quite vague. The point is that there seems to be no one commonly used definition of reading

comprehension, which could in part be due to the recent evolution of the concept of literacy—an increased number and type of and interactions with 'texts.'

Definitions for Literacy

Definitions of multiple types of literacy are supplied below, as much of the argument for graphic novels in the classroom centers on the dichotomy between traditional and twenty-first century literacy concepts.

- New Literacies—"New literacy…involves multiple forms of both text and media, including books, videos, life experiences, Web sites, CD-ROMs, illustrations, and the like" (Fisher et al., 2011, para. 16).

- Multimodal Literacy—The term multimodal literacy encompasses "a change in the literacy landscape that puts images, gestures, music, movement, animation, and other representational modes on equal footing with language" (Siegel, 2006, p. 65).

- Visual Literacy—"the ability to interpret, negotiate, and make meaning from information presented in the form of an image, as well as to produce visual messages" (Bakis, 2012, p. 7).

- Critical Literacy—"the capacity to 'speak back' to written texts" and "the capacity to 'read the world'" (Park, 2012, p. 629).

Definitions for Graphic Novels

As is often mentioned, the terms graphic novel, comic, and sequential art are often used in parallel fashion as synonyms to describe the same type of text. However, slight differences in denotation are noted. Thus, definitions for each are provided below.

- Graphic Novel—Fisher and Frey (2011) define the graphic novel as "a story that uses sequential art, has a beginning, middle, and end, and has a binding (p. 2). This very surface level definition is taken a bit further by noting that graphic novels are not simply fictional stories, but also include many other genres, such as informational, biographical, memoir, etc. (Tabachnick, 2009; Fisher & Frey, 2011). Graphic novels are a dynamic format, where both images and words work together to deliver enjoyment and meaning to readers (Bucher & Manning, 2004).

- Comic—McCloud (1993) defines comics as "juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer" (p. 9). Hatfield (2009) discusses comics and their meaning as linked to societal change by suggesting that comics today are best defined through an evolving historical lens, focused by the changing nature of image and text in culture and commerce.

- Sequential Art—Yet another term often used when discussing graphic texts is the term sequential art, defined by Carter (2009) as simply "images placed in sequence to tell a story" (p. 68).

Summary

It should be evident that the ways in which students read and interact with texts have changed, are changing, and will continue to change. These changes must inform not only

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pedagogical decisions, but policy decisions as well. At the secondary level, students are required to meet the CCSS, but nowhere in the document does it mention how students should be taught to meet these standards. The bulk—in fact, the whole of—reading comprehension strategy instruction is done at the elementary level. However, as students progress through the ranks of the school system and in turn engage with ever-increasingly complex texts, many students require assistance meeting both the teacher's and society's, often contrasting, definitions of literacy.

One proposed reading comprehension strategy is the use of graphic novels as supplemental materials and to assist students in developing background knowledge and schemata, as well as in connecting and transacting with texts.

In this chapter I offered a few of my own experiences reading and teaching with graphic novels. I then discussed the CCSS, new concepts of literacy, and student reading issues as contextual pieces for the problem being examined in this study, which consists of, among others, comprehension levels and problems, a lack of twenty-first century skills being taught in schools, a lack of research on graphic novels, and the importance of being taught to read visuals. Five main research questions along with definitions of all relevant terms were also provided.

CHAPTER TWO:
REVIEW OF THE LITERATURE

Introduction

To date, little empirical research on graphic novels in education has been published, less still on graphic novels in the secondary English classroom. Even less research is available examining graphic novels and reading comprehension or using quantitative methodologies.

This chapter provides the philosophical, theoretical, and conceptual frameworks for the current study. A review of the available literature for reading comprehension, reading visuals, and graphic novels is also provided. From this review, a significant gap in the literature surrounding the use of and possible benefits from graphic novels in the English classroom (secondary or otherwise) becomes apparent, demonstrating a need for this study—and numerous others.

Philosophical Framework

Pragmatism

This study incorporated pragmatic assumptions and beliefs about both democratic principles and literacy research. The following section provides a broad overview of pragmatism, its origins, and its most basic tenets. A brief context for pragmatism and education is provided as well. And finally, pragmatism is discussed in terms of a lens for inquiry in general as well as a more focused perspective for literacy research.

An Overview

Pragmatism is a branch of philosophy that was introduced over a century ago by William James (Dillon, O'Brien, & Heilman, 2000). Cherryholmes (1992) argues that there are many versions of Pragmatism, with many interpretations and emphases. One

misconception involving pragmatism has to do with the search for reality; pragmatists are not always attempting to gain knowledge that explains "reality." Instead the pragmatic stance "asserts that conducting inquiry to useful ends takes precedence over finding ways to defend one's epistemology" (Dillon et al., 2000, p. 17). A second, and quite similar, misconception, as Dewey pointed out, is that pragmatism is in search of *Truth*. For pragmatists, truth, if that is in fact an accurate term to use (because of the heavy connotation), is contextual and situational and not universal (Dillon et al., 2000). Pragmatists believe in the semiotic power of the community, where meaning-making can take place with iconic and symbolic forms and where ideas are based on experience (Dillon et al, 2000; Taylor, 2011). One use of pragmatism Dillon et al. point out is its ability to foster Dewey's broadly defined idea of a democratic life, "the creation of a freer and more humane experience" (p. 18).

Pragmatism and Education

A pragmatic framework of instruction allows both teachers and researchers to create a variety of learning environments that can foster an increase in reading proficiency or more broadly stated, student achievement (Ash, 2002). This study utilized multiple text-types and methods of instruction, as well as the varying levels of gender and academic level, to investigate the effects of a variety of learning contexts. This variety of learning environments can take many forms, depending on situation, context, and individual students. Within education, pragmatists recognize the important effect and influence social situations have on both the broad level of education and the more focused level of the classroom and individual student (Dillon et al., 2000). Pragmatic educators are interested in approaching research and pedagogy in practical, useful ways.

Ash (2002) describes one of the values of pragmatism as "the synthesis of varied, and sometimes conflicting, ideas into useful new theories and practices" (para. 4). In similar pragmatic fashion, this study took a practical approach to the topic of reading comprehension by introducing a relatively new type of text into traditional instruction.

Pragmatism and Inquiry

Cherryholmes (1992) states that pragmatic research, traditionally, has sought to clarify meaning. For pragmatists, the values of human actions are more important than a description of those actions. Cherryholmes further argues that, in the pragmatic tradition, "scientific research always occurs in social, historical, political, and other contexts," (p. 14) while always assuming the social situation of people and education. Pragmatism, as a stance on inquiry, is not about getting results, but is instead an orientation more interested in consequences (whether positive or negative), such as the potential benefits and/or constraints associated with graphic novels in the English classroom, than metaphysical principles (Dillon et al., 2000). "Pragmatic choices about what to research and how to go about it are conditioned by where we want to go in the broadest of sense" (Cherryholmes, 1992, p. 13). Pragmatists thus argue that inquiry would "be better off if we stopped asking questions about laws of nature and what is really 'real' and devoted more attention to the ways of life we are choosing and living when we ask the questions we ask" (p. 16).

Pragmatism and Literacy Research

Dillon, O'Brien, and Heilman (2000) argue, "the field of literacy, like the broader field of education, has not embraced pragmatism because it has been misunderstood and ill defined" (p. 12). Pragmatists and those who write about pragmatism in education posit that pragmatism requires us to rethink traditional paradigm affiliations, how we conduct

literacy research and whom we involve in the process. Likewise, pragmatists recognize their moral obligation in their selection of research problems (Ash, 2002; Dillon et al., 2000). Cherryholmes (1992) describes a pragmatic approach to reading research as beginning with a broad review of research and literature, indicating support for a wide variety of approaches. Within this starting point, "pragmatists willingly concede that reading can be successfully taught in terms of raising achievement test scores by any one of a variety of ways" (p. 14). The key here is the term 'variety,' suggesting multiple avenues for helping students become successful readers. It is within this idea of multiple avenues that this study was positioned. Graphic novels fall outside the norm of traditional literature, but represent one yet untapped approach to improving reading comprehension and creating literate and able life-long readers.

Taylor (2011) describes pragmatism, within reading research, as being aligned with Rosenblatt's transactional theory (discussed in detail later in this chapter) in that individual readers are able to exercise semiotic power by transacting with text of any kind in individual ways. This transaction is dialogic in nature, and meaning-making occurs in both interpersonal and intrapersonal ways. The semiotic dialogue is reflexive, is genre appropriate, and can be carried out multimodally. Dillon et al. (2000) state that a pragmatic stance requires a reconsideration of research traditions and methodologies; "a pragmatic stance values communities engaged in literacy research who focus on solving problems…with a promise of useful findings" (pp. 23-24). Additionally, a pragmatic focus of reading instruction "is on the kind of community he or she wishes to promote and the kind of reading and readers such a community would value" (Cherryholmes, 1992, p. 14).

To sum up the pragmatic perspective of literacy research, I leave the reader with a quotation from Dillon et al. (2000) that I feel encompasses this concept. "A pragmatic perspective offers literacy researchers a way to approach…the important work of defining the literacy problems we need to solve, determining how best to solve these problems, and ensuring that results inform practice" (p. 20).

Theoretical Framework

This study was based on the idea that multiple types of literature (e.g., traditional and graphic texts) can aid students in making connections to the texts they read and, as a by-product, making personal meaning from those connections. Two theoretical lenses were used, Schema Theory and Transactional Theory, both Constructivist models, providing further framework and underpinning for the current study.

Constructivism

Constructivism suggests that knowledge is constructed actively by individuals and states that learning can occur when a connection is made between new and prior knowledge. Tracey and Morrow (2012) list three major components of Constructivism. First, "learning takes place through internal mechanisms" (p. 58). Second, learning is a result of inferencing. Third, hypothesis-testing experiences (e.g., using context clues and decoding) can lead to learning. Constructivism is a learning theory, and for the purposes of this study a reading lens, which houses both Schema Theory and Transactional Theory.

In the design of constructivist learning environments, five foundations and assumptions intersect: psychological, pedagogical, cultural, pragmatic, and technological. The overlap of these intersections should drive teachers' instructional choices. Hannafin,

Hannafin, Land, and Oliver (1997) echo this point by suggesting, "methods consistent with constructivist foundations and assumptions typically emphasize…interactions to model or scaffold understanding and performance" (p. 110). The authors go on to state that using anchors to aid with instruction can serve as useful scaffolds and is grounded in Constructivist thought. "Anchored contexts support complex and ill-structured problems wherein learners generate new knowledge and subproblems as they determine how and when knowledge is used" (p. 109).

Schema Theory

Background

As mentioned above, Schema Theory is a Constructivist theory that helps to explain how learners actively create and use knowledge (Tracey & Morrow, 2012). The concept of schema was first used in theories developed by Kant and Piaget. However, the term schema was first used in education in 1932 by Bartlett (McVee, Dunsmore, & Gavelek, 2005; Tracey & Morrow, 2012). For Bartlett, "schemas were necessary to explain the constitutive role of culturally organized experience in individual sense making" (McVee et al., 2005, p. 535). Beginning in the 1970s and 1980s, schema theory was a force in reading model development and heavily influenced research on both learning and reading comprehension (McVee et al., 2005).

Schema Defined

The existing definitions of schema vary considerably in wording and complexity, but it quickly becomes easy to see that they all point in the same theoretical direction. For the purposes of this study, two definitions, which fairly represent those available, were used as foundational support. Little and Box (2011) offer a more complex

definition of the cognitive nature of schema by describing it as an "elaborate network or storage system of abstract mental structures that represent an individual's understanding of concepts related to experiences and knowledge" (p. 24). The second definition of schema used here provides a much more user-friendly and layman's description. Li et al. (2007) define schema as "the prior knowledge gained through experiences stored in one's mind…an abstract structure of knowledge" (p. 18).

Schema Process

Schema Theory suggests that people organize all knowledge into individualized knowledge structures often called schemata or schemas. These knowledge structures range from non-existent to partial to elaborate. "The more elaborated an individual's schema for any topic…, the more easily he or she will be able to learn new information in that topic area" (Tracey & Morrow, 2012, p. 62). A learner's existing schema, as well as any differences within, have a huge impact on the learning of any content or concept. Without existing schemata (or schemas), learning new information becomes extremely difficult. New schema can be created or existing schema changed, however, helping learners overcome difficulties. One way in which these changes can occur is through a process called restructuring, where "a new schemata must be created by the learner because the old one is no longer sufficient" (Tracey & Morrow, 2012, p. 63) or is perhaps non-existent. For the purposes of this study, the ability of graphic novels to assist adolescent readers with schema alteration and schema construction was explored.

Reading Schema

The concept of Schema Theory and schema development, as related to vocabulary development and reading comprehension, has been validated by multiple research studies

and is useful in helping researchers and teachers to better understand the role of background knowledge in the comprehension process (Little & Box, 2011; McVee et al., 2005; Li et al., 2007). Moreover, "research by schema theorists indicates that abstract concepts are best understood after a prior foundation of concrete, relevant information [e.g., the images and panel structure of the graphic novel] related to the major concepts to be studied has been established" (Little & Box, 2011, p. 25); in other words—readers must have adequate and appropriate background knowledge. Researchers (Li, Wu, & Wang, 2007; Zhao & Zhu, 2012; and others) have further described this concept of applying background or prior knowledge to learning, and specifically to comprehending what one reads, by describing three types of schema used during the learning process. 'Linguistic schemata' is described as having an existing proficiency with language. 'Formal schemata' constitutes the background knowledge of organizational and rhetorical structures of texts. And 'content schemata' includes the background knowledge of the content and topic of a text.

Describing the three types of schema, Tracey & Morrow (2012) note, "readers have schemata for reading processes (e.g., decoding, skimming, inferencing, and summarizing) and for different types of text structures (e.g., narrative texts, expository texts)" (p.63). The authors further state, "differences in readers' schemata in these realms are related to differences in comprehension" (p. 63). Readers' existing schemata, as well as their level of schemata development, for text structures and topics will greatly influence reading comprehension. Similarly, without these existing structures, reading comprehension cannot occur (Tracey & Morrow, 2012). Within this study, graphic

novels, where words and images supplement one another, provided a structure and a scaffold to help students over the barrier of schema and toward comprehension.

As part of the reading process, students actively build and revise their existing schemata. Likewise, existing schemata are used and modified to assist students with new reading experiences. When these existing schemata are inadequate for the reading task, students can experience problems (Tracey & Morrow, 2012). Little and Box (2011) summarize the importance of existing and adequate reading schemata for students:

> It is well known that students who have not been exposed to a writer's style, the conceptual vocabulary imbedded in the text or objects or information directly related to comprehending the text on various levels of knowledge, will indeed tend to struggle with vocabulary recognition and/or obtain an incomplete comprehension of the material being read. (p. 25)

One's prior knowledge about topics, concepts, experiences and vocabulary found in a specific text significantly influences meaning made.

When students lack the prerequisite schema structures and are unable to create meaning from a text, researchers suggest that learning scaffolds can serve as catalysts for schema construction. Little and Box (2011) note the benefit of using visual and graphic aids in connecting prior knowledge to new information. These scaffolds can be utilized as pre-reading, during-reading, or post-reading schema-building activities to help students combine new textual information with their own background knowledge (Zhao & Zhu, 2012).

Transactional Theory

Background

       The Transactional Theory of reading was developed by Louise Rosenblatt and suggests that "reading is a transaction, a two-way process, involving a reader and a text at a particular time" (Rosenblatt, 2001, p. 268). While reading, students (and readers of all ages and levels) can develop transactional relationships with not only the texts they read, but also the environments they read about. Texts can in fact both stimulate and cultivate intense personal experiences for readers. Transactional Theory is, at its core, a Constructivist theory, which "further extended the application of Schema Theory to the field of reading" (Tracey & Morrow, 2012, p. 65). "Based on the idea that every individual is unique with regard to what constitutes his or her schema in any particular area, Rosenblatt argued that every reading experience is therefore unique to each individual as well" (p. 65).

       Transactional Theory challenges the previous belief that meaning is pre-ordained. Damico, Campano, and Harste (2009) argue that Rosenblatt "has helped us better understand the ways individual readers actively construct meaning with texts, especially literary texts" (p. 177). This idea of a transaction between reader and literature "opened a pathway where a proliferation of meanings, rather than single or fixed meanings, could become a standard approach to literary interpretation or textual response" (p. 178). The authors further argue that Transactional Theory is currently even more relevant due to the educational era of accountability.

The Process

Rosenblatt and her Transactional Theory argued that both the text and the reader work interdependently to co-create meaning (Damico et al., 2009). Within Rosenblatt's theory, the process of reading involves a two-way transaction between the reader and the text. Each transaction is specific to time, setting, context, and circumstance (Damico et al., 2009; Rosenblatt, 2001). During the transactional process, "the experiences, emotions, and attitudes of individual readers fuse with a text" (Damico et al., 2009, p. 178). In her early work, Rosenblatt (1938) discusses this transaction created between reader and text:

> The special meaning, and more particularly, the submerged associations that these words and images have for the individual reader will largely determine what the work communicates to him. The reader brings to the work personality traits, memories of past events, present needs and preoccupations, a particular mood of the moment, and a particular physical condition. These and many other elements in a never-to-be-duplicated combination determine his response to the peculiar contribution of the text. (pp. 30-31)

The Reader

Transactional Theory states that readers respond to texts in two main ways: a fact-oriented, efferent response and a personally-based aesthetic response. One argument for fostering these responses in adolescents is to help them make connections between their lives and the text (Tracey & Morrow, 2012), which connects well with and further promotes the importance of background knowledge in Schema Theory. Rosenblatt (2001) describes this herself by stating, "the reader, bringing past experience of language

and of the world to the task, sets up tentative notions of a subject, of some framework into which to fit the ideas as the words unfurl" (p. 268).

The reader's mental stance—a conscious decision made early in the reading process—also affects how they interact with a given text. That said, the overall interaction between reader and text can be affected in multiple ways and does not allow for a simple, one-size-fits-all remedy. Echoing this idea, Rosenblatt (2001) suggests, "reading…is not an encapsulated skill that can be added on like a splint to an arm. [I]t…draws on the whole person's past transactions with the environment" (p. 273). In fact, Fisher et al. (2011) describe comprehension as an emerging and gradual process where readers utilize their transactions with texts to construct meaning. "When these transactions with environments and texts are lived through for their own sake, they will probably have as by-products the educational, informative, social, and moral values for which literature is often praised" (p. 275).

Conceptual Framework

Reading Comprehension

Introduction

For the purposes of this study, five major factors of reading comprehension found in the literature are used and discussed. First, vocabulary, which includes decoding, is an important factor. Second, background knowledge affects reading comprehension. Third, content schema, including content and subject matter as well as topic and literary elements of a text, is important to understanding what one reads. Fourth, formal schema for organizational and rhetorical structures is important for reading. And fifth, reader

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attributes (e.g., motivation and engagement, visualization and mental representation, strategy use, etc.) have a major effect on comprehension.

In an effort to be representative of the whole of reading comprehension discourse, I examined a variety of publication types, including reports of research, reviews of the literature, books, technical reports, and theoretical publications. Table 2.1 provides a summary of the components of reading comprehension found from my survey of the literature. Similar components were collapsed and combined into like categories, from an initial ten to the seven presented below, for purposes of clarity and structure.

Table 2.1—Components of Reading Comprehension

	Vocabulary (including decoding)	Background/Prior Knowledge	Content Schema	Formal Schema (including structural, linguistic, and extra-textual schema)	Inferencing (from content and/or context)	Fluency	Reader Attributes (intellect, motivation, engagement, visualization, strategy use, etc.)	Publication Type
Afflerback, Pearson, & Paris (2008)	✓	✓	✓					Review of Literature
Alderson (2000)	✓	✓	✓	✓	✓	✓	✓	Book
Baumann (2009)	✓							Research
Canney & Winograd (1979)	✓	✓	✓	✓		✓	✓	Technical Report
Concannon-Gibney & Murphy (2012)					✓		✓	Research
Crain-Thoreson, Lippman, & McClendon-Magnuson (1997)		✓					✓	Research
Davey (1988)		✓					✓	Research
Davis (1968)	✓		✓	✓	✓			Research
Fisher, Lapp, & Frey (2011)			✓				✓	Research
Golinkoff (1975)	✓			✓				Review of Literature
Hoffman (2009)	✓			✓		✓		Review of Literature
Kintsch (2005)		✓						Review of Literature
Leslie & Caldwell (2009)	✓		✓		✓		✓	Review of Literature
Miller & Faircloth (2009)							✓	Review of Literature
Hall (1989)	✓	✓		✓				Review of Literature
Biancarosa & Snow (2006)							✓	Technical Report
Torgesen (2006)	✓		✓	✓		✓	✓	Review of Literature
Van den Broek & Espin (2012)	✓	✓	✓		✓		✓	Review of Literature
Wu & Hu (2007)	✓		✓	✓			✓	Research
Zhao & Zhu (2012)	✓	✓					✓	Research
Totals	13	9	9	8	5	4	13	

Vocabulary and Reading Comprehension

Wu and Hu (2007) found vocabulary to be a major factor in reading comprehension. Going a step further, Baumann (2009) describes the relationship between vocabulary and reading comprehension as complex. For a reader to comprehend the texts he or she reads, attention to vocabulary and vocabulary development is important, especially in education. In order to enhance comprehension, vocabulary programs must be multifaceted, using multiple approaches. Baumann (2009) goes on to state, "there is considerable evidence that teaching students to develop their ability to use context clues holds promise for enhancing students' ability to acquire *many* word meanings" (p. 332; italics in original). Because written content is not always rich and can, in fact, be misleading, Baumann also points to the important relationship between independent and wide reading and vocabulary attainment. Echoing this point, he also argues that prior research points to the ability of multi-modal texts to aid in vocabulary acquisition.

Background Knowledge and Reading Comprehension

As cognitive and constructivist researchers would likely point out, the ability to comprehend what one reads, without any associated background knowledge, would be quite unlikely, if not impossible. This idea of background knowledge is multifaceted and is considerably more complicated than the very finite term 'knowledge' might suggest. For the purposes of this study, background knowledge will be looked at as consisting of topical knowledge and appropriate schema (described in greater detail in the following section). Hall (1989) describes prior knowledge as one of the most significant factors of the reading comprehension process. Similarly, Davey (1988) found that "prior

knowledge…can contribute to valid demonstrations of reading comprehension" (p. 74).

In order to increase reading comprehension, the logical place to start would be increasing

prior knowledge.

Schema and Reading Comprehension

"The process of comprehension is guided by the principle that every input is

mapped against some existing schema and that all aspects of that schema must be

compatible with the input information" (Zhao & Zhu, 2012, p. 113). Previous research

has found schema, both content and formal, to be yet another major factor in reading

comprehension. "Content schema and formal schema combine together to convey

information in most of the reading materials, affecting readers' comprehension

simultaneously and interactively" (Wu & Hu, 2007, p. 17). Hall (1989) discussed the

importance of schema by stating, "the schema a reader develops concerning what is in a

story and propositions underlying sentences in a story play crucial roles in developing

comprehension skills" (p. 160).

Content Schema

Content schema make up the existing knowledge structures readers have for

content or subject matter, as well as the topic, setting, and elements of a given text.

Content schema will obviously differ somewhat from class to class, topic to topic, and

text to text. For example, a reader will have a specific set of knowledge structures

(content schema) for a contemporary short story, with a teenage protagonist, set in an

American town, and read in an eleventh-grade American Literature class. Zhao and Zhu

(2012) further describe this connection between schema and comprehension by writing,

"the reading process…involves identification of genre, formal structure and topic, all of

which activate schemata and allow readers to comprehend the text" (p. 113). These individual variables such as genre or topic, within text type and content schema, play important roles in all reading comprehension (Alderson, 2000).

Formal Schema

For this study, formal schema includes structural, linguistic, and extra-textual components that make up the organizational and rhetorical structures of texts. Canney & Winograd, (1979) posit that inappropriate schema for language and structure can be one contributing factor to comprehension issues in poor or struggling readers. Knowledge of meanings and semantic relationships as well as knowledge of letters, words, and the social uses of language aid in reading comprehension (Fisher et al., 2011). Alderson (2000) argues that reading requires the access of existing schema, and comprehension is connected to the individual, formal knowledge structures of each reader.

Schema Development

Non-existent, or lack of, schema and even inappropriate existing schema do not mean that comprehension will never occur. Schema can be re-structured, adjusted, and even created in whole. Canney & Winograd (1979) suggest that schema can be developed by increasing students' interest in reading and by moving toward student-centered activities. The authors go on to state that "comprehension instruction that includes numerous concrete examples of new concepts…and that focuses students' attention on the content of the text prior to, during, and after reading may compel lower comprehenders to accommodate behaviors into their schemata for reading" (p. 45).

Reader Attributes

Motivation/Engagement

Much motivational research has shown a relationship between performance and an individual's self-efficacy with a given task (Miller & Faircloth, 2009). "Appreciation for learning can be supported through an optimal match between learning experiences and students' individual abilities, backgrounds, values, and interests, which fuels their ability to identify with learning activities" (p. 316). Engagement, and hence motivation, can be encouraged and fostered in all readers. Motivated readers can be re-engaged. Non-motivated readers can have their own self-confidence redefined and added-to by experiencing success in a variety of literacy activities. Torgesen (2006), for example, suggests allowing students choice and using interesting texts to engage students and build confidence and fluency.

Visualization

Recent advances in understanding comprehension processes point to visualization and mental representation as important factors. In fact, most reading comprehension theories place emphasis on readers constructing coherent text representations (van den Broek & Espin, 2012). To successfully comprehend a text, text elements are cognitively connected via semantic relationships and integrated into a coherent and mentally visualized whole. This process of visualizing or mentally representing takes place continuously as readers advance through a given text (van den Broek & Espin, 2012). To aid readers with this process, Davis (1968) suggests the use of visual aids as examples to familiarize students with concepts and word meanings.

Strategy Use

There is no shortage of reading comprehension strategies within the literature and educational discourse. A comprehensive listing here is outside the scope of this paper. However, these myriad strategies can be thought of as one cognitive processing category: strategy use, where readers have the metacognitive ability to determine when comprehension breaks down and proceed through the subsequent steps to fix the problem or disconnect. With that in mind for the reader, Fisher et al. (2011) define the goal of comprehension instruction as students' use of "cognitive strategies with automaticity, applying them authentically as they read" (p. 5). The educational concept of teaching comprehension instruction in schools has become a rising trend, especially given the high-stakes testing and accountability environment in U.S. schools. More and more research has been conducted looking at the connection between explicit instruction of reading strategies and reading comprehension (test scores), a large amount in the last decade or so, since the passage of No Child Left Behind (NCLB). Concannon-Gibney and Murphy (2012) point out that various studies suggest that a student's reading comprehension can improve through explicit instruction of reading strategies.

Reading Visuals

One cannot discuss the use of graphic novels in education, with their heavy emphasis on images as narrative, without first exploring the concept of "reading" visuals. The following section provides an overview of the literature available on the subject and attempts to approach visuals from an education perspective. First a brief background is provided, followed by a summary of noted benefits, and finally a break-down of the theories and perspectives on reading visuals available in literature across the board.

A Brief Background on Visuals

Eisner (1998) promotes the study and importance of visuals by arguing that "the eye is a part of the mind" and "not all that we know, we can say" (p. 64). The concept of visual images as narrative is not a new one at all (Sipe, 2011). Actually, Zoss (2009) points out that the idea of including visuals in literacy classes dates all the way back the The Committee of Ten in 1892. In the early 1990s, McCloud developed a visual language vocabulary, drawing attention to the study of visuals and making communication with and discussion of visuals easier (Brooks, 2009). Regardless of the attention over the previous two decades, the idea of visual literacy is still a relatively unexplored topic in contemporary, post NCLB, society.

Suhor (1992) noted that all school subjects, even those yet to be developed, are implicitly driven by semiotics (i.e., the study of signs), whether the idea is openly acknowledged by educators and policy makers or not, as the term *subject* can be seen as an organization of comprehensive signs. This suggests a rethinking of literacy and education (both language and communication working together) is long overdue. Kress and Van Leeuwen (1996) argue that traditional forms of language and visuals both express meaning and offer ways of communicating in society. It is by their shared cultural structures that congruence between the two forms of communication becomes apparent.

The reality in education and literacy instruction, however, is that traditionally, a broad view of what it means to be fully literate is rarely promoted at the policy level, and as a result at the classroom level. Because of this lack of attention to expanded literacy and the emergence of visual literacy, education produced what Kress and Van Leeuwen

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suggest are illiterates, at least with regard to visual literacy. While that seems very straight forward, the problem is not that simple. The opposition is not necessarily to visual media and visual literacy, but to using visual media in situations where they are perceived to be replacements for, even alternatives to, the traditional literacy practices promoted in schools (Kress & Van Leeuwen, 1996)

Benefits of Visuals

Integrating visual art into the literacy curriculum expands the ways in which students can learn by supplementing and complementing traditional literacy instruction (Zoss, 2009). Kress and Van Leeuwen (1996) make this same point by reminding educators that the forms and levels of meaning construction available from both traditional and visual language, in several ways, overlap. A good example of this overlap can be seen in the most basic role of language: representation. Both traditional and visual language have ideational functions, where they represent the world around us (Kress & Van Leeuwen, 1996). In fact, Sipe (2011) provides a taxonomy of word/picture relationships; from bottom to top, Sipe's taxonomy lists contradiction, counterpoint, enhancement, complementarity, and symmetry.

Eisner (1998) further discusses the relationship between words and images by suggesting that *all* abstract knowledge is dependent upon a reader's (or viewer's) ability to connect language and images. Much like traditional reading, "there are cueing systems within visual texts…that provide information regarding how, why and what students draw upon as they construct meaning" (Albers et al., 2011, para. 8). It is only by expanding our traditional boundaries of literacy approaches and beliefs that we can provide students the new perspectives and strategies necessary to be fully-literate global

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citizens (Serafini, 2011). "When we think about the arts not simply as objects that afford pleasure, but as forms that develop thinking skills and enlarge understanding, their significance as a part of our educational programs becomes clear" (Eisner, 1998, p. 64).

Visual Communication: Schools of Thought

The idea of visual literacy and reading visuals is not a new one. Visual communication has been important since cave men shared stories of mammoth killings and their communities' experiences as pictographs on cave walls. Visual communication has always been, throughout all of history, an important societal attribute. It has, however, taken until relatively recently for educational conversations surrounding visuals to both surface and be taken seriously in broad literacy discussions. Art educators like Eisner and design scholars like Kress and Van Leeuwen have shouted the importance of visuals to communication, literacy, and education since the 1990s. As mentioned previously, visuals were discussed in educational discourse as early as the turn of the 20th century. However, it wasn't until the twenty-first century, and the explosion in technology advancement, that those writing about literacy began to echo the call. And now, in 2013, we are unfortunately still attempting to justify the obvious.

The following section will share an overview of the literature on reading visuals. It is important to note that there seems to be no consensus on terminology, so I have separated this section into sub-sections, each organized around the terminology used by that (or that set) of authors. This lack of consensus probably stems from two main reasons: first, the concept is still fairly new; second, the authors writing about reading visuals represent an eclectic group indeed, ranging from art educators to literacy researchers to rhetoric experts to design and semiotics scholars, and several more. I use

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the same terminology as the original authors in an effort to be more comprehensive and to share more authentically how the concept of reading visuals appears in the broad range of literature. I also present it this way to demonstrate the lack of attention to reading visuals in educational research. The section below is separated into the following categories: visual literacy (a.k.a. reading visuals), visual rhetoric, semiotics, and reading comics.

Visual Literacy/Reading Visuals

Visual images function as synchronic media, where relationships and patterns are displayed simultaneously, which can facilitate comprehension. The ability to imagine what we read is key to constructing meaning. Therefore, images can play an important part in the ability to create meaning from a text (Eisner, 1998). Visual learning allows us to create meanings that are not always otherwise translatable. With that in mind, the meaning we are able to make is dependent upon the types of representation we have the ability to decode (Eisner, 1998).

Brooks (2009) points out that visual communication scholars and educators, such as McCloud, Horn, Kress and Van Leeuwen, and others "have all shown that visual communication and visual thinking involves an amalgamation of words, images, and shapes" (p. W233). Brooks also calls for more and sustained attention to the reading of visual-verbal texts and suggests they can benefit literacy study. While all texts are created through a series of purposeful choices affecting layout and readability, it should be obvious that visuals are read in different ways than are traditional texts. For example, the use of color, layout choices, and compositional structures, among many others,

provide the semantic features through which we interact and "read" (Brooks, 2009; Kress & Van Leeuwen, 1996).

This suggests the need for visual literacy instruction, providing students opportunities to interact with and make meaning from visual and visual-verbal texts. Echoing Eisner, Zoss (2009) notes the importance of multiple learning pathways for secondary students. This presents a rationale for approaching the teaching of literacy from a visual and semiotic perspective. Within this literacy approach, it is important to understand how visuals and words work together and apart to create meaning and how they can be used in classrooms. Images do have the ability to function without the aid of words, but being separated from words is not necessary for visual language and reading visuals (Brooks, 2009). Zoss (2009) then describes the integrated classroom as one where "the images are valued as texts to which questions are posed, into which investigations are launched, and with which relationships are transacted" (p. 186).

Visual Rhetoric

Hawhee & Messaris (2009) suggest that visual communication and rhetoric can be merged, allowing for a new approach to a very traditional concept. Within this merger of words and images, it helps to look at the contrasting nature of each, which ultimately demonstrates why they in fact share a symbiotic relationship. Words are by nature abstract; images on the other hand are quite concrete (Hawhee & Messaris, 2009; McCloud, 1993). Hence, words and images can supplement one another and foster communication. While images do mirror and supplement words, "they also perform an entirely different function that has no counterpart on the verbal side of the divide" (Hawhee & Messaris, 2009, p. 213). The dominant roles of visuals (movies,

advertisements, the Internet, etc.) in our society provide new perceptions and prime

viewers to make sense from and meaning of image sequences, as though they were

smaller pieces of larger stories. This can occur "even when those images are also

connected in more symbolic or conceptual ways" (p. 213).

Semiotics

Semiotics, at its most basic level, is the study of signs. Signs are, by their very

nature, aspects of language and are thus guided by syntactical rules allowing them to be

shared and understood. Suhor (1992) suggests, "analysis of the syntax of any non-

linguistic object, from an equation to a piece of sculpture, involves language" (p. 229).

These rule-governed signs manifest themselves in multiple forms and fashions. Suhor,

for example, lists three types of signs housed within the field of semiotics. Fist, symbols

make up the arbitrary relationships between any given symbol and what it stands for.

Second, icons are signs that resemble what they stand for. Third, indexes are signs that

serve as indicators of facts or conditions. The use of visuals, thus, runs the same

spectrum as verbal language. Suhor also notes three specific areas within the field of

semiotics that parallel traditional language: semantics, pragmatics, and syntactics.

Reading Comics

One of the benefits of comics is that they have the ability to focus attention on

specific ideas (McCloud, 1993). Comics are able to do this by utilizing what McCloud

calls "amplification through simplification" (p. 30). The abstraction done in cartooning is

not meant to eliminate details. Instead, images are stripped down to their essential

meanings, allowing artists to amplify that specific meaning in new ways that cannot be

achieved through realistic art. As has been mentioned previously and echoed throughout

literacy dialogue, images and words are rarely described as equal. "Writing and drawing are seen as separate disciplines, writers and artists as separate breeds" (p. 47). In comics, however, these differences are harmonious. While writing constitutes perceived information, where specialized knowledge is required to decode meaning, pictures and images are what McCloud terms 'received information,' where messages are instantaneous, and no specialized education is required.

Images and Learning

There is an extensive body of research examining the effects of images on learning. This existing research is foundational to the concept of learning through images rather than through words, but is outside the scope of this study. Similarly, there exists two decades of research on visual literacy in college and university English and computing publications. This topic, too, is worthy of mention, but is outside the scope of this paper. For those interested, however, in this body of work, see, for example, *College Composition and Communication* and *Computers and Writing*.

Graphic Novels

A History of Graphic Novel Scholarship

Compared to more traditional forms of literature and pedagogical practices, little has been published on graphic novels in the classroom. There are, however, several scholars arguing for the use of graphic texts and suggesting their usefulness to both teachers and students. With that said, graphic novels, comics, and sequential art (terms often used synonymously in the literature) are still in their infancy with regard to educational research. The purpose of this survey of literature is to examine relevant scholarship and to explore the benefits of using graphic novels in the English classroom.

Arguments for the Use of Graphic Novels

Struggling Readers

The use of graphic texts in the classroom holds potential benefits struggling readers. Students who consider themselves to be unsuccessful readers have been shown to experience successes with comics and graphic novels (Annett, 2008; Smetana, 2010). Many who struggle with reading do so because of a difficulty in visualizing the text (Smetana, 2010). By their very nature, graphic texts can assist students with this disconnect. Graphic novels can "teach [students] about how reading works and to develop their confidence for reading more challenging texts" (Bakis, 2012, p. 49). These texts can be powerful allies to students in becoming better readers and writers (Bakis, 2012).

Reading & Comprehension

In addition to struggling readers, graphic novels seem to offer help to all students in reading comprehension. Graphic novels require the same comprehension skills as traditional texts, given their use of text boxes and word bubbles, but they also require that readers have and use visual comprehension skills, including pragmatic features, motion, and use of panels (Rapp, 2012). "A chief benefit of using graphic novels is that the visual information can make complex information more understandable, especially when there is a gap in students' background knowledge" (Fisher & Frey, 2011, p. 4). Using graphic novels to read images and text in sequence can help students begin to understand their own active and constructive reading, as well as their metacognitive, processes (Bakis, 2012). "Expanding the perspectives students use to make sense of these

multimodal texts is an important part of comprehension instruction" (Serafini, 2011, p. 342).

Multiple Literacies

Because these texts are multimodal, they offer assistance in multiple literacy development. Students today encounter an ever-rising number of multimodal texts in their everyday lives (Tabachnick, 2009; Serafini, 2011). "Since the world today is full of multimedia and professional presentations that typically contain visual elements, it simply makes sense to prepare students to work with images as part of their developing language skill" (Bakis, 2012, p. 6). As a possible result of the changing nature of society and technology, much of what students read outside of school are multimodal texts (Serafini, 2011). Aside from students' outside-of-school lives, much of the material they read in school is evolving. Over the past few years, textbooks have begun to include an increasing amount of visual information (Fisher & Frey, 2011). With these things in mind, graphic novels offer a valuable form of literacy by fusing a variety of art and text and provide a valuable way to foster critical media literacy (Bucher & Manning, 2004; Bakis, 2012).

Engagement and Motivation

Over the past two decades, educators have steadily paid more attention to graphic texts in an effort to both engage and inspire readers, whether they are reluctant or motivated (Carter, 2009; Bakis, 2012). Graphic novels appeal to students because they are different from the traditional texts students encounter in classroom instruction and libraries (Smetana, 2010). Fisher and Frey (2011) suggest the use of graphic novels to expand literacy instruction, specifically in the secondary grades, in an effort to foster

engagement and comprehension in students. Moeller (2011) posits that graphic novels can potentially hold a high level of interest with many students and may encourage an appreciation of literature. In discussing her own classroom experiences, Bakis (2012) notes how graphic novels seemed to help her students begin to critically think about and discuss elements of classroom literature.

Misconceptions

Part of the problem holding graphic novels back from more mainstream use in the English classroom is the misconceptions noted in the literature. Carter (2009) suggests that teachers are misinformed about the potential of graphic novels in the classroom. It is a misconception to consider graphic novels as easy reading for several reasons. Graphic novels contain complex sentence structure and vocabulary. Because the words are fewer than in traditional texts, students must be able to make meaning from both limited text as well as visuals (Smetana, 2010). Some even argue that graphic novels are only for visual learners, but as Carter (2012) points out, "anyone who has sight is a visual learner" (p. viii). This concept of all students as visual learners is important because literacy today goes beyond just reading and writing; it also includes, among others, viewing and interpreting images (Carter, 2009; Fisher & Frey, 2011).

A Review of the Research

The criteria used to include studies in this literature review evolved and changed throughout the search. Initially, the goal was to search for and use only studies examining the effects of using graphic novels on students' reading comprehension. Not long into the search process, it became apparent that the content of this review had to change.

From the revised criteria, a total of twelve studies were found and included in this literature review. Because the overall topic was revised and expanded, a variety of studies are incorporated herein. This review of literature includes a range of topics pertaining to using graphic novels in an English classroom. A total of six distinct topics are discussed in the review: Multimodal Literacy, Reading Comprehension, Gender, Engagement, Narrative Creating, and Teacher Uses. Only two topics (Multimodal Literacy and Reading Comprehension) are covered in more than one study. Table 2.2 presents the number of studies by study topic.

Table 2.2—Studies of Graphic Novels in the Classroom

Study Topic	Number of Studies
Multimodal Literacy	5
Reading Comprehension	3
Gender	1
Engagement	1
Narrative Creation	1
Teacher Uses	1
Total Studies	12

In addition to the range of topics, both quantitative and qualitative studies were included. Most of the studies found (9 out of 12 in fact) are qualitative in nature. Two quantitative studies were found, exposing a significant gap in the literature. The final publication included was another literature review. While this is not a study, in the traditional sense, it is important to note that several findings are established. Because of this, and as a way to round out the topics, methodologies, and findings discussed in this review of literature, I made the decision to include this publication. The findings added new and useful information to this exploration. Table 2.3 lists each study title and methodology used.

Table 2.3—Studies by Methodology

Study Title/Author/Year	Methodology
A Case for Interruption in the Virtual English Classroom with the Graphic Novel American Born Chinese (Schieble, 2011)	Qualitative—Case Study
Adolescents and "Autographics": Reading and Writing Coming-Of Age Graphic Novels (Hughes et al., 2011)	Qualitative—Case Study
"Aren't These Boy Books?": High School Students' Readings of Gender in Graphic Novels (Moeller, 2011)	Qualitative—Focus Group and Individual Interviews
Graphic Novels and Multimodal Literacy: A Reader Response Study (Hammond, 2009)	Qualitative—Reader Response
Graphic Novel Gurus: Students with Learning Disabilities Enjoying Real Literature (Smetana, 2010)	Qualitative—Observation/ Interview
Implementing Graphic Texts into the Language Arts Classroom (Annett, 2008)	Qualitative—Semi-Structured Interviews
Mind the Gap: Absence as Signifying Function in Comics (Postema, 2010)	Qualitative—Document Analysis
Perceptions of New Literacies with the Graphic Novel Bone (Monnin, 2008)	Qualitative—Multi-Case Study
Using Graphic Novels, Anime, and the Internet in an Urban High School (Frey & Fisher, 2004)	Qualitative—Intervention Study
Exploring the Use of Graphic Novels in the Classroom: Does Exposure to Non-Traditional Texts Increase the Reading Comprehension Skills and Motivation Of Low-Functioning Adolescent Readers? (Lamanno, 2007)	Quantitative—Single-Subject (A-B-BC)
Visualizing Literacy: Determining the Impact of Graphic Novels in the English	Quantitative—Experimental Design

Studies Found by Category

In the following section, each study, along with its findings, are discussed. This section is organized by study topic to establish fluidity, coherence, and organization. An introduction to each topic, using relevant literature, is offered in an effort to provide context for individual studies reviewed and presented.

Multimodal Literacy

The benefit to students' development of multimodal literacy through using graphic novels in the classroom seems to be obvious. Today's adolescents have grown up in a world of video games, Internet, and television constantly streaming images and visuals into their lives. Bucher and Manning (2004) suggest these adolescents search for printed materials that include a mixture of visuals along with altered writing styles, similar to the multimodal material they are constantly engaged with and show enthusiasm for. Graphic novels can also aid in the development of both verbal and visual literacies (Moeller, 2011). Fisher and Frey (2011) acknowledge the shift in the meaning of literacy and suggest the use of graphic novels to aid in fostering whole literacy. "By teaching visual literacy [students] report that they are now better, more discriminating and self-aware readers than they were before they started reading graphic novels" (Bakis, 2012, p. 143). Including graphic novels in the English curriculum can allow students to engage with and practice media literacy. In doing so, students can learn to create and analyze various forms of media (Moeller, 2011).

Frey and Fisher (2004) explored using hidden literacy (those multiple literacies left untapped) to address and develop students' multiple literacies. Using graphic novel instruction, mini-lessons, and teacher modeling students completed writing samples and a culminating multimodal project. The authors found that scaffolding writing instruction with graphic novels helped students to practice writing and provided them the skills to read competently. Many of the devices students examined in graphic texts were found in their own writing as a result.

Monnin (2008) explored perceptions of one teacher and one student during reading of a graphic novel. Utilizing a qualitative multi-case study, she found that both teacher and student read with image literacies in two ways: as readers for school and for self. Both perceived the relation of images and words as related to reading comprehension, and both believed that struggling readers could benefit from image literacies. Monnin's findings suggest that graphic novels are valuable forms of new literacies, both for teachers and for students.

In a study of twenty-three 12th grade students, Hammond (2009) examined the effects of using graphic novels in the classroom on students' development of multimodal literacy skills. The findings support using graphic novels and teaching comics conventions within the curriculum as a means to improve students' multimodal literacy skills. Students demonstrated an ability to read both text and images and employed new reading strategies with images, as these offered detail not available in the text.

Hughes, King, Perkins, and Fuke (2011) conducted two case studies investigating the ways reading and writing/creating graphic novels and multimodal sequential art aid in the development of students' literacy skills. Students were eager to read and were

engaged in reading graphic novels and in producing graphic texts of themselves. Students demonstrated an ability to make connections to graphic novels from text and images. Six of the twelve students displayed new (multimodal) literacy skills, and two unmotivated and low-confidence readers were engaged and experienced growth.

Schieble (2011) conducted a case study in two parts. First, the ways in which preservice English teachers explored the construction of race and identity in graphic novels were examined. Secondly, the effects of multimodal texts on adolescents' critical awareness of racism in the United States were explored. Schieble found that preservice teachers were able to assist students in beginning to develop critical awareness, but neither preservice teachers nor students identified racism as a structural problem; it was seen as a problem at the individual level. Students, however, displayed abilities to make intertextual connections (from other modes) to the graphic novel. Much of this was facilitated by their prior knowledge of and experiences with computers.

Reading Comprehension

Three of the located studies address the use of graphic novels on students' reading comprehension. Graphic novels allow readers to make multiple connections to texts (e.g., character, setting, and even intangible ideas) (Bakis, 2012). Smetana (2010) suggests that graphic novels may be beneficial through the use of less text, thus helping students to focus on the tasks of using inference and creating meaning. Graphic novels, and specifically the images contained within, offer textual support to readers through the use of visuals. This added support can help students to decipher meaning and ultimately to comprehend the story (Smetana, 2010). Through using graphic novels, students can begin to understand the constructive and recursive nature of reading (Bakis, 2012).

Moeller (2011) suggests that graphic novels may offer benefit to both students who speak English as a first language and those who speak English as a second language.

Using a mixed-method approach with single-subject multiple baseline research design, as well as exit interviews, Lamanno (2007) evaluated graphic novel use in small group reading instruction with adolescents with severe reading problems. Of the twenty participants, four showed an increase in motivation to read, and seven showed a decrease. However, most participants felt their reading skills were benefitted through participation in the intervention. While a slight improvement in reading comprehension skills was indicated, findings are not supportive of graphic novel use with students with severe reading difficulties.

Examining the use of graphic novels within a resource program to promote literacy skills of students with learning disabilities, Smetana's (2010) findings suggest a benefit of graphic novels in this context. Students classifying themselves as unsuccessful readers were able to experience success while reading comics and graphic novels. Because the graphic texts had fewer words for students to read, they took additional, necessary time to decode unfamiliar words.

Investigating the impact of a graphic adaptation of Shakespeare's *The Tragedy of Macbeth* on students' reading comprehension scores, Kaulfuss (2012) found the use of the graphic novel to be beneficial. Students reading the graphic novel version scored significantly higher on the reading comprehension test than students reading the traditional text. A strong, positive correlation was also found between student engagement and reading comprehension scores.

Gender

One of the questions surrounding graphic novels concerns gender. The stereotype associated is that graphic novels are books for boys and specifically books for boys who are either struggling readers or unmotivated and unengaged readers. This stereotype, however, does not seem to be true in all situations. Fisher and Frey (2011), for example, suggest that graphic novels may appeal to and aid in instruction with all students, regardless of reading level, regardless of academic level, and regardless of gender. Graphic novels can create new readers, can help ELL students, can motivate readers (especially males), and can be used as supplemental texts for higher achieving students (Carter, 2009). Including graphic novels in the school could help to balance reading interests between genders. It is important to point out that the only study found which included connecting gender issues with graphic novels does not offer strong support for these arguments.

In examining the ways in which gender is connected to how high school students read graphic novels, Moeller (2011) found that reading only slightly differed by gender. The gender differences noted were seen in the ways students talked about stories. In the focus groups boys tended to discuss action whereas girls discussed feeling. Boys also discussed pleasure from knowing the authors' intentions, a clarification they noted as lacking in the traditional novel. While admitting they enjoyed graphic novels, girls preferred traditional texts. Interestingly, the focus groups did not identify graphic novels by or as a construct of gender when interviewed.

Engagement

There has been recent growing support for the use of comics and graphic novels in education to enhance literacy instruction by addressing non-motivated readers (Rapp, 2012). The use of graphic novels can address this problem by helping to engage reluctant readers (Carter, 2009; Fisher & Frey, 2011). Graphic novels may be useful as supplements to traditional literacy instruction in schools because of the potential to engage readers who require assistance and scaffolding (Rapp, 2012). The graphic novel, by its very nature, offers support to adolescent readers. "The content and structure of graphic novels affords students with appealing and engaging materials on which to practice strategies for reading" (Smetana, 2010, p. 12).

In her review of the literature, Heaney (2007) found that graphic novels offer benefits for students, are engaging instructional materials, and can aid in language and literary development. While graphic novels are engaging for reluctant readers, they also can capture the interest of more experienced readers. Graphic novels can help students improve in both their language and literary development by helping students learn inferencing skills, which matches the high level of thinking in Bloom's revised taxonomy. The benefits associated with teaching graphic novels outweigh any associated challenges and issues.

Narrative Creation

Graphic novels are often seen as entertaining texts that break away from the traditional literature mold, and it is these non-traditional narratives, and the ways in which they are created, that can be helpful in classrooms. Graphic texts challenge and stand in contrast to the traditional ways in which students are taught to read (Rosen,

2009). In fact, Bucher and Manning 92004), in their suggestions for integrating graphic

novels into curriculum, argue that, similar to traditional reading, reading graphic novels

requires a set of complex cognitive skills. "Pictorial elements of graphic novels are not

illustrative but as essentially textual as the print, and…the totality of the pictures and

words form what I have elsewhere called conglomerate layers of text" (Carter, 2008, p.

19). Helping students to read and interpret images, layout, and panel framing is as

important for graphic novel literacy as the ability to interpret metaphors and literary

devices is for traditional literary criticism (Rosen, 2009).

In a review of comics and graphic novels, Postema (2010) investigated the ways

in which narratives are created in comics and examined the ways in which comics engage

readers. The researcher found that although comics have their own unique conventional

signs, other conventional codes are also necessary to read the narrative. Readers can

approach the narrative from the point of view of the text, using images, layout, gutters

and frames as meaningful units in unnoticed, automatic ways.

Teachers' Uses for Graphic Novels

There are many suggested uses for graphic novels in the English classroom.

Some of these have surfaced through the discussion of other topics and studies within this

review of the literature. It is important to look at graphic novel usage through teachers'

eyes to probe for additional benefits.

Graphic novels are practical and can serve as bridge texts or to teach visual

literacy (Annett, 2008). Carter (2009) suggests using graphic novels within pre-existing

units, as this can be more effective than teaching graphic novels alone. However, using

graphic novels with students can go a step further. "In addition to discussions of

character, conflict, theme, and setting, students in the graphic novel classroom also talk about images, icons, and how we know and interpret what we see" (Bakis, 2012, p. 143). Smetana (2010) discusses using graphic novels within a resource program to promote literacy skills of students with learning disabilities. Regardless of how teachers integrate graphic novels into their classrooms, one rationale seems to rise above the rest. "While reading of text unaccompanied by images will continue to be important, sequential art seems a perfect fit with modern reading habits" (Tabachnick, 2009, p. 4).

Annett (2008) investigated the ways teachers utilize graphic novels in their classrooms. Several categories emerged from the interviews. Teachers noted a higher engagement level in students and noted specifically that those students with interest and talent in visual arts were especially interested in graphic texts. Students were described as enjoying graphic novels and as appreciative of the change from the norm of traditional literature. In their class instruction with graphic novels, all teachers utilized traditional literary analysis as part of their classroom instruction. Overall, all teachers agreed there was value in using graphic texts in the English classroom.

Conclusion

Over the past several years, graphic novels have certainly gained increased attention in education literature and within English education. While much more research is needed, these twelve studies provide an interesting look at how and why teachers should consider using graphic texts in ELA classrooms. Over the course of the review, six distinct topics were found, each important in English education at any level. Table 2.4 provides a summary of findings by topic. The hope is that the findings from these studies and the suggestions from the relevant scholarship will help create a dialogue

and will encourage future research in the area. The research shared can also provide a

starting point for teachers interested in bringing graphic novels into their classrooms as

well as a rationale for those teachers who already do.

Table 2.4—Summary of Findings by Topic

Topic	Findings
Multimodal Literacy	Frey and Fisher (2004)—Qualitative, Intervention Study Graphic novels scaffold students in reading and writing development. Students incorporated devices read into their own writing. Graphic novels can engage students in writing. Students developed visual vocabulary. Monnin (2008)—Qualitative, Multi-Case Study Teachers and students used image literacy in two ways: as readers for school and self. Both perceived relationship of images and words to reading comprehension. Found graphic novels to be valuable forms of new literacies. Hammond (2009)—Qualitative, Reader Response Graphic novels can improve multimodal literacy skills. Demonstrated ability to read, interpret, and make predictions with both text and images. Students enjoyed new reading strategies. Hughes, King, Perkins, and Fuke (2011)—Qualitative, Case Study Demonstrated eagerness and engagement. Demonstrated ability to make connections to graphic novels from text and images. Some unmotivated and low confidence readers demonstrated understanding and growth. Half displayed new literacy skills. Schieble (2011)—Qualitative, Case Study Adolescents experienced multiple perspectives. Adolescents displayed abilities to make intertextual connections to the graphic novels. Preservice teachers were able to assist students in developing critical awareness. Neither identified racism as a structural problem.
Reading Comprehension	Lamanno (2007)—Quantitative, Single Subject Slight increase in overall reading skills. Increased motivation in 4 of 20 participants. Decreased motivation in 7 of 20 participants. Students perceived an increase in their reading skills. Overall findings not supportive of graphic novels with students with severe reading difficulties. Smetana (2010)—Qualitative, Observation & Interview Students took more time to decode difficult words—due to fewer number of words in graphic novel format. Kaulfuss (2012)—Quantitative, Experimental Design Students reading graphic versions scored significantly higher on reading comprehension test. No significant interaction between graphic novel use and academic level. Strong, positive correlation between engagement and reading comprehension

	scores.
Gender	Moeller (2011)—Qualitative, Focus Group Interviews Reading only slightly differed by gender. Gender differences were in the ways students talked about stories.
Engagement	Heaney (2007)—Literature Review Students show improvement in language and literary development. Students develop inferencing skills. Can capture the interest of unmotivated and experienced readers. Engage reluctant readers.
Narrative Creation	Postema (2010)—Qualitative, Document Analysis Narrative created in different ways. Both traditional and new conventions required to "read" graphic narratives (happens automatically) Readers can approach from the viewpoint of the text.
Teacher Uses	Annett (2008)—Qualitative, Semi-Structured Interviews Teachers still use traditional literary analysis. Teachers noted value in graphic novels in ELA. Teachers noted higher engagement in students. Students enjoyed graphic novels, especially those with interest and/or talent in the visual arts.

Based on the results of this review of the literature, graphic novels should not be limited to struggling readers. Advanced and motivated readers can experience benefits from these texts as well. The number of strong, practiced readers who are enthusiastic about and motivated by graphic novels is constantly growing (Carter, 2009; Fisher & Frey, 2011; Bakis, 2012). "As literacy educators move from traditional texts used in classrooms to the multimodal texts used beyond, they will need to be more intentional in their instruction to address the new strategies and theories that will be useful for making sense of these texts" (Serafini, 2011, p. 348). Perhaps Carter (2009) points out why teachers should consider using graphic novels most effectively by noting:

> The effective use of graphic novels and other forms of sequential art can help
>
> teachers accomplish all of these goals. When paired with other forms, old and
>
> new, this ancient type of text can be a valuable bridge between student and text,
>
> student and teacher, and the centuries themselves. (p. 72)

Summary

This chapter opened by describing the multi-level framework, which grounds the current study. Pragmatism was discussed as the overarching philosophical framework. Schema Theory and Transactional Theory were then explored to provide a theoretical framework. Finally, the available literature on reading comprehension, reading visuals, and graphic novels were reviewed to provide the conceptual framework and to demonstrate a need for the current study.

Three important claims were made through this chapter. First, reading comprehension is affected by multiple factors; vocabulary, background knowledge, content and formal schema, and reader attributes were the most frequently discussed and provide the basis for the comprehension portion of this investigation. Second, a number of scholars have discussed the importance of images and visuals in communication and visual literacy, but few of these conversations have taken place in (a) mainstream literacy research or (b) educational policy and pedagogical discourse. And third, while an ever-increasing amount of anecdotal information is available on graphic novels, few empirical research studies (and an even smaller amount of quantitative data) have been conducted and reported. The literature reviewed here suggest not only the need for empirical studies of graphic novels in the English classroom (or even education in general), but also the importance of approaching graphic novels from the conceptual standpoint of "reading" visuals.

CHAPTER THREE:
METHODOLOGY

Introduction

In this chapter, the research design for the current study is discussed. First, an overview of the research design is provided. Second, the independent and dependent variables are labeled and introduced. Third, the population of interest and the procedures for sampling are provided. Fourth, the method of statistical analysis is presented. The fifth and final section of this chapter provides detailed procedures for the study.

Research Design

This study utilized a 3x4x2 factorial design and examined the complexities and variation present in a traditional high school English class. Each of the three groups received a corresponding Method of Instruction. The control group (C) received only a traditional version of a classroom text. Experimental group one (E_1) received only a graphic adaptation of the classroom text. Experimental group two (E_2) received both the traditional and graphic adaptation of the classroom text. Gender and grade level were also included as factors in the design. All subjects were measured on the same dependent variable immediately following the completion of instruction. See Table 3.1 below for a breakdown of this design.

Table 3.1—3x4x2 Factorial Study Design

	9th Grade	10th Grade	11th Grade	12th Grade	
C					Males
E_1					
E_2					

	9th Grade	10th Grade	11th Grade	12th Grade	
C					Females
E_1					
E_2					

Independent and Dependent Variables

For this study, there were three independent variables (or factors): Method of Instruction, grade level, and gender. Each of the independent variables has multiple levels. Method of Instruction has three levels: control (traditional text only), experimental group one (graphic text only), experimental group two (both traditional and graphic text). Grade level has four levels: ninth, tenth, eleventh, and twelfth grades. Gender has two levels: male and female.

The dependent variable used for this study was individual student's reading comprehension test scores. The dependent variable was developed by the researcher and measured on a 100-point scale.

Subjects and Sampling

The population of interest for this study is all high school students. Specifically, traditional high school students, age 14-18 and in grades 9-12, taking traditional English classes will serve as the context for examining the data.

Research Site

The research site for this study was a rural, traditional high school in the southeastern United States. This high school has a student population of approximately 600 and a faculty of approximately 35 teachers. This school was chosen to serve as the research site for two reasons: one, its diversity; and two, its ease of access to the researcher.

The research site is a Title I school, with approximately 70% of the student population receiving free or reduced lunch. Ethnic and racial approximations are as follows: White—33%; African American—21%; Hispanic/Latino—43%; Other—3%.

Sampling Method

Because my population of interest is all high school students, I believed it was beneficial to have a broad and accurate representation of students in high school. Thus, a representative sample was used. Stratified Random Sampling was used to separate all students by grade level. Within each individual grade level (or strata), random assignment was used to place participants in each of the three Method of Instruction groups. This was done to ensure equity, with regard to grade level and gender, among each sub-group as well. Table 3.2 provides the sampling breakdown for the current study.

Table 3.2—Sampling Breakdown

Control (C) Traditional text only	Experimental 1 (E₁) Graphic text only	Experimental 2 (E₂) Graphic + traditional text	Totals
9th = 19 M=10; F=9	9th = 19 M=9; F=10	9th = 22 M=12; F=10	56 M=29; F=27
10th = 15 M=7; F=8	10th = 16 M=7; F=9	10th = 15 M=7; F=8	57 M=27; F=30
11th = 18 M=6; F=12	11th = 17 M=8; F=9	11th = 15 M=6; F=9	56 M=29; F=27
12th = 20 M=10; F=10	12th = 21 M=11; F=10	12th = 20 M=11; F=9	56 M=28; F=28
Totals for Control N=72 M=33; F=39	**Totals for E₁** N=73 M=35; F=38	**Totals for E₂** N=72 M=36; F=36	**Overall Totals** N=217 M=104; F=113

Method of Analysis

Within this study, data (reading comprehension test scores) were examined using a three-way (3x4x2) Analysis of Variance (ANOVA). The ANOVA tested for two things: one, the main effects of each, individual factor, ignoring the levels of other factors; and two, the interactions between factors on the dependent variable. The model for the three-factor ANOVA is provided below.

$$X_{ijkm} = \mu + \alpha_j + \beta_k + \tau_m + (\alpha\beta)_{jk} + (\alpha\tau)_{jm} + (\beta\tau)_{km} + (\alpha\beta\tau)_{jkm} + e_{ijkm}$$

The null hypotheses for this study were as follows: all effects are zero; and there are not interactions between factors.

Four levels of statistical analysis were conducted. First, main effects of each factor were examined for significance. Second, the interactions between factors,

including levels of each, were examined for significance. This design allowed for the researcher to account for more of the differences in students' reading comprehension scores and thus conduct a more thorough and comprehensive study. Third, Tukey post hoc tests were conducted to test for pairwise differences in means. Finally, a post hoc item-analysis was conducted on the research instrument, which allowed for me to examine any necessary test revisions for future use in classrooms by teachers and to make the instrument more reliable for future research studies.

The alpha level for each statistical test in this study was set at $\alpha = .05$. With regard to the main effects for method of instruction, there were three treatment levels used. Based on theoretical assumptions, I assumed an effect size of approximately .50 for this main effect. Because the sample size was 72 (73 for E_1 group) and $\alpha = .05$, the estimated power of this analysis was at least .75 (Hinkle, Wiersma and Jurs, 2003).

Due to reduction in cell size, power for 2 and 3 way interactions were assumed to be somewhat lower. However, two considerations maximized the possibility of identifying statistical effects. First, the 3x4x2 factorial design would result in lowered error variance within groups, thus increasing the power of statistical tests for interaction. In addition, measurement error was minimized through the use of a valid and reliable measurement instrument (the Poe reading comprehension test). This consideration would also improve the precision of statistical tests.

Instrumentation—Dependent Variable

Student scores on the reading comprehension test provided the dependent variable for this study. The researcher developed the test itself (see Appendix A), with feedback from high school English teachers and English Education professors, as well as an

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outside, psychometric reviewer, for two main areas. First, individual questions were

written to address the essential components of reading comprehension for this study (see

chapter 2). Second, each question was written to be a fair and accurate assessment of

both text types (i.e., they should not be biased toward either the traditional or the graphic

adaptation). The test was multiple-choice in format, providing a reliable means of

assessment and to look very similar to the traditional unit and End-of-Course tests these

students take.

Supplemental Analyses

Students were randomly selected to participate in post-interviews based on the

Method of Instruction group they were in and their reading comprehension score. An

equal number of participants (n=16 from each group) was selected from the E_1 and E_2

groups (the Control group is not included here, as they had no interaction with the

graphic text). There were also an equal number of students selected by gender (n=16 for

each group) and grade level (n=8 for each group). Table 3.3 provides a breakdown of

students sampled to participate in interviews.

Table 3.3—Breakdown of Sample for Interviews

Method of Instruction	Total	Grade Level	Gender
E_1	16	4	8
E_2	16	4	8

Interviews followed the outline provided in Appendix B. Please note that students

interviewed from group E_2 were asked four additional questions in order to examine their

perceptions of interacting with both text types (traditional and graphic).

Similarly, all teachers involved (n=5) in the study were interviewed at the

conclusion of the study. The purpose of the teacher interviews was to examine teachers'

perceptions of student engagement (including noted benefits and difficulties) as they read the graphic text. Teacher post-interviews followed the outline provided in Appendix C.

For both student and teacher post-interviews, data were analyzed by individual interview question and within the context of research question 5 to allow for student and teacher opinions, perceptions, and experiences to emerge from the responses. Data are reported within the framework of research question 5 and by individual interview question. The interview instruments were validated as they were constructed, utilizing input and feedback from a qualitative researcher on this researcher's committee.

Procedures

The research instruments used in this study were administered during normal class time. Data represent normal classroom learning artifacts. The main instrument used within this study, the reading comprehension test (dependent variable), is representative of both the traditional unit test and the state End-of-Course tests, of which students are familiar.

Selecting a Text

For the purposes of this study, Edgar Allan Poe's short story, "The Cask of Amontillado," served as the text of interest. After choosing the text of interest, the question then became which graphic adaptation to use. Selection of the graphic text used in this study followed the following process. First, an Internet search was conducted to establish the range of available texts. A total of 10 titles were found, all describing themselves as graphic adaptations of Poe's work. Second, I ordered a copy of each of the 10 titles (see Appendix D for a complete list and citations). Third, the researcher read

and evaluated each of the 10 texts and split them into three broad categories (see Table

3.4).

Table 3.4—Poe Graphic Adaptation Categories

Useful	
Text	Reason in Category
Dark Graphic Tales by Edgar Allan Poe (Despeyroux & Serratosa)	Minimal changes to stories—"The Cask of Amontillado" not Included
Graphic Classics: Edgar Allan Poe (Pomplun, 2004)	Quality adaptations; accurate and true to text—includes "The Cask of Amontillado"
Graphic Classics: Edgar Allan Poe (Pomplun, 2010)	Quality adaptations; accurate and true to text—includes "The Cask of Amontillado"
Radical Adaptation—No Longer Poe's Work	
Text	Reason in Category
The Poe Twisted Anthology (Jang)	Modernized; character types changed; language changed
Edgar Allan Poe's Tales of Mystery: Graphic Classic: Volume 21 (Pomplun, 2011)	Illustrations modernized and changed (for example, the text for "The Tell-Tale Heart" is accurate, but the narrator has been changed to a female with a Mohawk, a shotgun, and a swastika)
Nevermore: A Graphic Adaptation of Edgar Allan Poe's Short Stories (Delano & Pugh)	Radical changes (for example, both characters in "The Tell-Tale Heart" have been changed to female); text has been adapted as well; Poe's language has been changed
Edgar Allan Poe's Haunts of Horror (Corben & Margopoulos)	Radical changes to contemporary settings, characters, weapons, etc.
Should Not Be Classified As Graphic Novel	
Text	Reason in Category
The Tell-Tale Heart and Other Stories (Grimly)	Lacks graphic novel components (e.g., gutters, text bubbles, etc.); more of an illustrated story
Edgar Allan Poe's Tales of Mystery and Madness (Grimly)	Lacks graphic novel components (e.g., gutters, text bubbles, etc.); more of an illustrated story
Edgar Allan Poe's Tales of Death and Dementia (Grimly)	Lacks graphic novel components (e.g., gutters, text bubbles, etc.); more of an illustrated story

Fourth, the researcher conducted a second reading of and re-evaluated each text

labeled "Useful." One text, Despeyroux and Serratosa (2013), did not contain the short

story chosen for this study. Two of the texts, both the 2004 and 2010 Pomplun texts,

were very similar. Both offered Poe's original language and vocabulary. Both followed

Poe's plot line and included important events. Ultimately, the most recent revision,

Pomplun (2010), was selected to serve as the graphic adaptation text used in this study.

Creating the Test

Test construction of the research instrument proceeded as follows. First, using Thorndike and Thorndike-Christ (2010) as a guideline, items within the reading comprehension test were created and revised with the following criteria in mind. One, item stems should clearly formulate the problem. Two, each item has only one correct answer. Three, each distractor should be plausible. Four, a randomized position of correct responses should be used. Thorndike and Thorndike-Christ's suggestions were all followed during construction of the assessment instrument with one caveat. While increasing the length of the test is one method of producing higher reliability by decreasing the chance of measurement error, the decision was made to limit the instrument to a total of 30 questions, rather than the 40 previously considered. This decision was made based on my knowledge of the population and was meant, in part, to limit the taxation the test placed on participants.

Second, the test was content-validated throughout its creation and administration by content experts. Both secondary English teachers and English education professors reviewed the test in each of its stages and provided feedback for revisions. The content experts were asked to look specifically for three things: one, accuracy of the assessment instrument with regard to the text of interest; two, potential biases toward either the traditional or graphic version of the test; three, appropriateness of the instrument with regard to academic level and curriculum; and four, that the collection of test items broadly sample the applicable content.

Third, a psychometrician was used as an outside evaluator. Based on the subsequent suggestions and recommendations, all items were revised accordingly. Paired

with Thorndike and Thorndike-Christ's criteria, as well as the evaluations from multiple content experts, the outside evaluation completed the fine-tuning of the instrument and has increased the reliability of the test because high-quality items produce higher reliability.

Fourth, test items were aligned with content standards. Because this instrument was used with high school students from grades 9-12, the CCSS were used. Individual items were aligned with corresponding College and Career Readiness Anchor Standards for Reading and to grade-specific reading standards. As this study included grades 9-12, and the CCSS were designed to build vertically through grade-levels, only the 11th and 12th grade-specific standards are cited here. Table 3.5 displays the test item alignment with content standards.

Fifth, at the conclusion of the study, I conducted an item-analysis and computed a coefficient alpha, to assess the quality of the assessment instrument and to make the instrument more reliable for future classroom and research uses. The computed coefficient alpha for the reading comprehension test was a respectable $\alpha=0.879$.

Table 3.5—Test Item Alignment to the CCSS

Question Number	Anchor Standard(s)	Grade-Specific Standards
1	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1, RL.11-12.7; RL.11-12.10
2	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
3	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
4	R.CCR.1; R.CCR.2; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.2; RL.11-12.7; RL.11-12.10
5	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
6	R.CCR.2; R.CCR.7; R.CCR.10	RL.11-12.2; RL.11-12.7; RL.11-12.10
7	R.CCR.2; R.CCR.7; R.CCR.10	RL.11-12.2; RL.11-12.7; RL.11-12.10
8	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
9	R.CCR.1; R.CCR.2; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.2; RL.11-12.7; RL.11-12.10
10	R.CCR.1; R.CCR.4; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.4; RL.11-12.7; RL.11-12.10
11	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
12	R.CCR.2; R.CCR.4; R.CCR.7; R.CCR.10	RL.11-12.2; RL.11-12.4; RL.11-12.7; RL.11-12.10
13	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
14	R.CCR.1; R.CCR.2; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.2; RL.11-12.7; RL.11-12.10
15	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
16	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
17	R.CCR.1; R.CCR.3; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.3; RL.11-12.7; RL.11-12.10
18	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
19	R.CCR.1; R.CCR.3; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.3; RL.11-12.7; RL.11-12.10
20	R.CCR.1; R.CCR.3; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.3; RL.11-12.7; RL.11-12.10
21	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
22	R.CCR.1; R.CCR.4; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.4; RL.11-12.7; RL.11-12.10
23	R.CCR.1; R.CCR.4; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.4; RL.11-12.7; RL.11-12.10
24	R.CCR.1; R.CCR.3; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.3; RL.11-12.7; RL.11-12.10
25	R.CCR.1; R.CCR.6; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.6; RL.11-12.7; RL.11-12.10
26	R.CCR.1; R.CCR.3; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
27	R.CCR.1; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10
28	R.CCR.1; R.CCR.4; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.4; RL.11-12.7; RL.11-12.10
29	R.CCR.1; R.CCR.4; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.4; RL.11-12.7; RL.11-12.10
30	R.CCR.1; R.CCR.6; R.CCR.7; R.CCR.10	RL.11-12.1; RL.11-12.7; RL.11-12.10

Study Procedures

This study took place at the conclusion of an instructional unit on Edgar Allan Poe and his writings. All students, regardless of Method of Instruction groupings, received the same instruction throughout the unit. The researcher constructed all aspects of the Poe unit for teachers to follow. This helped to ensure that all students, regardless of class and teacher, received the same background, instructional information, and support. Providing a prescriptive unit was meant to remove potential confounding effects due to individual teachers' pedagogical styles, instructional beliefs, personalities, etc. The instructional unit created by the researcher and utilized with all students was implemented over the course of approximately two weeks.

The instructional unit provided to teachers included background and contextual information on Poe and his writings. Likewise, the unit included instruction on two additional Poe texts (one short story and one poem), including all supplemental materials.

At the conclusion of the unit, students were provided with the corresponding version (depending on their grouping within Method of Instruction) of Poe's short story, "The Cask of Amontillado." The Control group (C) received and read only the traditional, text version of the story. Experimental Group 1 (E_1) received and read only the graphic adaptation of the story. Experimental Group 2 (E_2) received and read the graphic adaptation followed by the traditional, text version of the story.

Each student read his or her version(s) of the text during an in-class, timed session. Immediately following the reading, students completed the comprehension test (providing the dependent variable for this study). No additional instruction of any kind was provided prior to the test. Throughout the unit and this study, all instruction was

provided by the students' classroom teachers and all reading comprehension tests were administered by the students' classroom teachers. Data collection for the reading comprehension test took one 90-minute class period. All students, regardless of method of instruction, completed the reading comprehension test immediately after reading the text(s). See Appendix A for the reading comprehension test used for this study.

Following the unit and completion of the reading comprehension test, students were randomly selected from groups E_1 and E_2 to participate in individual post-interviews. Similarly, all teachers participating in the study were interviewed using qualitative techniques (i.e., post-interviews) to elicit their opinions of and perspectives on the use of graphic texts by their students during this study. Post-interviews, with both teachers and selected students took place over the course of approximately one week. For more information on student and teacher post-interview outlines, see Appendix B and Appendix C.

Obtaining Consent and Protection of Human Rights

IRB approval was received prior to the implementation of this study. Participation in this study was strictly voluntary. I offered students no incentives to participate. Those students who choose to participate could withdraw at any time with no penalty. Students' grades were not affected by participation in this study. Likewise, grades were not affected by the choice to not participate or to withdraw from the study before conclusion. Because this is a public school setting and most students will be under the age of 18, parental consent was required. Similarly, each participating teacher, as well as the principal, was required to consent to participation.

Student confidentiality and anonymity have been protected in multiple ways. First, all student names and identifiers were removed from the data and replaced with a representative number (code or tag). Second, all forms containing student names or identifiers (consent forms, participant/tag master key, etc.) have remained locked in the investigator's file cabinet. All paperwork will be destroyed upon completion of the study.

Validity

Within this study, multiple levels of validity were addressed to strengthen the study design and data, as well as any inferences made to the population of all high school students.

Content Validity

To have content validity, a study must utilize an instrument, which reflects the actual content being taught. In this case, the content is reading comprehension of the Edgar Allan Poe short story, "The Cask of Amontillado." The test itself was developed using two important guides. First, the important components of reading comprehension (from the review of the literature in chapter 2) were used to guide creation of individual test items, as well as the assessment as a whole. Second, content experts (high school English teachers and English Education professors) were used to review drafts of the reading comprehension test and provide feedback for revisions.

Construct Validity

To have construct validity, a study must utilize instruments specifically designed to address the relevant research construct(s). Because the main area of interest of this study was to examine the effects (and possibly constraints) graphic novels have on

students' reading comprehension, the assessment instrument must address the degree to which students comprehend the text. The reading comprehension test was designed to gather data on exactly that—students' comprehension levels. To that end, an outside, psychometric reviewer was utilized during the creation of the research instrument.

Another important component of this study was to elicit students' perceptions and experiences with the graphic text, as well as teachers' opinions and perceptions of their students' engagement with the graphic texts. The two post-interview outlines (one for students and one for teachers) were developed, with the support and feedback of a qualitative researcher in English Education, to both elicit this information and provide the leeway to ask follow up questions and attempt to exhaust students' and teachers' semantic fields.

Internal Validity

For a study to have internal validity, steps should be taken to ensure that for any group differences found, the researcher can be reasonably sure they are due to the varying treatments provided and not to other confounding variables. Within this study, the researcher was interested in determining if there were significant effects for method of instruction. Because of this, it was important to address confounding variables such as differences in classroom teacher, differences in instruction, and differences in student ability. Each of these potential confounding variables were addressed. First, differences in classroom teacher and differences in instruction were addressed by providing a prescriptive unit for all teachers to follow. This prescriptive unit minimized confounding effects from individual teachers and ensured that all students receive the same instruction.

Second, potential differences in student ability were addressed by the research design and the use of random assignment to the three methods of instruction groups.

External Validity

The self-reported opinions and perceptions of students and the perceptions of teachers elicited from the post-interviews may not be generalizable to the larger population because of their situational, contextual, and geographical specificity. However, the study utilized a large sample (N=217) and the primary instrument addressed objective reading comprehension data, so the study was designed to allow for trustworthy and reasonable generalization of the sample data to the population of interest, providing external validity.

Process Validity

Process validity, for this study, was established through the use of multiple data collection instruments and varied data types. For this study, data were collected using three instruments: reading comprehension test, student post-interviews, and teacher post-interviews. Also, feedback and support were received from content experts throughout the research study, on both instrument design and data analysis.

<div align="center">

Summary

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Within this chapter, the methodology for the proposed study was provided. An overview of the research design was presented. Both independent and dependent variables were identified and discussed. The population of interest was described, and the procedures for sampling subjects were explained. The method of statistical analysis was detailed, and the qualitative supplementary analysis methods were provided. Lastly, the procedures for text selection and for study implementation were presented.

CHAPTER FOUR:
RESULTS

Introduction

In this chapter, descriptive statistics for the study are provided. I also describe the data analysis and interpretation for each primary research question. Next, I discuss data and findings from student and teacher interviews. The results from the item analysis of the Poe reading test are explained as well. Finally, a summary of findings is provided.

Descriptive Statistics

Before discussing each of the research questions for this study, descriptive statistics are provided as context for this chapter. First, number of participants randomly assigned to each factor and factor-level is provided below (see Table 4.1)

Table 4.1—Number of Factor and Factor-Level Participants

		Value Label	N
MethofInstr	1.00	Control	72
	2.00	E1	73
	3.00	E2	72
GradeLevel	1.00	9th Grade	60
	2.00	10th Grade	46
	3.00	11th Grade	50
	4.00	12th Grade	61
Gender	1.00	Male	104
	2.00	Female	113

Second, group number, mean and standard deviation at factor and factor-level are provided in Table 4.2.

Table 4.2—Descriptive Statistics at Factor and Factor-Level

Descriptive Statistics

Dependent Variable: TestScore

MethofInstr	GradeLevel	Gender	Mean	Std. Deviation	N
Control	9th Grade	Male	47.1000	11.35733	10
		Female	52.4444	9.48830	9
		Total	49.6316	10.58411	19
	10th Grade	Male	57.5714	18.89318	7
		Female	58.7500	13.42439	8
		Total	58.2000	15.60311	15
	11th Grade	Male	66.0000	26.00000	6
		Female	58.5833	14.00298	12
		Total	61.0556	18.40228	18
	12th Grade	Male	58.0000	19.87181	10
		Female	65.7000	17.05579	10
		Total	61.8500	18.45129	20
	Total	Male	56.0606	19.10978	33
		Female	59.0256	14.13746	39
		Total	57.6667	16.54614	72
E1	9th Grade	Male	54.7778	13.59943	9
		Female	57.7000	17.73916	10
		Total	56.3158	15.54939	19
	10th Grade	Male	58.5714	12.79137	7
		Female	63.0000	11.94780	9
		Total	61.0625	12.11318	16
	11th Grade	Male	60.7500	11.02918	8
		Female	74.2222	10.81409	9
		Total	67.8824	12.63864	17
	12th Grade	Male	65.1818	13.73913	11
		Female	73.9000	11.69473	10
		Total	69.3333	13.26022	21
	Total	Male	60.1714	13.01467	35
		Female	67.1316	14.79074	38
		Total	63.7945	14.30614	73
E2	9th Grade	Male	51.5833	14.04187	12
		Female	64.5000	16.26346	10

		Total	57.4545	16.12371	22
	10th Grade	Male	60.5714	10.27711	7
		Female	66.8750	7.01911	8
		Total	63.9333	8.97191	15
	11th Grade	Male	63.8333	13.09071	6
		Female	64.4444	16.64415	9
		Total	64.2000	14.81891	15
	12th Grade	Male	75.0909	9.09345	11
		Female	74.8889	11.82629	9
		Total	75.0000	10.12033	20
	Total	Male	62.5556	14.82940	36
		Female	67.6111	13.86522	36
		Total	65.0833	14.47947	72
Total	9th Grade	Male	51.0645	13.03057	31
		Female	58.4138	15.38672	29
		Total	54.6167	14.57429	60
	10th Grade	Male	58.9048	13.76555	21
		Female	62.8800	11.20387	25
		Total	61.0652	12.45686	46
	11th Grade	Male	63.2500	16.52072	20
		Female	65.0333	15.05274	30
		Total	64.3200	15.51489	50
	12th Grade	Male	66.3438	15.88387	32
		Female	71.3793	13.97041	29
		Total	68.7377	15.09514	61
	Total	Male	59.6923	15.85130	104
		Female	64.4867	14.69883	113
		Total	62.1889	15.41453	217

Primary Analysis

Research Questions

1. Is there an effect of method of instruction on students' reading comprehension test scores?

2. Is there an effect of grade level on students' reading comprehension test scores?

3. Is there an effect of gender on students' reading comprehension test scores?

4. Is there an interaction between method of instruction, grade level, and gender on students' reading comprehension test scores?

5. What are student perceptions of working with graphic texts? Additionally, what are teachers' observations and perceptions of students working with graphic texts?

RQ1

- Is there an effect of method of instruction on students' reading comprehension test scores?

The factor, method of instruction, had a significant main effect on student scores $(F_{2,193}; p=.009)$. Table 4.3 provides the main effect statistics for the independent variable, Method of Instruction.

Table 4.3—Method of Instruction Main Effect

Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
MethofInstr	1955.638	2	977.819	4.854	.009

Within method of instruction, there were two significant differences between levels of the factor (See Table 4.4). Students in group E_1 scored significantly higher than students in the Control group (p=.023). Similarly, students in group E_2 scored significantly higher than the Control group (p=003). These findings suggest that, regardless of the experimental group students were assigned to, students who read the graphic adaptation scored better on the test on average than did students who only read the traditional version. Interestingly enough, and to further make this point, there was no significant difference found between groups E_1 and E_2. Students in group E_2 did score higher, on average, than students in group E_1; however, there was only a slight difference, and the significance level was well above the required alpha level (p=.476). While reading the

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graphic adaptation did have an effect on student scores, it does not seem to matter if students only read the graphic text or if they read the graphic text followed by the traditional text. It is apparently the graphic text itself, which offers the benefit.

Table 4.4—Pairwise Comparisons within Method of Instruction

(I) MethofInstr	(J)MethofInstr	Mean Difference (I-J)	Std. Error	Sig.
Control	E1	-5.494	2.394	.023
	E2	-7.205	2.420	.003
E1	E2	-1.711	2.396	.476

RQ2

- Is there an effect of grade level on students' reading comprehension test scores?

Grade level did have a significant main effect ($F_{3,193}$; p<.001) on students' scores, across all four levels (9th, 10th, 11th, 12th) on the dependent variable (see Table 4.5 below).

Table 4.5—Grade Level Main Effect

Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
GradeLevel	6355.941	3	2118.647	10.517	<.001

Within grade level, there were four significant differences between levels of the factor. Students in grades 10, 11, and 12 scored significantly higher than 9th grade students (See Table 4.6). There was little significant difference between grade levels after 9th grade; however, 12th grade students scored significantly higher than 10th grade students. 12th grade students have been in high school and received reading instruction for four years, whereas 9th and 10th grade students are less experienced. This additional instruction and time to practice can perhaps lead to an increase in metacognitive strategies, ability to make connections to texts, schema development, etc. by the 12th grade. Table 4.6 provides comparisons within factor levels.

Table 4.6—Pairwise Comparisons within Grade Level

(I) GradeLevel	(J)GradeLevel	Mean Difference (I-J)	Std. Error	Sig.
9th Grade	10th Grade	-6.206	2.794	.028
	11th Grade	-9.955	2.768	<.001
	12th Grade	-14.109	2.590	<.001
10th Grade	12th Grade	-7.904	2.782	.005

RQ3

- Is there an effect of gender on students' reading comprehension test scores?

Gender had a significant main effect ($F_{1,193}$; p=.018). See Table 4.7 for the mean effect of gender.

Table 4.7—Gender Main Effect

Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Gender	1138.571	1	1138.571	5.652	.018

Within gender, there was a significant difference between male and female scores. Female students, on average, scored higher than their male classmates (see Table 4.8). This is perhaps the most interesting finding because it goes against the often believed stereotype that graphic novels are "boy books." It does, however, fall within the parameters of the belief that females tend to do better than males in ELA classes. Additional investigation into this finding is warranted.

Table 4.8—Pairwise Comparisons within Gender

(I) Gender	(J) Gender	Mean Difference (I-J)	Std. Error	Sig.
Male	Female	-4.665	1.962	.018

RQ4

- Is there an interaction between method of instruction, grade level, and gender on students' reading comprehension test scores?

A test for interaction effects was conducted between method of instruction, grade level, and gender. Interestingly enough, no significant interactions were found. See Table 4.9 below for a breakdown of each interaction in the tests of between subjects effects.

Table 4.9—Independent Variable Interaction Effects

Variable Interaction	Type III Sum of Squares	df	Mean Square	F	Sig.
MethofInstr* GradeLevel	698.648	6	116.441	.578	.748
MethofInstr* Gender	284.913	2	142.457	.707	.494
GradeLevel* Gender	167.520	3	55.840	.277	.842
MethofInstr* GradeLevel* Gender	1243.145	6	207.191	1.028	.408

RQ5

- What are student perceptions of working with graphic texts? Additionally, what are teachers' observations and perceptions of students working with graphic texts?

Student Interviews

Engagement

Students were asked if the graphic novel was engaging to them as readers. As can be imagined, a range of responses were provided. Several students described the graphic text as more engaging than a traditional text for several reasons: it was easier to understand, it was les confusing, and it was fun to read. Students overall liked having pictures to help them better understand the text, noting specifically that the images helped them to "visualize and understand the story better." Another student stated being engaged by the graphic text because it showed pictures of what it was describing (with

words), making the plot more interesting; "the images helped me because I knew what was happening," and "I could follow along with what's happening better."

Not all students found the graphic text to be engaging. While these students only constituted a very small percentage of all students, it is important to flesh out this discussion of graphic novels by including these students' perceptions. Similarly to those who found the text engaging, those who were not engaged cited the images as the major contributing factor. "It was very confusing if you don't pay close attention to the pictures." Students like this one found the text more difficult precisely because of the images. They stated their lack of ability to understand it because "it was harder than reading a regular story" and "the images hindered my reading." A final student seemed to be straddling the fence on graphic texts and described the images as engaging but difficult to understand.

Text Differences

Students were also asked if the graphic version of the story was different than reading a traditional text. Answers were almost uniformly positive; one is classified as indifferent. "The graphic really helped you understand the confusing parts…because you get a better visual." A second student stated, "with the traditional text, I had to make a rough imagination of the scenario; whereas, in the graphic, it was clearer to me." Other students echoed these statements, but one specific student summed this concept up well: "It was different, but I did like it. I had a better picture of what was going on. The traditional was much harder to understand. I think it (the graphic) was more helpful and more interesting."

Also of note were the comments mentioning the benefit students perceived from reading both texts. These students suggested that, because of the images, the graphic text helped them to better understand the traditional. "The graphic text helped me understand the traditional text more. After reading the traditional, I only sort of understood. Then, after reading the graphic, it helped me get a clearer picture." Another way of stating this could be seen in yet another student's response. "The graphic was easy to understand while the traditional was more informative."

Not all student experiences were completely positive. One student stated that the graphic version was only slightly easier to understand because while there were descriptive visuals, the story had fewer words.

In a follow-up question, I asked the students who read both text versions to discuss the ways in which the graphic version was different. Again, responses were overwhelmingly positive. Some comments were very surface level and included short, un-detailed statements, such as "it is better than the novel" and "I don't know…I just seemed to comprehend it better." Other students shared more specific thoughts about benefits of the graphic text. "I enjoyed it. It gave me a clear visual image of what was happening over the text." Two other students mentioned the images saying, "you could see how the characters looked" and "with the graphic novel, I actually have images rather than imagining it myself." A third student with a similar response noted that seeing the pictures helped her to understand the scenario because it was simple and to the point and the traditional text was hard to read. Perhaps the most telling quotation from the transcripts came from a student who openly loved the graphic text. "I loved it. It

allowed me to understand what was going on. The images really clarified my questions on the reading."

The only semi-negative comment from a student suggested her wish for a longer and more detailed graphic text, as she stated that she "only saw the major parts of the story with pictures." There were also a couple of students who were seemingly indifferent about the graphic text. "It helped me by showing what the characters actually looked like, but it also hindered me because it was hard to figure out what to read first." This student acknowledged the benefit of the visuals, and also brought up an important point about, due to inexperience with graphic texts, a lack of knowledge about how to read a graphic story. The second student pointed out what she saw as missing detail and the importance of using that detail to develop her own mental picture. "I liked the graphic novel although I feel like it left [out] a lot of details. I prefer to have a lot of details and make a picture in my head."

Text Preference

Because I was interested in how students felt about continuing to interact with (or read) graphic texts, I asked them what type of text they would prefer to read in the future, if given a choice. As a follow-up, I prompted students to explain their answer. The majority of students said they would prefer to read a graphic text; however, several acknowledged their preference of traditional texts. To round out student responses, a couple of students admitted having no preference.

Many of the students told me they would prefer to read a graphic text in the future, which was not a huge surprise. After all, students often look for ways to minimize the amount of school work they have to complete. But what is worth discussing here are

the reasons students stated for preferring graphic texts in the future. Several students did mention the somewhat stereotypical responses about graphic texts: "I would actually want to read it;" "it has pictures to help you better understand;" "it's easier to understand;" etc. Regardless of these expected statements, other students did provide real insight. "It makes it easier to understand. It helps because I can understand what I'm reading. I could understand the graphic novel whereas the text was hard to follow." This student goes a bit deeper than simply mentioning images or ease of use; she instead verbalizes the contrast she experienced as she tried to "understand" each text. Yet another student demonstrated metacognitive thought and reflection by saying, "The graphic novel offers more ability to visualize the story and comprehend it easier."

As noted previously, a few students did state their preference for traditional texts. Their comments ranged from being distracted by the pictures to the traditional text having more details to it makes more sense. These are each valid considerations to take when thinking about the overall effect of graphic novels in the classroom. While students' scores were significantly higher, it is apparent that not all students are comfortable with reading graphic texts. This could be because some students honestly prefer traditional texts; it could, however, also be because many students are unfamiliar with the graphic format and are not comfortable reading in that way.

Teacher Interviews

Previous Experiences

I first asked teachers if they had ever used graphic novels in instruction prior to their participation in this study. I was interested in any background and/or experiences they would bring with them to this graphic adaptation and Poe unit. Going into this, I

expected that most would not have had any real previous interaction with graphic texts. Four of the five teacher participants stated they had never used a graphic novel in class. Interestingly enough, one of these four mentioned she had only ever used one or two images to convey information in her class.

Perceptions

Next, I asked teachers about their perceptions of student engagement with the graphic text. To take this further and to help provide some context, I also asked teachers how they defined engagement. The resulting comments were interesting. One teacher stated, "students were engaged. Students with the traditional texts attempted to play around." Another mentioned her students were "focused in their reading, going back and forth from the text to the questions." Her corresponding definition of engagement was being "on task and asking questions about the text, really seeming to understand and like the text." While no teachers reported their students to be unengaged while reading the graphic text, this teacher's statement best captures the overall opinion of the group.

Engagement

Because all five teachers seemed to believe their students were benefited by the graphic adaption, I asked them to describe the ways in which the graphic text helped student engagement and/or comprehension. Responses here were positive as well. "Those students of mine that read the graphic novel believed it was easy; whereas, the students who read the traditional text were anxious and concerned." A second teacher stated, "it helped them better grasp the meaning of the text. It may have hindered a little, but not really. Just talking about the pictures, which really is a good thing." One teacher mentioned not only the benefit of the graphic text, but also a criticism. "I believe the

graphic novel made comprehension of Poe very easy. However, I do not know that the text itself stretched the students thought processes as much as a straight text would. The questions on the test did help with critical thinking." This teacher brought up an interesting point by suggesting that the graphic text was not as rigorous or "text-like" as a traditional story. This point is well-taken, but there are two other issues at play with his statement. First, he mentioned at the beginning of the interview that he had no previous experiences with graphic novels. This suggests he is not familiar with the complexity of reading images. Second, this statement is very stereotypical of those who do not consider graphic texts to be on par with traditional texts.

Opinions of the Text of Interest

Teachers were also asked about their opinions of the adaptation of Poe's short story to a graphic version. They commented on the language, vocabulary and plot line specifically. All teachers stated that they believed the graphic adaptation was true to Poe's original work, with a few understandable alterations. For example, one teacher described the graphic text as being true to Poe's language, but "there was a great deal less text to read in the graphic version. The syntax was broken up into easier to read portions. Entire paragraphs were shortened to the main idea." When asked the same question, the four other teachers labeled the language of the graphic version as appropriate for the purpose.

The teachers also found the vocabulary to be true to Poe's work. "All the vocabulary used in the graphic novel came straight from the original, but as noted before, some vocabulary was left out, including some that may be a little difficult." Another teacher described how the graphic text helped her students clear up some of their

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misconceptions about the meanings of certain Poe vocabulary. She said, "students found the vocabulary to be different than what they thought were the meanings of the words. It was interesting to watch their expressions." All five teachers involved in this study, in one way or another, stated that the vocabulary used in the graphic text was true to that in Poe's original work.

In similar fashion, all five teachers described the plot line as true to the traditional story. They noted that only minor alterations were made for editorial purposes and that their students were able to successfully follow along with the plot. One teacher told me that she felt "the plot line didn't cause any students to struggle, even though they struggle with many traditional stories." I found this to be an important point. If the plot line in a graphic adaptation is in fact true to the original, and students can successfully follow the plot, this may suggest a benefit of using graphic texts in English classrooms to supplement traditional reading practices. One other teacher response is worth noting as a close to the discussion of plot. 'The plot line was spot on. It was only abbreviated in minor ways."

In an attempt to help teachers truly reflect on the graphic novel and to elicit additional information, I asked each teacher to describe for me their overall opinion of the Poe graphic adaptation used in this study. Their responses closely paralleled their previous comments, as they were all positive, even when sharing a slight criticism. The only noted criticism can be seen in the first teacher's response; "My opinions are mixed. It (the graphic adaptation) could make Poe more readable, but it also takes away from the learning stretch for many students." This concept of a learning stretch and using rigorous text is an important one to keep in mind when discussing graphic novels. However, as

was stated previously in this chapter, this teacher's comment may also be a result of his lack of experience with reading and teaching graphic texts.

All other responses given were very positive in nature. One teacher stated, "my students were thoroughly engaged and worked like I expected them to do." Although this is a fairly stereotypical response from a teacher, it does help to describe the high level of engagement students experienced. A second teacher responded, "I think it was great. The students seemed to enjoy it more than the traditional text. It helped them relate to and understand the text better." This teacher's response was much more detailed and pointed out specific benefits her students experienced (e.g., enjoyment, ability to relate and understand). One other response merits inclusion in this discussion. This teacher vehemently expressed her newfound love for graphic novels in her classroom (she had previously never taught one and had only used images in her class once or twice in the past). She responded, "my overall opinion is that for my students to effectively understand Poe, they require a graphic version of the story. At the very least, I believe that the students require some form of graphic prompt/illustration to help understand. The graphic element to this study is what made it successful." Obviously, she feels strongly that the graphic version helped her students, and while not all teachers were quite this adamant, they did all have positive opinions of the text used. A final teacher shared one comment, which demonstrates that her students also held positive opinions. "Upon completion of this study, my students have been actively asking me to use more graphic novels in my teaching as they felt the Poe story was easier to comprehend through the graphic novel." She went on to share her own opinions of this graphic text and graphic texts in general by stating, " I don't have a bad word to say regarding this

text. I believe they (graphic texts) can only help and not hinder a student's understanding."

<div align="center">**Supplemental Analysis**</div>

Post Hoc Item Analysis of the Poe Reading Test

At the conclusion of the study, I conducted an item analysis of the test to calculate a reliability coefficient (α=.879) and to make the test more reliable for future use. Both item difficulty and item discrimination were calculated.

Difficulty

After conducting the analysis, I examined items with a p-value $\geq$ .80. This choice was made because an item on a four-choice test is generally considered easy if it has a p-value of .85 or higher. Several of the test items fell into this category and were thus examined. After re-examining each test item, I saw no need to make change to or remove any of the items. Each of these items was made up of and assessed more foundational reading comprehension skills (e.g., understanding details and making predictions). Items such as these are important to a test of reading comprehension and look very similar to many of the questions they have been asked to answer on an End-of-Grade or End-of-Course test in previous ELA classes. As these items are part of a more comprehensive test, covering a range of themes, they will remain in the test for future use.

I also examined items with a p-value < 0.3 because they would be the hardest items. Only one item fell in this category (its p-value was .2). In keeping with suggestions (see discussion in Chapter 3) for creating a reliable test, there should be a range of item types and difficulty levels used to create any classroom test. With that in mind, the findings from the item analysis suggest the test used in this study meets the

suggested criteria for test construction, and all items fall within an acceptable range for classroom use.

Discrimination (D)

After completing my analysis of item difficulty levels, I examined item discrimination. I chose to examine items with a discrimination index ≤ 0.2. Only one item fell within this category; this item was retained as part of the test for future use, as it contributes to a well-rounded test containing items of increasing complexity and difficulty.

As discussed above, all items used to create this test fall within an acceptable range for classroom use. The findings from the item analysis coupled with the coefficient alpha ($\propto=0.879$) calculated for this test demonstrate the reliability of the test used to collect the dependent variable for this study and for use in future classrooms and research studies.

Summary of Findings

In this chapter, I provided descriptive statistics for the study. I also described the data analysis and interpretation of findings. I went on to discuss data from student and teacher post-interviews. Finally, I described the results from the item-analysis of the Poe test. I will discuss the implications from this study in Chapter 5. Below, however, I have provided a bulleted summary of my findings.

- Method of instruction had a significant main effect on students' reading comprehension scores. Students in both experimental groups (graphic only and graphic plus traditional) scored significantly higher than students in the control group.

- Grade level had a significant main effect on students' reading comprehension scores. Tenth, eleventh, and twelfth grade students scored significantly higher than ninth grade students. Twelfth grade students also scored significantly higher than tenth grade students.

- Gender had a significant main effect on students' reading comprehension scores. Females scored significantly higher than males.

- There were no significant interactions found.

- Not all students found the graphic text to be engaging. Many students reported enjoying and finding help in the images, but some students preferred traditional texts.

- All students, with the exception of one, noted positive differences when comparing the graphic text to the traditional text (i.e., the graphic text was easier to read and more beneficial than the traditional).

- When asked what type of text they preferred to read in the future, students' answers varied. Many reported preferring graphic texts because of the added benefit from the images and engagement, but several mentioned preferring the traditional texts they were most familiar with.

- Four of five teachers interviewed stated they had neither taught nor read a graphic novel in the past.

- All five teachers believed their students were engaged with the graphic text.

- Teachers overwhelmingly believed the graphic adaptation was true to Poe's original work. One teacher, however, described the graphic adaptation as a

condensed version that could take away from the learning stretch students go through while reading Poe.

CHAPTER FIVE:
CONCLUSION

Purpose of the Study

The purpose of this study was to examine the potential effects of graphic novels/texts on students' reading comprehension in traditional, high school English classes. I was specifically interested in investigating the potential benefits and constraints of a graphic adaptation of Poe's "The Cask of Amontillado." This study was designed to look at the graphic text in two separate ways. First, I wanted to examine the graphic text as a replacement for the traditional text. Second, I was interested in exploring the use of the graphic text as a supplement to the traditional text.

Similarly, I was interested in exploring one of the non-traditional ways (or possibilities) to engage students in the act of reading and to foster an enjoyment of reading. Graphic novels have the potential to engage students and to foster enjoyment in reading; with that in mind, this study was ultimately about the use of a non-traditional text and non-traditional literacy practices to encourage reading comprehension.

Conclusions

Several important findings from the data emerged throughout analysis. First, method of instruction had a significant main effect on students' reading comprehension scores. Students in both experimental groups (E_1 and E_2) scored significantly higher than students in the Control group. That is, both groups reading the graphic adaptation (whether in isolation or as a pre-requisite to the traditional text) performed better on the test than their peers who read the traditional text only. However, there was no significant difference found between the two experimental groups. This is an interesting finding

indeed because it suggests that the graphic text benefited students, regardless of whether or not they had access to the traditional version of the story.

Second, a significant main effect was found for grade level. Students in grades ten through twelve scored significantly higher than their ninth-grade peers. Likewise, students in twelfth-grade scored significantly higher than students in tenth-grade. From these findings, it seems that students in ninth-grade do no yet benefit from the additional instruction that older students (in higher grade levels) have received. Students in twelfth-grade have been in high school the longest, have received more reading instruction, and have taken more English courses than students at any other grade level. This can help to explain why seniors scored significantly higher than ninth-grade and tenth-grade students.

Third, gender had a significant main effect on students' reading comprehension scores. Female students scored significantly higher than their male counterparts. This finding is interesting for two main reasons. Traditionally, there has existed a stereotype that males perform better in math and science classes, while females perform better in courses such as English. The finding that girls scored better promotes this long-lasting stereotype. In contrast, one of the arguments against graphic novels has been the stereotype that they are books for boys. This finding completely contradicts this stereotype and offers justification for future investigation.

Fourth, several findings emerged from the qualitative, supplemental analysis of student and teacher post-interviews. While many students reported being engaged with the graphic text, not all students found the adaptation to be engaging. Most students discussed positive differences between the graphic and the traditional texts. Students

varied in their future reading preferences; many students did report preferring graphic texts for their future reading, but several stated a preference for traditional, familiar texts.

Teacher interviews elicited interesting information as well. Four out of five teachers reported having never read or taught a graphic novel in the past. After participating in the study, all teachers stated that their students were engaged with the graphic adaptation. Lastly, all teachers believed the graphic adaptation was true to Poe's original work; however, one of the classroom teachers stated a belief that the graphic text, while true to Poe's story, was a condensed version that did not allow students as much of a learning stretch.

Just as important as the findings from this study is what was not found from the data. While all three independent variables were found to have significant main effects, there were no significant interaction effects between these variables. This is perhaps due to the reduction in cell size at the sub-factor levels (See Table 3.2 in Chapter 3 or Table 4.2 in Chapter 4). These small participant numbers contributed to a decrease in power for interaction tests. With a larger overall sample size, and larger numbers at the individual levels of each factor, significant interactions are indeed possible.

The findings from this study contribute to the gap in the literature of graphic novels in education and graphic novels in English classrooms (and for the purposes of reading comprehension). With that said, more research is needed to fully understand the effects of graphic novels on students' reading comprehension and ultimately the place of graphic texts in English curricula. Several implications for the field and recommendations for future research are provided below.

Implications for the Field of ELA

The findings from this study suggest implications for English teachers and the field of English language arts. Like all classroom texts, teachers must fully consider the pedagogical implications of the graphic format and of any graphic novel before making any pedagogical decisions. Teachers should give specific thoughtful consideration to the benefits and possible constraints of graphic novels before adding any title to a classroom reading list or library. With this in mind, the data, both from this study and from the limited available literature, point out potential benefits of graphic texts, especially in high school English classrooms. However, once teachers decide to make the transition to non-traditional texts, and graphic texts specifically, careful consideration should be given to text selection.

In the same way teachers would scrutinize any potential classroom novel or text before integrating it into their instruction, educators should give careful consideration to any graphic text proposed for classroom use. English teachers would never select a book to teach which they had never read. Likewise, teachers should not select a graphic novel for use in the classroom simply because it has the potential to be engaging. Teachers should never select a text of any type to use within instruction without first reading the text and subsequently scrutinizing it.

If graphic novels are to provide any benefit within the field of English language arts, we must overcome the overall lack of familiarity with the graphic format. This refers to both teachers and students. In my interviews, a large proportion of students reported having never read a graphic novel; in similar fashion, the bulk of the teachers

involved in this study discussed their inexperience both reading and teaching graphic texts.

Two brief, anecdotal, stories are worth mentioning here. First, as I met with teachers to begin the planning stages for this study, one of the proposed teachers approached me and said (in an almost embarrassed whisper) that she could not teach graphic novels. When I asked her why this was the case, she responded, "because I don't teach books with bad language and sex in them." While this is, admittedly, an oversimplification of the concept of lack of familiarity with this text-type, it does paint an accurate picture of the traditional tunnel vision often present in the English classroom. Second, a parent of one of the students participating in this study phoned my advisor to express her concern over "graphic" and inappropriate texts being used with high school students. Once it was explained to her that graphic novels were texts merging traditional language and images, the parent realized her mistake, agreed her daughter could participate, and apologized for the misunderstanding. While this response may not be overly common, it is representative of the ways in which non-traditional instructional resources are sometimes received and perceived. These two examples call to attention the unfortunate connotations that come along with certain terms (e.g., graphic). It is important for educators to keep in mind potential reactions, from parents and other educators, to the semantic meaning(s) and interpretation(s) of the term "graphic" and how these can affect perceptions and ultimately academic opinions.

To harness any power graphic novels have to offer, educators must give real consideration to the benefits graphic texts may offer and begin to move beyond and away from contemporary graphic novel stereotypes. As the data suggest, graphic novels are

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not simply picture books. They are not simply boy books. While the sample size and singular geographic location of this study may prevent the findings from being generalized to the larger population, potential benefits are apparent and suggest that teachers should, at minimum, reflect on their definitions of the term *text* and their beliefs of what it means to (as the Common Core suggests) interact with a wide variety of complex and multi-modal texts.

Recommendations for Future Research

The Adaptation Used in the Study

The text chosen for this study was one specific adaptation of Edgar Allan Poe's work, one of several. Previous research (Kaulfuss, 2012) found a graphic adaptation of one of Shakespeare's plays to significantly contribute to students' reading comprehension. Similarly, this study found one Poe adaptation to positively affect reading comprehension. These findings do contribute to a rather large gap in the literature and begin to breakdown common misconceptions of the graphic format; however, additional research is needed to explore other graphic adaptations of Poe's short stories.

Also, future research is needed to investigate the benefits of other short story graphic adaptations to continue to shed light on the pedagogical implications of graphic novels in English classrooms. Future research may examine any similarities found across authors and the choices artists make while adapting a text. Additionally, future research can begin to compare findings across studies (of short stories, plays, or across genre types) to determine whether or not similar results are present. If educators are to fully

accept graphic texts as, at least, supplements to more traditionally taught works, additional research must be conducted to flesh out our current understanding.

Other Genres and Graphic Novels

While it is important to continue conducting research on the value of graphic adaptations in the classroom, a more comprehensive understanding is necessary. Other genres and titles should be examined. For example, research using graphic adaptations of novels, poetry, and non-fiction is needed. The concept of the graphic novel has expanded greatly. Long gone are the days where the term graphic novel referred only to the exploits of superheroes. The idea of the graphic novel as a *genre* is not accurate, either. The graphic novel is a modality, a way of telling a story or sharing information, and it covers all genre types.

As we consider this expanded definition of the graphic novel, educational research should do the same. My review of the literature for this study only turned up one research study examining the effects of graphic novels on reading comprehension. Including the current study, there are but two investigations of the relationship between graphic texts and reading comprehension. A great deal of research is still needed. Aside from graphic adaptations, future research is needed to better understand the effects of graphic novels as a whole on student engagement in reading and comprehension levels. Research should be conducted using graphic novels as stand-alone texts, not just as graphic adaptations of existing texts. A more detailed understanding is needed if graphic novels and the graphic format are to be widely accepted in the field of English education and within English classrooms.

Unfamiliarity with Graphic Texts

As I mentioned previously, many teachers and students are unfamiliar with graphic novels, both as classroom texts and as personal reading material. In my interviews, most students reported having never read a graphic novel previous to this study. In like kind, teachers overwhelmingly stated that they had little experience with graphic novels in their personal or professional lives. This idea of unfamiliarity with the graphic format and with graphic texts should be examined.

Future research can take two separate approaches. First, future research should provide a detailed look at teachers' beliefs about graphic novels to help establish potential barriers to the use of graphic novels in school, as well as confounding effects within research studies. To add a second layer to this investigation, additional research should include an examination of prevalent stereotypes that may potentially prevent the use or consideration of graphic novels.

Second, as graphic novels receive more attention and use in classrooms, further research will be needed to examine how current benefits and/or negative effects change. That is, as graphic novels are more widely used and read, and the ideas of novelty or uniqueness and perceptions alter, researchers can begin to look at graphic texts in more grounded, authentic, and established ways.

Grade Levels and Setting

This study was situated in one high school, with only high school students as participants. Future research can greatly expand on this and include different grades and grade bands, as well as a larger range of grades. Future studies can examine the effects of graphic novels and graphic adaptations of texts on all levels of learners. Researchers

should examine the uses of graphic novels with students at the elementary level and the middle school level. Additionally, research examining the potentialities of graphic texts with adults can help to round out the discussion in the literature.

Likewise, research is needed in different settings and contexts. The findings from this study suggest the benefit of graphic novels on students' reading comprehension in this specific geographic location. Future research should investigate the use of graphic texts in different and varied locations and settings. To begin to fully understand the benefits and effects of graphic novels, research should be conducted in multiple contexts and areas. For example, similar studies can be conducted in urban and suburban areas, areas of poverty and of affluence, and areas with small and large minority populations. If graphic novels are to receive considerable attention and use in U.S. schools, a broad and diverse range of evidence supporting their use is needed.

Gender

The role of gender in reading comprehension was explored as one of the independent variables within this study. However, additional research is necessary here. As part of this study, gender was only one of three variables of interest. Future research can explore more fully the role of gender as a part of reading comprehension and engagement level as students interact with graphic texts in their English classes.

The results from this study do contradict the "boy book" stereotype often associated with graphic novels. Results from additional studies are needed to completely understand this concept and to begin to debunk this belief. These additional findings can also be compared to the findings from the current study to see if they are applicable to other locations and other students.

Sample Size

The current study utilized an acceptable sample size (N = 217). To be able to generalize results to the much broader population, more research is needed in communities across the country and using larger sample sizes. Future research should be conducted with more students, with more teachers, and in more classrooms. This additional research can help us understand the uses and benefits of graphic texts in the larger educational context.

Significant interaction effects were not found within this study. This is possibly due to the small cell sizes at certain sub-factor levels. This is an additional area in need of future study. Further research is needed with the previously mentioned larger sample sizes to ensure that power at all interaction levels remains high. This research will help us to understand how independent variables work together and affect one another as students read and interact with various text-types. It will also help to better understand the reading comprehension processes of 21st century students and of multi-modal texts.

Language Learners

While the current study did not specifically examine the role graphic novels play in the engagement and reading comprehension of English Language Learners or of students whose first language is not English, the setting for this study was a rural high school situated in an agricultural community with a large and ever-rising Hispanic population. The vast majority of these students speak English, and speak English well, but in many cases it is either not their first language or not the only language they speak. The findings from this study that students in both experimental groups scored higher than students in the control group suggest that the Hispanic students in this community

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benefited from the graphic text. It is important, however, for future research studies to be designed to examine the effects of graphic novels on ELL students and students who speak a different language at home.

Currently, there is a thread of conversation present in the literature. Regardless of that fact, few studies have examined the uses of graphic novels on students whose first language is not English and who struggle to interact with the English language and with texts written in English. As the landscape of the U.S. population continues to change, it is, and will continue to become, extremely important that we understand how to best meet the literacy needs of these students. Empirical research is needed to contribute to the current discussion in an effort to begin to move our understanding forward.

Conclusion

For this study, I was interested in the effects of graphic novels on students' reading comprehension scores. I specifically examined the benefits and effects of a graphic adaptation of Edgar Allan Poe's "The Cask of Amontillado." The findings suggest that the graphic text benefited the study participants. Similarly, when interviewed, the students and teachers associated with this study noted positive perceptions of and experiences interacting with the graphic text.

From this study, I learned two important lessons. Fist, data from the current study point to potential benefits of graphic texts in high school English classrooms. As an echo to this, all teachers who participated in this study have expressed plans to continue using graphic novels in their classroom instruction. Second, although the data show significant positive effects from reading the graphic adaptation, it is important to look beyond the quantitative data when considering the use of graphic texts. During their interviews,

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several students mentioned having difficulty reading the graphic version. Some stated that the use of fewer words, and even the use of images, were contrary to their normal reading processes, making it tough for them to read and fully understand the text.

Incorporating graphic novels into classroom instruction, like the use of any new text or text-type, requires several considerations of teachers. As mentioned above, teachers and educational researchers should consider the potential benefits and constraints of graphic novels. Perhaps the most important constraint to keep in mind is that the graphic format is new to many students (and teachers), and instruction and practice may be necessary to ready students to use this type of text. Additionally, teaching with graphic texts requires teachers to shift from traditional views of texts and literacy. To fully harness any benefit graphic novels may offer, teachers must familiarize themselves with the graphic format and the ways it can benefit their instruction and their students. Like any quality instructional design, the use of graphic texts for instructional purposes requires thoughtful planning.

APPENDICES

Appendix A

Name/ID: _____ Grade: _____ Gender: Male/Female

Circle the Text You are Using: <u>Traditional</u>   <u>Graphic</u>   <u>Both</u>

Instructions: You have been given test form "A." Beside your name/ID, please write "A." Also, please provide your grade level (e.g., 9th, 10th, 11th, 12th), your gender, and the text type you are using in the provided spaces above.

You may use your text as you take this test. Note that some questions include the relevant page numbers in the traditional and the graphic texts. For each test item, select the *best* answer. Please mark only one answer for each question.

Please Note: In the page numbers provided (e.g., p. 1/40), the first page number refers to the traditional text version, and the second page number refers to the graphic novel.

1. According to Montresor, he decides to seek revenge against Fortunato because Fortunato
   a. Attacked him physically
   b. Injured him more than a thousand times
   c. Injured his ancestors
   d. Stole some valuable wine from him
2. It is apparent that the narrator wants to punish Fortunato in such a way that:
   a. Fortunato will not suffer
   b. Fortunato will know who his punisher is
   c. Everyone will know who harmed him
   d. Fortunato will never forget it
3. According to Montresor, revenge would not be successful if he were
   a. Not punished for taking revenge
   b. Recognized by his victim
   c. Punished for taking revenge
   d. Compelled to murder
4. What can you predict from the following sentence spoken by Montresor?
   "At length I would be avenged; this was a point definitely settled…" (p. 1/39).
   a. Montresor will not do anything
   b. Montresor will apologize
   c. Montresor will carry out his revenge
   d. Montresor will be murdered
5. Fortunato is an expert on:
   a. Gems
   b. Painting
   c. Wines
   d. Literature

6. Fortunato's costume of a jester is important to note because
   a. He often jests about his knowledge of wine
   b. He is foolish about going into the catacombs with his severe cold
   c. Montresor plays him for a fool
   d. Montressor laughs at his jokes
7. At the mention of Luchesi, the narrator plays on Fortunato's weakness:
   a. His pride—Fortunato thinks he is much better than Luchesi
   b. His alcoholism—Fortunato drinks all the time
   c. His stupidity—Fortunato is not very wise
   d. His loneliness—Fortunato is not very powerful
8. When Fortunato offers to judge the wine, Montresor responds by
   a. Being sincerely eager
   b. Being sincerely reluctant
   c. Pretending to be eager
   d. Pretending to be reluctant
9. What can the reader infer from the following sentence?
   "Come," I said, with decision, "we will go back. Your health is precious" (p. 3/42).
   a. He is worried about Fortunato's health
   b. He has changed his mind about getting revenge
   c. He wants to leave
   d. He is pretending he is concerned for Fortunato
10. Why does the narrator give Fortunato the Medoc?
    a. To keep him drunk
    b. To occupy his mind
    c. To make himself feel better
    d. To control his cough
11. Why does Montresor warn Fortunato about the air in the vaults?
    a. Montresor wants to make sure that Fortunato does not suspect his motives
    b. Montresor wants to discourage Fortunato from entering the vaults
    c. Montresor wants to avoid responsibility for Fortunato's death
    d. Montresor wants to warn Fortunato that death is near
12. The presence of the flambeaux suggests that the story takes place:
    a. In the 21st century
    b. A long time ago
    c. On an island
    d. In the future
13. The skeletons in the walls of the catacombs are the remains of
    a. Carnival merrymakers
    b. Montresor family enemies
    c. Montresor's ancestors
    d. Montresor's prior servants

14. When Fortunato says, "I shall not die of a cough," Montresor says, "True, true,"
    (p. 3/42) because he:
    a. Knows the cough is not serious
    b. Wants Fortunato to drink more wine
    c. Knows Fortunato will die for a reason other than a cough
    d. Is psychic
15. The building materials being present in the crypt suggests
    a. People buried building materials with their dead
    b. Montresor had prepared the crypt ahead of time
    c. Montresor had never entered the crypt before
    d. The materials were left after a previous burial
16. Montresor used the building stone and mortar
    a. To repair the wall
    b. To wall up Fortunato in the crypt
    c. To build a new crypt
    d. To scare Fortunato to death
17. When Montresor says his "task was drawing to a close," his task was
    a. Chaining Fortunato
    b. Building the wall
    c. Exploring the catacombs
    d. Finding his Amontillado
18. As the last stone is being put into place
    a. Fortunato escapes
    b. Fortunato laughs
    c. Fortunato's bells jingle
    d. Montresor laughs
19. At the end of the story, we know Fortunato is dead because
    a. The narrator says, "Fortunato is dead"
    b. The torch burns out
    c. No one has moved the bones or masonry for 50 years
    d. The story ends
20. Which line below hints that maybe Montresor had second thoughts or doubts
    about Fortunato?
    a. "I drink to the buried that repose around us" (p. 3/43).
    b. "Nemo me impune lacessi" (p. 4/43)
    c. "There was then a long and obstinate silence" (p. 6/47)
    d. "There remained but a single stone to be fitted and plastered in" (p. 6/48).
21. In the story, why does Fortunato go into the vaults?
    a. To meet Montresor's ancestors
    b. To find some peace and quiet
    c. To attend a meeting of masons
    d. To prove his wine expertise

22. Using context clues, what is the best meaning for the word "borne" in the story?
    a. Given
    b. Seen
    c. Received
    d. Heart About
23. Using context clues, what is the best meaning for the word "impunity" in the story?
    a. Lightly
    b. Unknowingly
    c. Until death
    d. Without consequence
24. How are Montresor and Fortunato alike?
    a. They share an interest in fine wine
    b. They have affection for each other
    c. They both have respect for Luchesi
    d. They both have revenge in their nature
25. By never mentioning the insult that Fortunato committed, Poe
    a. Confuses the reader
    b. Leaves out an important part of the story
    c. Focuses our attention completely on Montresor's revenge
    d. Forgot to include the best part
26. What is one reason that the reader knows Montresor is an unreliable narrator?
    a. He is drunk on amontillado
    b. He is snobbish and wealthy
    c. He does not reveal everything about the past
    d. He is feverish and unable to think clearly
27. Which evidence best supports the claim that Montresor is insane?
    a. He wears a strange consume
    b. Thought of Fortunato's death makes him smile
    c. He pays full price for a cask of wine
    d. He does not ask Luchesi to test the wine
28. What is a cask?
    a. A crypt
    b. A wooden container for the dead
    c. A story
    d. A wooden container for liquid
29. A "pipe" of Amontillado is:
    a. A large cask
    b. A small tube
    c. A devise used for smoking
    d. A glass
30. In "The Cask of Amontillado," who is the narrator of the story?
    a. Luchesi
    b. Montresor
    c. Fortunato
    d. Amontillado

Appendix B

Student Interview Outline—Sampled from Groups E_1 and E_2:

1. What are your previous experiences reading Edgar Allan Poe's short stories?
        a. Have you read any as a student?
        b. What about for your own entertainment?
2. What are your prior experiences with graphic novels?
        a. Do you have any prior experiences with comic books?
3. What was your overall impression of "reading" the graphic novel?
        a. Was it engaging?
        b. Was it interesting?
        c. Was it different than traditional reading? In what ways?
        d. Did the images and layout help or hinder your reading?
4. Do you feel like you fully understood (comprehended) the story?
        a. Can you tell me about your favorite part?
5. If given the choice in the future, would you prefer to read a traditional story or a graphic version?
        a. Why? What makes you want to read that type of text?
        b. How would that type of text benefit you over the other?
6. Is there anything else you would like to add that can help me understand how you interacted with the graphic novel?

For Group E_2 Sample Only:

1. How were your experiences with each of the texts different?
2. Was the vocabulary and language used in the graphic version true to that used in Poe's version?
3. What is your overall opinion of the graphic novel?
4. Did the characters depicted in the graphic text match up with your mental image of them from the traditional text?

Thank you for your time, for your input, and for participating in this study.

Appendix C

Teacher Interview Outline—Used with All Participating Teachers:

1. Have you ever used graphic novels in instruction prior to this study?
    a. Have you ever seriously considered using them?
2. What have your students said about reading Poe in the past?
    a. What about this experience?
3. Did you perceive students to be engaged while reading?
    a. Were those with traditional texts engaged?
    b. Were those with the graphic text engaged?
    c. Were those students reading both text types engaged?
    d. Follow Up: How did you know they were engaged? How do you define
engaged?
4. From your observations, in what ways did the graphic text help and/or hinder student
    engagement and comprehension?
5. What is your overall opinion of the Poe graphic adaptation used for this study?
    a. Was the language true to Poe's language?
    b. What about vocabulary?
    c. What about plot line?
6. Is there anything else you would like to add that may assist me in better understanding
    the potential benefits and constraints of using graphic novels in the classroom?

Thank you for your time, for your input, and for participating in this study.

Appendix D

Poe Adaptations Reviewed

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