THE STRATEGIES, TOOLS, AND VISUAL MEDIA USED BY K-12 CURRICULUM DIRECTORS, INSTRUCTIONAL COACHES, SPECIALISTS, AND WRITERS TO TEACH READING: A DELPHI STUDY

by

ALEXANDER NGHIEM FRASIER

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Abstract

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Alexander Nghiem Frasier, PhD

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Supervising Professor: James Hardy

The purpose of this study was to investigate the strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in Texas. The study examined what strategies, tools, and visual media were encouraged during professional development courses. The potential of using visual media such as graphic novels, comic books, and Japanese manga were investigated. The Delphi Method was incorporated.

An expert panel of 35 participants came to consensus on 21 important items composed of 2 strategies, 10 tools, and 9 visual media items used to teach reading. These same items were encouraged during participants' professional development courses. Participants rarely used visual media such as graphic novels, comic books, and Japanese manga style comic books to teach reading.

Participants indicated willingness to use these items to teach reading, yet unfamiliarity, few resources, and a lack of training were concerns. The two important strategies were: 1-receiving professional development training to incorporate visual media and, 2-promoting reading clubs and organizations.

The ten important tools were: 1-computers and laptops, 2-educational reading software, 3-internet blogs, 4-projectors and document cameras, 5-Promethean Boards and interactive whiteboards, 6-tablets, iPads, and (electronic readers) e-readers that incorporate (electronic books) e-books, 7-video websites such as YouTube and DailyMotion, 8-websites that offer interactive visual reading programs, 9-websites that allow making movies, animated cartoons, and video streaming, 10-word processing and presentation software such as Microsoft Word, PowerPoint, Prezi, and Google Docs.

The nine visual media items were: 1-art, paintings, and drawings, 2-books and short story readers that include text (words), images, and pictures, 3-comic books, 4-flashcard, graphs, charts, and graphic organizers, 5-graphic novels, 6-movies, movie clips, and animated cartoons, 7-political cartoons and comic strips, 8-still pictures, photos, and digital images, 9-traditional newspapers and magazines that include text (words), images, and pictures used to teach reading.

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Chapter 1

Introduction

College readiness has become a prominent concern among potential university bound students, educators in K-16, politicians, and constituents who have invested financially in the well-being of universities. Researchers and educators across the K-16 educational spectrum have come to realize students are not prepared for college coursework (Terry, 2007; Hoyt & Sorenson 2001; Ignash, 1997; Kozeracki, 2002; Levin, 2001; McCabe, 2000; Roueche & Roueche, 1999; Shults, 2000).

College admissions assessments indicate readiness problems (Graham & Perin, 2008). According to the National Center for Education Statistics (2011), "As student diversity has increased, the overall average score on the critical reading section has declined over the last decade from 505-502" (p. 15). Also, according to the American College Test (ACT) reading data shows readiness for college level reading is at abysmal lows (Bracey, 2006). Graham and Perin (2008) cited in the 2005 national report that "approximately 32% of high school graduates are not ready for introductory English writing and literature classes at the university level" (p. 10). Slightly more than half of ACT test takers score up to par on the reading assessment (Bracey, 2006). When students are unable to meet the minimum admissions standards on assessments, they are required to complete developmental courses. According to a National Center for Education

Statistics report (2011), 40% of incoming freshman in 2006 were required to take developmental courses in reading, writing, science, or mathematics at four-year institutions.

The need for developmental courses indicates that students are entering college with inadequate reading and mathematics skills. The lack of basic reading skills has been financially detrimental to the K-16 educational system by costing universities and taxpayers nearly $2.5 billion a year on developmental classes (Schacter, 2008). Wise (2009) explained annually, 1.2 million high school students drop out and many of these dropouts lack basic reading skills. Over a lifetime an illiterate dropout costs the nation nearly $260K in lost income (Wise, 2009). Dropouts are more likely to be arrested and incarcerated than their literate high school graduate counterparts (Wise, 2009). Also, critics argue the existence of developmental coursework in higher education provides evidence that many incoming freshman are not academically prepared and should not be admitted (Harwood, 1997; Marcus, 2000; Trombley, 1998). Researchers have found that remedial education has negatively affected the quality of regular course offerings on 2-year and 4-year institutions (Hoyt & Sorenson 2001; Ignash, 1997; Kozeracki, 2002; Levin, 2001; McCabe, 2000; Roueche & Roueche, 1999; Shults, 2000).

Roueche and Roueche (1999) detail the rise of developmental courses in the American Community College System. They note that community college

students often enter the system without the necessary academic skills. Roueche and Roueche (1999) explain these students are even further behind students who enter 4-year universities and may face an uphill challenge.

Over the past several decades reading habits have evolved with the advent of new visual media and new technologies. Students gather information faster by using focal points such as hypertext and images (Moorefield-Lang & Gavigan, 2012). Visual media such as graphic novels and new technologies provide a seamless transition to reading due to their visual nature (Moorefield-Lang & Gavigan, 2012). Students look at an image, highlight pertinent information, minimize text, and move on (Moorefield-Lang & Gavigan, 2012). Graphic novels, comics, and Japanese manga style comic books that integrate high volumes of text and image are popular among students and, they are gradually becoming accepted in the academy (Downey, 2009). The medium has evolved from popular culture into a tool to attract reluctant readers, and has become a medium to increase literacy, comprehension, knowledge, and creative thinking (Downey, 2009). Educators are only beginning to discover the medium and are sparsely using them in their lesson plans. One day graphic novels, comics, and manga may be built into the textbook plans and American curriculum (Downey, 2009). It is clear traditional literacies are evolving. With the addition of new visual media and communication technologies there are many reading possibilities to explore concerning graphic novels, comics, and manga.

Statement of the Problem

College readiness is a prominent K-16 educational concern (Stoops, 2003). Numerous studies support the belief that U.S. students are not adequately prepared for college level coursework (Terry, 2007). Large numbers of students struggle to meet the academic demand facing them upon arrival at university, and 40% of incoming college freshman are required to register for developmental reading and writing, science, or mathematics courses (National Center for Education Statistics, 2011). According to the statistics from the U.S. Education Department (2006) college freshman who are enrolled in developmental reading courses are 40% less likely to graduate than those who are placed into other non-reading developmental coursework. Adelman (1999) explained reading is the rudimentary skill most needed to be college ready. Also, clearly improving and reducing the need for developmental courses in grades K-16 is paramount. Thus, in this study the reading strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading were examined.

Purpose of the Study

The purpose of the study was to investigate what strategies, tools, and visual media are currently used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading. In addition, the study wished to discover what types of visual media are being encouraged during professional

development training to teach reading. The study was particularly interested to learn if visual media such as graphic novels, comic books, and Japanese manga style comic books are being utilized.

Rationale

This study was conducted to examine what strategies, tools, and visual media are being used by decision makers and experts to teach reading in K-12 education in the state of Texas. Gaining insight and a deeper understanding of how reading strategies, tools, and visual media are being used and taught in K-12 education may aid educators to align reading curricula across the K-16 educational systems. Also, this insight may help to reduce the growing need for developmental reading coursework in K-16 reading education.

Data was collected from an expert panel. The panel consisted of K-12 reading curriculum directors, instructional coaches, specialists, and writers from school districts across the state of Texas. The precise strategies, tools, and visual media used to teach reading were examined. Experts from small, medium, and large school districts participated in the panel.

Research Questions

1. What types of visual media do curriculum directors, instructional coaches, specialists, and writers incorporate to teach reading?
2. What types of visual media are encouraged during professional development courses to teach reading?

Theoretical Framework

This body of research used the New London Group's theoretical multiliteracies framework as a guide to find greater meaning of the impact of strategies, tools, and visual media used to teach reading. The New London Group (1996) developed a new pedagogical literacy framework and called it 'Multiliteracies'. This framework was developed to broaden and include not only traditional linguistic literacies but added new literacies in multimodal textual practices in pedagogy (New London Group, 1996). In contrast to the singular literacy, multiliteracies and new literacies are wider concepts including texts, language, situated meaning, technology, popular culture, power, identity, and critical stance (Collins & Blot, 2003; Gee, 1996).

The New London Group created the term 'Multiliteracies' to incorporate two new concepts in response to how modern literacy was changing. First, multiple modes of communication connected with media, mass media, multimedia, and the internet were addressed (New London Group, 1996). Next, they discussed literacy in relation to the importance of cultural and linguistic diversity as a consequence of migration and globally marketed services (New London Group, 1996). The multiliteracies pedagogy posits four related components: situated practice, overt instruction, critical framing, and transformed practice (New London Group, 2000). First, situated practice builds on the life and world experiences of students that situate meaning making in real-world contexts.

Next, overt instruction guides students to use explicit metalanguage design. Then, critical framing encourages students to interpret the social context and purpose of designs and meaning. Lastly, transformed practice takes place when students transform existing meanings to design new meanings (New London Group, 1996). These components of pedagogy do not constitute a linear hierarchy and can happen simultaneously, randomly, and or be related in complex ways. Each of these elements may be repeated and revisited at different levels' (New London Group, 2000).

The New London Group's multiliteracies framework explains new literacies integrate multiple meaning-making systems, such as language, image, sound, and movement (New London Group, 2001). The components of the multiliteracies framework explain that students learn to read from multiple mechanisms, i.e. audio, spatial, linguistics, gestural, and visual modes of learning. Also, the framework explains there is a modernization of multiple sources through which students learn reading and obtain new information. Then, the framework explains the multiliteracies framework is a way to use new and old methodologies by looking at multimodal, digitally mediated, culturally diverse, and dynamic multiliteracies for changing times (New London Group, 1996). In this study it was helpful to researchers in attempting to understand reading strategies, tools, and visual media to use a lens by which to examine reading visual media. The New London Group's multiliteracies framework provided such a lens.

Significance of the Study

The majority of American universities and junior colleges offer developmental courses for students who lack reading, writing, and mathematic skills essential for university level work (Roueche & Roueche, 1999). Levey (2006) found 40% of traditional undergraduates have taken at least one developmental course. Remediation is even more prevalent among older and nontraditional students (Woodham, 1998). Developmental coursework has become a polemic issue among politicians over the past several decades (Kozeracki, 2002). Critics of developmental coursework suggest that some institutions have lowered their standards for admission and have watered down their courses to accommodate unprepared students (Bennett, 1994; MacDonald, 1997, 1998, 1999; Traub, 1995). Levey (2006) points out only about a quarter of community college students' transfer to four-year universities within five years. Critics of developmental courses claim at-risk students will have a longer road to get to four-year universities (Levey, 2006). In addition, others argue a disproportionate percentage of students who must take remedial courses are African American and Hispanic (Levey, 2006). Students from families in the lowest quartile of socio-economic status (SES) are more likely to take remedial coursework (Levey, 2006). Interestingly, 24% of students from the highest quartile of SES families have been found to take remedial courses in college (Levey, 2006).

The inability to read effectively and efficiently has consequences on the K-16 educational systems. The need for developmental coursework in reading has created a large disconnect between college readiness and university standards. There are numerous stakeholders involved. Educators must identify the problems and align systems to traverse the gap into a more proficient and literate society. This study was designed to examine the strategies, tools, and visual media that K-12 level curriculum directors, specialists, and writers use to teach reading. Also, the study examined what strategies, tools, and visual media were encouraged to use during professional development training among participants. The study explored the capacity in which these experts incorporate the use of visual media such as graphic novels, comic books, and Japanese manga to teach reading.

Methodology

This study used the Delphi Method to investigate the two research questions. The Delphi Method was designed by the RAND Corporation in the 1950's by Olaf Helmer and his colleagues (Cope, 1981). A total of 460 experts were invited to participate in this study. Thirty seven initially agreed to take part in the study. A total of 35 participants completed three survey rounds. Research data was collected online using the Survey Monkey software tool. Delphi panelists consisted of K-12 reading, English Language Arts (ELA) curriculum directors, instructional coaches, specialists, and writers. All participants were volunteers. These particular panelists were selected because they must develop,

design, write, and teach educators how to implement reading curricula for school districts on a large scale. These expert participants affect students' reading pedagogy across multiple levels of alignment and grade levels. Thus, they prepare the next generation of students by creating better readers who will hopefully require less developmental coursework in higher education.

The Delphi Method enables the search for consensus to be conducted in a logical, order driven, systemic, and empirical manner without the need to have all panelists meet as a group (Starling, 1988). Data is gathered among participants anonymously. Fish & Osborn (1992) explain that the Delphi Method promotes structured communication among experts by providing feedback on individual contributions of ideas and an assessment of group consensus at multiple stages. Kreber (2002) indicates the Delphi Method allows experts to construct the content of a questionnaire. The open ended nature of the questionnaire gives participants the opportunity to elaborate their answers which helps underline richness in thematical responses (Rowe, 1994). Also, Clayton (1997) recommends a panel size of 15-30 participants with similar backgrounds to take part in the Delphi Method.

Treatment of the Data

The Delphi Method required researchers to collect three rounds of data to reach consensus. The first round consisted of two open-ended questions to generate lists of important items. After the first round of data collection

researchers identified, coded, and collapsed the initial 50 items into 25 items. Then, researchers developed a survey with 25 questions using a Likert scale and asked participants to rate the importance of each item. Powell (2003) explained consensus can be accomplished in multiple ways, with some researchers establishing a percentage level for inclusion items, while other researchers (Lindeman, 1975, Bond & Bond, 1982, Gabby & Francis, 1988, Hartley, 1995, Gibson, 1998) indicate interpretation is left to the reader. Powell (2003) detailed percentage levels for inclusion items can be set according to the design of the individual Delphi study with common mean percentage thresholds of 2.5, 3, and 4. In this study ratings of importance were determined based on the percentage of items getting a mean score between 1 and 5. In the second round of data collection items that were rated with a mean score of 3 or higher were considered important. Items rated with a mean score of 2.9 or less were considered as unimportant. In this study researchers used multiple descriptive statistics methods to determine consensus. Researchers calculated the mean, median, mode, and converted the mode to a percentage. Anderson (2003) also used a similar evaluation rating system to determine if items were important and not important. In the third round of data collection consensus was realized when the majority or at least 51% or more of participants agreed each item in question was important to reading.

After collecting and analyzing data from round two researchers were left with 21 items. In the third and final round of data collection participants were asked to confirm and agree the remaining items from the second round of collection were important to teaching reading. Anderson (2003) explained the degree of consensus and the percentage of importance and priority rank will help identify the rank order of important items for related research questions and help participants come to consensus. Linestone and Turoff (1975) noted in the final round of data collection usually outlined a consensus of opinion among panelists. At the conclusion of the study all expert panelists reached consensus and agreed that 21 items were important strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading.

Definition of Terms

1. *Comic Book:* A comic book is a juxtaposed pictorial and other images in deliberate sequence intended to convey information and or to produce an aesthetic response from the viewer (McCloud, 1994).
2. *Curriculum Director:* A curriculum director is a person who manages an organized group of people or a part of an organization such as a school or institution (Cayne & Bolander, 1991).

3. *Curriculum Writer:* A curriculum writer is someone whose work is to write, design, and edit curricula and instruction for educational purposes (Cayne & Bolander, 1991).

4. *The Delphi Research Method:* The Delphi Research Method is a research technique used to anonymously gather data from participants in three data collection rounds. It enables the search for consensus to be conducted in a logical, order driven, systemic, and empirical manner without the need to have all panelists meet as a group (Starling, 1988).

5. *Graphic Novel:* A graphic novel is a thick comic book that is thick enough to need a spine (Yang, 2008). Graphic novels are a part of a growing effort to cast the comic book medium in a new more literary light and apart from the genres usually associated with it (Yang, 2008).

6. *Instructional Coach:* An instructional coach is a private teacher who gives lessons in a particular subject such as reading, writing, history, math, and science (Cayne & Bolander, 1991).

7. *Japanese Manga:* Japanese Manga are stories told in sequences of pictorials and written cartoons made by Japanese artists for a Japanese audience. They resemble Western graphic novels and comic books (Schodt, 1986).

8. *Reading Strategies:* Reading strategies are practices and methods aimed at improving and teaching reading skills (Tierney & Readence, 2000).

9. *Specialist:* A specialist is one who specializes in a particular occupation, practice, or branch of learning such as a mentor or a teacher (Cayne & Bolander, 1991).

10. *Tool:* A tool is an instrument or apparatus used in performing an operation or necessary in the practice of a vocation or a profession (Cayne & Bolander, 1991).

11. *Visual Media:* Visual Media in this study is defined by researchers as communication with visual images, print, and or technologies based on the New London Group's multiliteracies framework (New London Group, 1996).

Assumptions

The study was conducted under the following assumptions:

1. A sufficient number of participants completed all three rounds of the study within the designated time allotted for data collection.
2. Participants answered all survey questions honestly and objectively to the best of their expertise.
3. Survey results provided sufficient data for in-depth analysis to answer the desired research questions.
4. Participants would be able to utilize the Delphi Research Method to reach consensus and agree on important items such as strategies, tools, and visual media to teach reading.

Limitations

Researchers acknowledged the following study limitations:

1. The research data collected in the study was dependent upon reading curriculum directors, instructional coaches, specialists, and writers' participation from start to finish of the study.
2. Identification of potential participants was dependent upon the accuracy of the current information posted on Independent School District (ISD) websites.
3. The participant sample of curriculum directors, instructional coaches, specialists, and writers may not necessarily reflect the views and opinions of all eligible participants.

Chapter Summary

This study identified important strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. The Delphi Method was used to collect data and answer each research question. Three rounds of data collection were conducted using the Survey Monkey software tool. Data analysis revealed important strategies, tools, and visual media used by expert participants to teach reading.

Chapter 2

Literature Review

This study investigated the strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. The following literature review looked at the importance of reading in relation to college readiness and reading in K-16 education, developmental courses, reading strategies, tools, and visual media, reading interests, and the New London Group's multiliteracies theoretical framework.

College Readiness & Reading in K-16 Education

College readiness is an ongoing challenge that students, educators, and policy makers are legitimately concerned about. Every year, students across the nation aspire to attend higher education. Whether or not they are ready is a great concern to educators, parents, politicians, and the public at large. Some students traverse the bridge to four-year institutions with ease, while others experience great difficulty. In the United States, 65% of 12th graders are not proficient readers according to the National Assessment of Educational Progress (2011). Nearly six million American K-12 students read below grade level (Wise, 2009). A study conducted by Wilkins, Hartman, Howland, and Sharma (2010) examined eleventh grade students' scores of the Texas English language arts and reading assessment on the Texas Assessment of Knowledge and Skills (TAKS) and found

only about half (51%) of Texas public school students are prepared to read entry-level English course textbooks. In 2004, the National Endowment for the Arts published a report, *Reading at Risk: A Survey of Literary Reading in America* which explained that over the past 20 years young adults 18-34 in age have declined from being the most likely to read literature to the least likely to read literature (O'English, Matthews, & Blakesley Lindsay, 2006). Clearly, high school students reading skills' are inadequate, and this lack of skill in reading carries over into the higher education systems.

Developmental Courses & Reading

Odds are against community college transfer students requiring developmental courses from graduating from 4-year universities (National Center for Education Statistics, 2008). Kozeracki (2002) explained the majority of students who must take remedial courses at community colleges will not make the transition to four-year universities. Critics of developmental coursework point out only about a quarter of community college students' transfer to four-year universities within three years (Kozeracki, 2002). Only 15% of the transfer students acquire their bachelor degrees within six years (National Center for Education Statistics, 2008).

Adelman (2004) studied factors affecting college graduation rates and time to degree. Students who took developmental courses in college had markedly lower graduation rates: 39% earned bachelor's degrees, compared to

69% of students who took no remediation courses over five years. Adelman (1999) argues that students who take developmental courses in reading are less likely to graduate, whereas those taking developmental courses in mathematics had a better chance at graduation. Adelman (1999) argues that some types of remedial coursework are more consequential than others.

American colleges and universities invest substantial amounts of financial and physical resources providing developmental programs to aid student success (Tai, 2007). However, there is a disconnect between what students learn in remediation courses and what is required in credit-bearing courses (Tai, 2007). This rise of developmental programs in community colleges indicate the problem of under preparedness for university level work is growing (Byrd, 2005). Illich & Hagan (2004) found college-level pass rates are much lower among students who concurrently enrolled in developmental courses who did not complete one or more of the developmental courses. Students under-performed irrespective of the type of college level course. By contrast, students who passed their developmental courses were generally successful in their college level courses (Illich & Hagan, 2004).

Reading Strategies, Tools, & Visual Media

Visualization is extremely important during reading (Allyson, 2004). Allyson (2004) explains it is important to use reading strategies and tools that help students develop adept reading proficiency. Reading books that incorporate

multiple images and text help students decode messages and find meaning from texts (Allyson, 2004). The marriage of pictures and text assists the reader during the reading process, making the process of reading less intimidating (Allyson, 2004). The strategy has been found to assist inept readers to understand unfamiliar and complex words (Allyson, 2004). The amount of visuals can be decreased with repetition and increased frequency of reading practice (Allyson, 2004). Educators assume all students can visualize pictures in their minds while engaged in a book (Allyson, 2004). Hibbing and Rankin-Erickson (2003) explained "American classrooms have computers, televisions, and projectors. School media centers and computer labs are filled with visual images. Unfortunately, this bombardment of visual images does not necessarily transfer to students' ability to create mental images that support reading comprehension" (p. 762). Students still need practice using these visual texts and images. Many visual texts are isolated (Hibbing and Rankin-Erickson, 2003).

Hibbing and Rankin-Erickson (2003) explain,

> Students who lack the ability to create visual images while reading experience comprehension difficulties. For students incapable of visualizing, chapters of text are intimidating mountains to scale. Words become just words without imagery to bring them to life and reading becomes painful, because their minds are unable to mentally connect with

> the print. Students are busy trying to decode words, and they fail to create images associated with meaning.

Hibbing and Rankin-Erickson (2003) explain that pictures are really the key for reading success in reluctant readers. Krashen (2005) explained that the visual narrative that accompanies text in comic books "can provide clues that shed light on the meaning of an unfamiliar word or grammatical structure" (p. 234). Hibbing and Rankin-Erickson (2003) found that "students understand the supportive roles pictures play in helping them understand what they read" (p. 765). They asked students to consider the statement, "A picture is worth a thousand words," and students said,

> A picture helps me by showing me what's going on, in my textbooks when they show the pictures it helps me see what they are talking about if you look at a picture, it puts more ideas in your head, if you have a picture, it may take a thousand words to get the true meaning of the picture.

Students appear to enjoy reading visual media such as graphic novels, comic books, and Japanese manga because they have images that traditional texts do not. Hibbing & Rankin-Erickson (2003) go on to say "Students do not consider images found in graphic novels and manga to be real books because of the pictures, and as a result they do not mind reading them, and they do not realize they are reading complete stories, because these graphic novels are entertaining students and assisting their reading skills" (p. 765).

Reading Interests

Allyson (2004) explains the popularity of visual media such as graphic novels, comic books, and Japanese manga among adolescents and young adults has increased in recent years. Reading interests of adolescents is becoming more exotic (Allyson, 2004). Many reluctant readers like images in graphic novels and manga and talk about them with their friends (Allyson, 2004). The popularity of texts with visuals to explain them has grown. "If students talk about a book, chances are they will want to read more of the books that generated the enthusiasm. Thus, reluctant readers become more regular and proficient readers" (Allyson, 2004, p.306). Teenagers are up to date with current styles and trends, even when reading. If their friends find graphic novels and manga that interest them, then they pass it along and share it with other friends (Allyson, 2004). The images are important to convey meaning, and these texts are filled with interesting and non-traditional images found in early comic books of past generations (Allyson, 2004). These texts show and tell stories with speed, power, and fluidity of image combined with thought (Allyson, 2004).

Graphic Novels

Graphic novels in the West were a spinoff of comic books which originated in the 1960's (O'English, Matthews, & Blakesley Lindsay, 2006). At the time, writers wanted to use the comic book pictorial medium to talk about more adult topics and societal issues (O'English, Matthews, & Blakesley Lindsay,

2006). Arguments exist about who first used the phrase ‘graphic novel’, however Will Eisner’s *Contract with God and Other Tenement Stories* was first published in 1978 and regarded as the first graphic novel (O’English, Matthews, & Blakesley Lindsay, 2006). Will Eisner explained he first used the term as a marketing technique in the hopes that his series of illustrated short-stories about Jewish working class families during the Great Depression would get published (O’English, Matthews, & Blakesley Lindsay, 2006).

Graphic novels are relatively new forms of media. Countries such as Belgium, France, Japan, and the United States lead the way in graphic novel production (Drucker, 2008). The designation of a graphic novel is applied to any book-length publication that utilizes drawn pictures with narrative, and the subject matter may be biography, history, memoir, or fiction (Matsuchika & Boldt, 2010). Graphic novels are more expensive than comic books due to the amount of ink and paper used to bind them usually ranging from $6.99 - $39.99 in price. In this respect, graphic novels are very similar to purchasing normal books. Graphic novels can be found on a variety of subjects including but not limited to biblical, fantasy, historical, instructional, science fiction, self-help, teenage issues, and more. What sets them apart from comic books and normal reading books is their enhanced aesthetic nature, mixture of text and visual images, and appeal to all genders and ages.

Japanese Manga and its effect on Graphic Novels in the West

Japanese manga is the Eastern predecessor and cousin to the Western graphic novel and comic book. Manga are comic books written by Japanese artists, for a Japanese audience, in a Japanese context since the 1770's (Schodt, 1986). In Japan, manga are written in Japanese language as compared to manga distributed to the U.S. which has been translated into English. Even though manga is translated into English in the U.S., its desired Japanese presentational form is preserved. In general, manga comic books are proportionally smaller and thicker in width than their American counterparts and are serialized (Weiner, 2003). The serialization of manga allows writers to develop story plots and characters well (Weiner, 2003). To add, the serialization allows manga writers to develop strong followers who wait with anticipation for the release of weekly and biweekly issues of their favorite manga titles (Weiner, 2003). Manga comic books have a unique style of writing and pictorial display of images. This unique design style has been borrowed by numerous popular Western comic books and graphic novels. The infiltration of Japanese manga was relevant to the development of the graphic novel in the West. In 2007, manga represented 56% of all graphic novels released in the U.S. and 56% of all graphic novel sales (Matsuchika & Boldt, 2010).

In Japan manga is found everywhere and read abundantly. According to 2007 data reported by Matsuchika & Boldt (2010) in Japan 74% of men in their

teens read manga, 64% in their twenties, 47% in their thirties, and 30% in their forties read manga. Manga is also popular among Japanese women. Mastuchika & Boldt (2010) report that 47% of women in their teens read manga, 42% in their twenties, 31% in their thirties, and 24% of women in their forties read manga. In 1995, 2.3 billion manga titles were published, and of those 1.9 billion titles were sold in Japan (Schodt, 1996). Matsuchika & Boldt (2010) also report that in Japan manga made up 25% of all book sales, and 20% of all magazines are of manga variety. In 2006, manga book and manga magazine sales earned ¥592.2 billion yen, (nearly $5 billion dollars).

Japanese manga and its similar cartoon version called 'anime' have substantially helped grow the graphic novel industry in the U.S over the past few decades. Academics have conducted research on Japanese manga and anime. American universities such as the University of California Berkeley, the University of Texas at Austin, and the University of Washington have offered courses which examine Japanese manga and anime (Napier, 2001). Courses on manga and anime are found in Eastern studies, film studies, cultural studies, language studies, literacy studies, art education, and Women's Studies (Matsuchika & Boldt, 2010). Some researchers argue that manga should be used as a reading strategy or tool to aid literacy. Schwartz & Rubinstein-Avila (2006) suggest that educators should conduct more research on reading manga because they are extremely popular intrinsic reading choices among American

adolescents. Japanese manga require multimodal reading, interpretation of visuals and text, and critical analysis (Schwartz & Rubinstein-Avila, 2006). Adams (1999) also added manga require complex visual reading for students. Bearne (2003) argued proficient manga readers are adept at negotiating multimodality reading and they partake in the dynamic interplay among cultures, identities, texts, and literacies. Carrington (2004) explained manga readers use graphical information in unison with the hierarchical level as the printed text, and this is a major change from traditional reading which involves attending first and foremost to the written text, and using pictures and images only as supplements to it. More researchers explain manga are cultural texts and they provide a means for young readers to negotiate alternative identities by engaging in a wide variety of characters, dynamic plots, and storyboards (Allender, 2004; Fisher & Frey). Adolescents make connections with these popular texts and their own life experiences (Allender, 2004; Fisher & Frey). Japanese manga comic books have helped Western graphic novels and comic books become popular reading amongst American students. Japanese manga has also caught the attention of researchers.

American adolescents are reading graphic novels, and creating a potent demand for visual media texts. In 2002, graphic novel sales in the United States totaled $110 million (Williams & Peterson, 2009). In 2004, sales doubled to a robust figure of $207 million (Williams & Peterson, 2009). In 2007, graphic novels, comics, and manga title production increased from 1,826 titles in 2004 to

7,717 (Williams & Peterson, 2009). Recently, graphic novels, comic books, and Japanese manga sales have surpassed more than $400 million in the U.S. (Moeller, 2013).

According to Moeller (2013) the sales of digital graphic novels has doubled since 2010. Digital graphic novels surfaced during the 1980's. The Pew Research Center's Internet & American Life Project (2006) found over eleven million teenagers get online daily to access their informational needs. These teenagers are accessing online media through computers, televisions, cellphones, and gaming consoles (Moorefield-Lang & Gavigan, 2012). The popularity of accessing and buying digital graphic novels is growing fast (Moorefield-Lang & Gavigan, 2012). Digital graphic novels are accessed on digital devices including computers, mobile devices, and e-readers (Moorefield-Lang & Gavigan, 2012). They are relatively inexpensive to produce in comparison to print graphic novels (Rousseau, 2009).

Subscriptions for digital applications (apps) for digital graphic novels are on the rise (Moorefield-Lang & Gavigan, 2012). Digital applications for digital graphic novels are available for the iPad, iPhone, iPod, Android, electronic readers (e-readers), Kindle Fire, Nook, and additional mobile tablet devices. Popular digital graphic novels series include *Star Trek, The Walking Dead, and the Mouse Guard.* Marvel Comics, DC Comics, Archaia Entertainment, BOOM! Studios, Dynamite Entertainment, and Image Comics combined offer over 10,000

digital graphic novels and comics online (Moorefield-Lang & Gavigan, 2012). Many readers prefer to access digital graphic novels because they are cheaper than traditional print graphic novels which range from $1.99 - $10.99 on average to download (Moorefield-Lang & Gavigan, 2012). Some titles are free (Moorefield-Lang & Gavigan, 2012). Many online digital graphic novels are interactive. Students choose outcomes of characters and story plots (Moorefield-Lang & Gavigan, 2012). The interactive appeal, online availability, and less cost of digital graphic novels are very attractive options for adolescent readers of this technologically integrated generation.

Arguments for Using Graphic Novels as Tools in K-12

Many educational professionals including librarians have made arguments for including graphic novels in school libraries and called for integrating them into the reading curriculum (Moeller, 2013). Moeller (2013) argues using graphic novels as reading tools helps educators to prepare students for the literacy demands of the future. Moeller (2013) explains students constantly text each other, send tweets via social networking, and send pictures of themselves to create ideas and information. Moeller (2013) details the manner of multi-modal information mirrors a graphic novel's approach to using text and image to portray meaning. Gorman (2004) found many public school libraries graphic novels consist of less than 5% of entire collections; however graphic novels account for nearly 40% of the circulation. Charbonneau (2005) found in his study on public

library usage in Montréal, Canada 59% of respondents stated that 'la bande desinée' (comic book) is the main reason they visited the library. Charbonneau (2005) also reported youth in Montréal love reading manga, and 19% of respondents in his study stated they only read Japanese manga. Poershke (2005) found many students requested manga texts for their library. Also, Gavigan (2012) gave the following examples of how using graphic novels can help librarians and educators meet the Common Core Standards Initiative:

Grade 2, Reading Standard 7: Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot. Grade 5, reading Standard 7: Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, and poem). Grades 6-12, Standard 10: range, quality, and complexity of a student reading: Includes the subgenres of adventure stories, historical fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels. Gavigan (2013) explained graphic novels are valuable literacy tools for college bound students who are not completely college ready. In addition, the American Association of School Librarians (AASL) discussed the Standards for the 21st – Century Learner (2007) and explained information literacy has evolved to include multiple literacies such as textual, digital, technological, and visual. The AASL

pointed out that this recognition of the importance of multiple literacies can be seen in many of the standards and gave the following examples:

1.1.6 Read, view, and listen for information presented in any format (e.g., textual, visual, media, digital) in order to make inferences and gather meaning. 2.1.6 Use the writing process, media and visual literacy, and technology skills to create products that express new understandings. 3.1.4 Use technology and other information tools including information skills as visual literacy to organize and display knowledge and understanding in ways that others can view, use, and assess. 4.1.4 Seek information for personal learning in a variety of formats and genres (Standards for the 21st – Century Learner, 2007). Elder (2012) founder of the organization Reading with Pictures explained synthesizing words and pictures in comics and graphic novels conveyed information more efficiently than words alone. Graphic novels enable educators to do more engaged reading with students than with traditional texts (Elder, 2012).

Additional researchers contend engaging graphic novels is a more rigorous cognitive activity than reading conventional written text only books (Lavin, 1998; Lyga, 2006). Monnin (2008) explained teachers and students read the images on different levels and graphic novels gave opportunities for developing in school literacies. Krashen (2004) found comics and graphic novels offered 20% more rare and unique vocabulary than traditional books. Ujiie & Krashen (1996) found graphic novels are constructive to the literacy development of English Language

Learners (ELL) and low-level proficiency reading students. They also discovered graphic novels act as a scaffold to introduce other types of literature to inept and unmotivated readers (Ujiie & Krashen, 1996). Crawford, Gropman, & Woodcock (2004) explained graphic novels can benefit English Language learners (ELLs). MacDonell (2004) found pleasure reading is essential for ELLs, and many ELLs often choose graphic novels for pleasure reading. Hammond (2009) found high school seniors responded to graphic novels and manga in many traditional ways, such as critical analysis, yet they also adjusted their normal reading process to include image analysis. McTaggart (2008) argued reading graphic novels promotes better reading skills, improves comprehension, and complements other areas of the core reading curriculum. Carter (2009) found graphic novels rejuvenated students' interest in reading in his classroom. Weiner (2004) explained using graphic novels in the classroom enriches students' experiences by giving them deeper information about the subject. Graphic novels serve as a transition into more print-intensive texts enticing reluctant readers to more traditional prose texts (Weiner, 2004).

In addition, researchers argue graphic novels and visual media help make the reading curriculum more relevant and applicable for students by letting them create a connection and explore their own popular culture (Alvermann & Xu 2003; Schwarz 2006; Xu, Sawyer, & Zunich, 2005). Gavigan (2012) found graphic novels can be used as effective bibliotherapy tools for middle and high

school students because they discuss problems that teenagers encounter daily and are able to relate to them. Graphic novels can be used as bibliotherapy for teens because they discuss issues such as bullying, coming of age stories, eating disorders, gangs, homelessness, homosexuality, mental issues, pregnancy, and sickness and death (Gavigan, 2012). Gavigan (2012) explains viewing teenage centered graphic novels shows them they are not alone and helps them visualize their options for the future.

Gender related research concerning graphic novels revealed males respond positively to the image and text format used in graphic novels because males are more visually and spatially adapted learners (Min. of Ed. 2004; Smith & Wilhelm, 2002). Cary (2004) found boys frequently chose graphic novels out of their own volition when allowed to select materials to read. Graphic novel researcher Gavigan (2011) found struggling adolescent males who read graphic novels were more confident readers and read more often.

Also, researchers found reading graphic novels increased reading interests among students with disabilities (Gavigan 2011; Smetana & Grisham, 2012). Zull (2011) examined research in learning and brain activity. Zull (2011) found students engage both the back and frontal cortex functions of the brain and create meaning with the use of visual images. Zull (2011) explained using graphic novels to learn to read is highly brain-compatible. Griffith (2010) also found comics can aid in vocabulary development for elementary students who have

language and learning disabilities. Schneider (2005) found high school students who had learning disabilities reported graphic novels motivated them to read and assisted their reading comprehension. Similarly, Stall (2000) found comic books and graphic novels help in vocabulary development for elementary students with language and learning disabilities. Many facets of teaching reading while using the visual medium of graphic novels have been researched and argued as beneficial for K-12 students of all kinds.

Growing Acceptance of Graphic Novels in K-12 & Academia

Educators, librarians, and academics debate the validity of graphic novels, comics, and manga as real literature. Critics of the medium believe graphic novels should not be used in academia and prefer traditional texts. Abilock (2003) argued it is doubtful that teacher training and professional development programs in K-16 curricula are consistently encouraging educators and students to include the use of visual texts such as graphic novels or Japanese manga. Researchers found educators reported willingness to use graphic novels and other visual media (Lapp, Wolsey & Walden 2012; Fisher & Fry 2012). Yet, there are obstacles because they must seek approval to use them in the curriculum. Educators have limited access to graphic novels and visual media resources. Most importantly, they lack training on how to properly integrate them into the student pedagogy (Lapp, Wolsey & Walden 2012; Fisher & Fry 2012). Students have also expressed their discontent with educators' inhibitions about reading

graphic novels and manga in the classroom (Moeller, 2011). Moeller (2011) found despite students being excited about reading graphic novels and manga their teachers did not find them to be legitimate forms of school knowledge. Students felt teachers would not encourage them to read graphic novels and manga over the 'real books' usually prescribed for in class reading (Moeller, 2011).

Understanding the growing popularity among adolescent readers and academics may persuade critics of the medium to reconsider graphic novels for the classroom and their library collections (Griffith, 2010). Some researchers have found great success with the medium. For example, in 1992 the Pulitzer Prize Committee recognized Art Spiegleman's *Maus* for Special Awards and Citation-Letters for his depiction of the Jewish Holocaust struggle with Nazi Gestapo during World War II (Griffith, 2010). In 1994, the Library of Congress Authority File included graphic novels as an authorized subject heading (Williams & Peterson, 2009). By 2005, several library journals had regular columns on graphic novels for young adult collections, and articles on using graphic novels in the classroom were appearing in education journals (Williams & Peterson, 2009). In 2007, the Young Adult Library Services Association (YALSA) awarded Gene Luen Yang's *American Born Chinese* the Michael L. Printz Award (Griffith, 2010). In 2007, the Association for Library Service to Children awarded Siena Cherson Sigel's *To Dance: A Ballerina's Graphic Novel* the Robert F. Sibert

Medal for nonfiction. In 2009, YALSA created the "Great Graphic Novels for Teens" list as a teachers' aid (Griffith, 2010). The graphic novel, comic book, and manga medium has won recent prestigious literary awards, which helps to solidify their validity as literature for children, adolescents, and even adults (Griffith, 2010).

Scholars have been writing and presenting more frequently about graphic novels. In 1998 and 2000 two important conferences took place (O'English, Matthews, & Blakesley Lindsay, 2006). In 1998 the 1st International Conference on the graphic novel was held at the University of Massachusetts, Amherst. In 2000, another International Graphic Novel Conference was held in Belgium (O'English, Matthews, & Blakesley Lindsay, 2006). In 2002, the University of Florida hosted a conference on comics and graphic novels called "The Will Eisner Symposium". At this symposium Will Eisner the writer who arguably published the first graphic novel in the West was the keynote speaker. Graphic novel writers, artists, and scholars spoke and presented about comics and graphic novels at the conference (O'English, Matthews, & Blakesley Lindsay, 2006). Universities such as Duke, MIT, Michigan State, Chicago, UC Berkeley, Rutgers, and USC have been building extensive graphic novel collections in their libraries for academic and recreational reading (O'English, Matthews, & Blakesley Lindsay, 2006). At the University of Tennessee Botzakis (2013) uses graphic novels and comic books in his education courses to teach undergraduate students

about literacy and content area resources. He explained he uses graphic novels and comic books to examine and grow their views about literacy (Botzakis, 2013). Many of the soon to be educators he teaches have never read or used comic books with instruction. Botzakis (2013) elaborated he wants to use this unfamiliarity to take future teachers out of their comfort zones so they understand how their future students may feel about the print heavy classic texts they want them to read. In today's technology filled world many teenagers may not have the patience or the reading skills to read traditional texts that the pre-teachers are comfortable using (Botzakis, 2013). He explained using graphic novels to scaffold inept readers into becoming more adept readers is important. Future educators may have to use nontraditional texts to achieve this objective (Botzakis, 2013). It is clear that adolescent reading interests' are evolving. Visual media such as graphic novels, comics, Japanese manga, and new communication technologies are changing reading education. Researchers such as the New London Group have already begun to break new ground in literacy development.

The New London Group's Multiliteracies Framework

In 1996, a group of 10 academics and educators gathered in New London, Connecticut to discuss the current modes and changes in literacy. Originally, the Multiliteracies Project was an Australian initiative composed of people from across the English speaking world who were thought to be at the cutting edge of literacy, pedagogy, and curriculum (Cloonan, 2004). They advocated a ground

breaking approach to literacy pedagogy in response to changes in the global communication evolution (New London Group, 1996). The New London Group developed a new pedagogical literacy framework and called it 'Multiliteracies' (New London Group, 1996). This framework was developed to broaden and include not only traditional linguistic literacies but added new literacies in multimodal textual practices in pedagogy (New London Group, 1996). In contrast to the singular literacy, multiliteracies and new literacies are wider concepts including texts, language, situated meaning, technology, popular culture, power, identity, and critical stance (Collins & Blot, 2003; Gee, 1996). The multiliteracies framework was first published in the Harvard Educational Review (1996) and was received with energy and discontent.

Explicitly, the New London Group created the vernacular term 'Multiliteracies' to incorporate two new concepts in response to how modern literacy was changing. First, multiple modes of communication connected with media, mass media, multimedia, and the internet were addressed (New London Group, 1996). Next, they discussed literacy in relation to the importance of cultural and linguistic diversity as a consequence of migration and globally marketed services (New London Group, 1996). These two components are related because the proliferation of texts is partially attributed to the diversity of cultures and subcultures (Cope & Kalantzis, 2000). The multiliteracies pedagogy posits four related components: situated practice, overt instruction, critical

framing, and transformed practice (New London Group, 2000). First, situated practice builds on the life and world experiences of students that situate meaning making in real-world contexts. Next, overt instruction guides students to use explicit metalanguage design. Then, critical framing encourages students to interpret the social context and purpose of designs and meaning. Lastly, transformed practice takes place when students transform existing meanings to design new meanings (New London Group, 1996). These components of pedagogy do not constitute a linear hierarchy and can happen simultaneously, randomly, and or be related in complex ways. These elements may be repeated and revisited at different levels' (New London Group, 2000). Cope & Kalantzis (2000) explained "Critical framing within a pedagogy of multiliteracies involves the development of alternative reading positions and practices for questioning and critiquing texts, with their affiliated social formations and culturally specific assumptions" (Cope & Kalantzis, 2000, p.20). Educators must take the old ways and merge them with new ways, because learning and reading styles have changed since they were students.

Cope & Kalantzis (2000) added that multimodality design expresses the complexity and interrelationship of multiple modes of meaning. The students learn to read by combining linguistic, visual, auditory, gestural or spatial modes of meaning. Students learn to read through multiple stimuli. The visual meanings or modes include images, page layouts, screen formats, colors, perspectives,

vectors, foregrounding and back-grounding (Cope & Kalantzis, 2000). All images and their orientations effect the learner. Audio meanings include music, voice-overs and sound effects (Cope & Kalantzis, 2000). Gestural design involves body language, gestures, kinesics, feelings and behavior (Cope & Kalantzis, 2000). Also, Mills (2005) explains often valued literature systematically excludes certain texts such as picture books, popular texts, romance and science fiction. Often, educators pass over using nontraditional texts such as graphic novels etc., because it is not considered traditional and valued. Some educators believe there is a lack of vigor in reading graphic novels due to the amounts of pictures. Mills (2005) elaborates removing these popular texts from the curriculum disenfranchises many groups and negates valuable opportunities to meet children's interests.

In addition, Luke (2005) explained information texts, emails, websites, databases, visual literacies and oral discourses should not be overlooked as 'inferior literacies' (Luke, 2005). Luke (2005) argued "the 'new' electronic writing is a different form of literacy, not an inferior or lesser form of some 'golden age' vision of literacy" (Luke, 2005, p. 147). Students are growing up in the 'digital age' and are learning 'digital literacy'. Just because it is new, does not mean it is not a valid form of learning. The New London Group (2001) refers to today's students as 'screenagers', because they are immersed in multi-contextual technologies. They receive, decode, and interpret information and texts through

all forms of digital media and technology. Today, students receive much of their information and data electronically or through telecommunications media. Thus, it is easier to teach students through mechanisms that they already use (New London Group, 2001). This allows students to make sense of the information flow around them, i.e. visuals screens, images, and visual media (New London Group, 2001). Educators need to go beyond the traditional training, and try new and non-traditional means, e.g. visual media and images to teach reading and reach their students (New London Group, 2001). The New London Group (2001) points out teachers have yet to catch up and are trying to teach today's youth with old methods. Current instructional strategies are like educators "trying to pour new wine into old wine bottles" (New London Group, 2001, p. 382).

Since the inception of the multiliteracies framework in 1996 it has been used frequently by many scholars. Traditional reading researchers used the framework for visual literacies (Burton, 2006; Callow 2006; Noad 2005; O'Brien 2001). Danzak (2011) engaged students through multiliteracies by letting them create graphic novels to explore their immigration stories. Callow (2006) studied visual metalanguage used in the classroom in regards to political advertisements. Mills (2009) utilized multiliteracies by emphasizing the importance of literacy to use a vast range of digital text types as well as traditional written texts. These applications of the multiliteracies framework focused on popular multimedia texts

research in the classroom (Mills, 2009). Hodgman (2005) engaged the framework with information literacy.

The framework has also been applied to speaking and linguistics. Newman (2005) applied multiliteracies with textual analysis and functional linguistics. Newman (2005) also employed the multiliteracies framework in unison with the importance of oral vernacular genres. Other researchers used multiliteracies to examine oral vernacular and mass media texts (Mackey 2003; Mason 2004; Newman 2005; Nixon & Comber 2001; Stevens 2001). Walsh (2006) incorporated the framework in a language program and underlined the hypermedia design skills evident in portfolio websites of students.

Additional researchers have used the multiliteracies framework in creative ways. The multiliteracies framework has been implemented in geographical, historical, political, economic, ecological, environmental, and cultural literacies in the context of social education (Muller 2006; Shultz 2006). Also, the framework was integrated with the visual and performing arts (Hertzberg 2001; Makin & Whiteman 2007; Martello 2004; Thwaites 1999). Liau (2003) infused the multiliteracies framework with emotional literacy. The multiliteracies framework has been used in the scientific (Weinstein, 2006) and numeracy disciplines (Every & Young, 2002).

The New London Group's seminal multiliteracies framework has been applied to many disciplines in academic research. The multiliteracies pedagogy is

an innovative attempt to combine the strengths of past approaches to overcome their weaknesses while addressing the need for new, multimodal, digitally mediated, culturally diverse, and dynamic multiliteracies for our changing times (New London Group, 1996). With certainty, the New London Group's multiliteracies framework will continue to be used by future researchers and ever evolve.

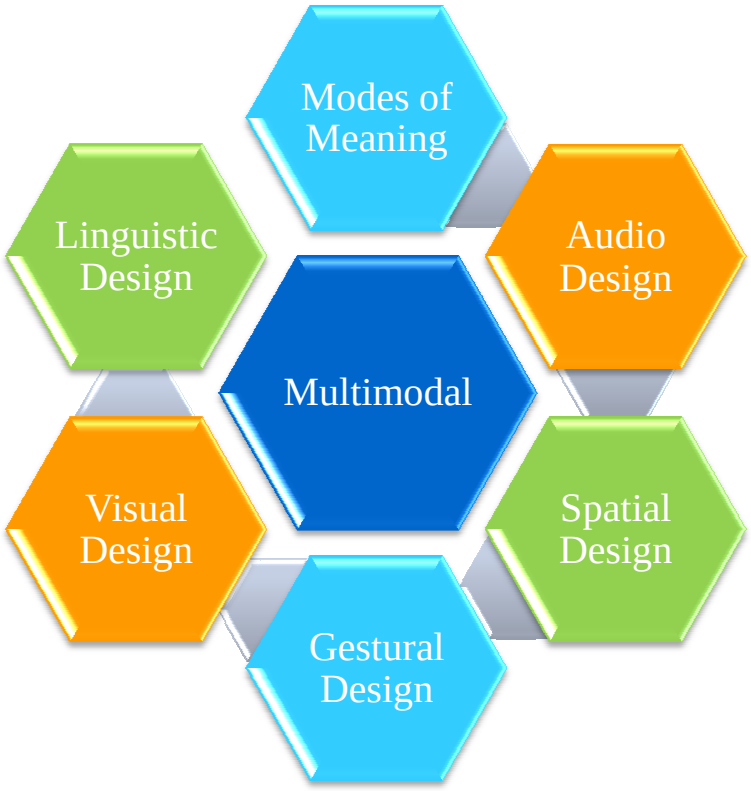

Figure 2-1 The New London Group

Chapter Summary

Chapter two discussed a review of the literature in relation to this study concerning strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. The following literature review specifically looked at the importance of reading in relation to college readiness and reading in K-16, developmental courses, reading strategies, tools, and visual media, reading interests, and the New London Group's multiliteracies theoretical framework. The evolution of literacy will continue to force educators and students to engage each other while creating new and unexplored opportunities to learn to read.

Chapter 3

Methodology

The purpose of this study was to investigate what strategies, tools, and visual media are currently used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. Also, the study examined what strategies, tools, and visual media were encouraged to use during professional development training among participants. Specifically, the study examined if visual media such as graphic novels, comic books, and Japanese manga style comic books were used to teach reading. The ability to read proficiently affects many students, therefore it was important for researchers to identify and share the findings with educators across K-16 education. In addition, creating stronger readers may aid in reducing the growing need for developmental reading coursework in K-16 and enable students to be more college ready.

In attempting to gain insight on which reading strategies, tools, and visual media were being used to teach reading in K-12 it was necessary to use an appropriate and practiced research method. The Delphi Method was used to collect high volumes of quantitative and qualitative data in attempting to answer each research question.

The Delphi Method

The Delphi Method was designed by the RAND Corporation in the 1950's by Olaf Helmer and his colleagues (Cope, 1981). Initially the Delphi

Method was used to determine the opinions of scientists in relation to the effects of nuclear war, cold war politics, and military strategic planning (Misiner, Watkins, & Ossege, 1994). The Delphi Method founders devised a systemic method for collecting information from experts in their respective fields. The Delphi Method aims to predict the likelihood of future specific events and or occurrences (Gordon, 1994; Rowe & Wright, 1999). Linestone & Turoff (1975) explained the Delphi Method provides interactive forecasting in environments and produces a critical and well thought out examination, discussion, and findings for research. Thus, the Delphi Method is a communication process which enables expert panelists to give input and feedback about complex and multifaceted issues (Linestone & Turoff, 1975). Usually, the Delphi Method employs an expert panel of 15 to 30 participants (Linestone & Turoff, 1975). Also, Clayton (1997) recommends a panel size of 15-30 participants with similar backgrounds to take part in the Delphi Method. Dalkey (1969) indicated a panel size of 30 participants will be able to reach consensus about the selected issues. However, Delphi panels may vary in size ranging from 15 to 100 or more participants (Clayton, 1997). The Delphi does not require participants to meet face to face nor meet in the same location at any given time (Linestone & Turoff, 1975). Researchers are able to modify the size of the Delphi panel of participants to fit the parameters and research questions of each particular study, some being smaller and or larger in nature (Linestone & Turoff, 1975).

The Delphi Method has been used in a full spectrum of disciplines ranging from business, education, engineering, and medical. Rowe & Wright (1999) explained the primary components a Delphi are anonymity, iteration, controlled feedback, and statistical aggregation of group responses. In a Delphi the data is gathered among participants anonymously. In addition, the Delphi Method neutralizes strong personae panelists from swaying the opinions of weaker personalities among panelists should they have met in a focus group study, because panelists do not physically interact with one another (Wataba & Farmer, 1988). The Delphi Method enables the search for consensus to be conducted in a logical, order driven, and systemic and empirical manner, without the need to have all panelists meet as a group (Starling, 1988). Fish & Osborn (1992) explained that the Delphi Method promotes structured communication among experts by providing feedback on individual contributions of ideas and an assessment of group consensus at multiple stages. The Delphi is an iterative data gathering process because data is systematically solicited, collected, evaluated, and tabulated by questionnaires (Rowe & Wright, 1999). Kreber (2002) indicates the Delphi Method allows experts to construct the content of a questionnaire. The open ended nature of the questionnaire gives participants the opportunity to elaborate their answers which helps underline richness in thematic responses (Rowe, 1994). Powell (2003) argued "Delphi does not call for expert panels to be representative samples for statistical purposes, " rather" representativeness…is

assessed on the qualities of the expert panel rather than its numbers" (p. 378). Powell explained "most Delphi users suggest experts should be chosen for their work in the appropriate area and credibility with the target audience" (p. 379). Data is collected in a series of successive rounds (Linestone & Turoff, 1975).

Researchers noted the advantages and disadvantages of using the Delphi Method. First, open-ended questions used in the first round of data collection enables researchers to gather an abundance of raw data which may help answer the research questions (Linestone & Turoff, 1975). Next, the ability to increase sample sizes of participants heightens the participant panel's ability to confer and make quality decisions on important items and initiates development for comprehensive research findings (Linestone & Turoff, 1975). In addition, the ability to gather data without having participants physically meet is advantageous because there is little monetary, time, distance, and physical limitation (Linestone & Turoff, 1975).

On the other hand there are disadvantages to using the Delphi Method of data collection. First, data analysis is arduous and may take long periods of time (Linestone & Turoff, 1975). Next, researchers must develop and utilize well written and interesting survey questions so participants do not lose interest in the study and maintain low levels of attrition (Linestone & Turoff, 1975). Then, if the Delphi study has too few numbers of panelists and drop below the recommended number of participants the study may not be statistically significant

(Linestone & Turoff, 1975). The Delphi may rely too heavily on only the data provided by participants in each respective study (Linestone & Turoff, 1975).

Regardless of its few weaknesses the strengths for using the methodology outweighed its minor flaws. The Delphi Method would allow for more flexibility during data collection for expert participants who have time constraints and physically reside in numerous locations. Since the investigation of strategies, tools, and visual media used to teach reading was more qualitative in design the Delphi Method was chosen to explore this phenomena.

Denzin & Lincoln (2005) explained qualitative research is the attempt to make sense of, or interpret, phenomena in terms of meanings. Van Maanen (1979) added qualitative research involves interpretive techniques which aim to describe, decode, translate, and come to terms with the meaning, not the frequency, of naturally occurring phenomena in the world. In this study the first round of data collection was very qualitative and used open-ended questions to try to probe and elicit raw data from respondents. Due to the open-ended nature of the research questions participants were able to generate lists of items used to teach reading in round one. In relation to data analysis in qualitative studies researchers try to develop the three areas of data management, data reduction, and conceptual development (Lindlof & Taylor, 2002). After the first round of data collection researchers examined the raw data. Then, researchers coded the items and categorized the items into salient concepts and themes. This is the qualitative

approach to starting from the larger fifty thousand foot view to refining the data and zooming in to the fixed ten thousand foot view.

Next, the second round of data collection was more quantitative in approach. Quantitative research often looks for cause and effect thinking, reduction of specific variables and hypotheses and questions (Creswell, 2003). It uses measurement and observation, and tests theories through experiments and surveys (Creswell, 2003). Researchers developed a quantitative survey containing questions based on lists of items generated from participants in round one with the intention of finding consensus on important items. Quantitative research methods collects data on predetermined instruments that yield statistical data (Creswell, 2003). Then, round three of data collection was also quantitative in design. Researchers used the same survey instrument and removed items ranked as unimportant by the expert panel from the second round of data collection. In the final round participants were asked to agree and or disagree on important items to form consensus. The qualitative and quantitative statistical data collected in the three rounds of data collection was invaluable during data analysis and formulating meaning from the findings. The next pivotal steps in employing the Delphi Method is to account for designated research procedures and the selection of appropriate expert panel participants.

Procedures & IRB

All universities have an Institutional Review Board (IRB) that governs research. Prior to conducting any and all research involving human and or animal participants standardized procedures, protocols, and regulations must be followed. This study examined the strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading. It was imperative to seek IRB approval to conduct the study. On July 17, 2013 the IRB committee determined this study to be qualified as exempt under the federal guidelines for the protection of human subjects. After receiving clearance to begin the study researchers soon began the rigorous process of identifying qualified expert participants. At the end of the identification process 460 potential participants were identified from across the state of Texas to participate. Modified protocols were submitted to the IRB for approval before conducting each of the three rounds of data collection. Researchers executed the study after planning and analysis according to following schedule:

-Round 1 – Approved 07-17-2013

-Round 1 – Conducted 10-22-2013

-Round 2 – Approved 11-04-2013

-Round 2 – Conducted 11-16-2013

-Round 3 – Approved 11-26-2013

-Round 3 – Conducted 12-01-2013

Data collection rounds were planned to be seven days on and seven days off between rounds. However, due to incomplete participant surveys an extra seven day grace period was granted to those participants who needed the extra time to complete each round. Identifying qualified K-12 curriculum directors, instructional coaches, specialists, and writers was key to developing a reliable and valid expert panel. The Texas Education Agency's (TEA) website and databases were used to localize the participants. All 1226 of Texas school districts websites were visited and examined to collect contact information for potential participant selection.

Panel Selection

When conducting a Delphi study the selection of participants is essential for realization of the study (Powell, 2003). Researchers wished to recruit 50-60 participants to account for anticipated attrition of participants. Researchers predicted attrition would be high after the first and second rounds of Delphi questioning due to the busy schedules of professionals. By the third and final round of Delphi questioning researchers anticipated having a sufficient number of participants. Approximately a panel of 30 participants would be able to answer the study's desired research questions. Fortunately, attrition levels were low and 35 out of 37 participants completed the study.

After having identified potential participants, 460 invitational emails were sent to qualifying K-12 reading curriculum directors, instructional coaches,

specialists, and writers to participate. At first 37 expert participants agreed to take part in the study. Participants replied to the initial email and confirmed their willingness to participate. The email gave instructions for completing the study, a time frame for survey completion, and a link with an access code to the Survey Monkey software tool. Since all participants remained anonymous to each other participants were given a unique access code to use in during each round of the study. This was necessary for researchers to be able to send reminder emails to participants who had yet to complete each round before a subsequent survey was sent. Throughout the three rounds of data collection, additional reminder emails were sent to participants to encourage their completion. Often, participants would express their gratitude for sending them reminder emails because they were preoccupied with other duties. At the end of the data collection process thank you emails were sent to all panelists for their participation. By the study's conclusion 35 participants remained and completed the study.

Participants' positions in reading and English Language Arts (ELA) related disciplines qualified them for the study. In qualitative research data provided by these participants is considered valid due to its 'authenticity' and relevance to the study (Merriam, 1998). Participants provided qualitative data relative to their areas of expertise and deemed it to be valid (Merriam, 1998). Data was deemed reliable due to its 'consistency' (Merriam, 1998). Participants represented a range of school district sizes across the state of Texas. Small school

districts were identified as having 24,9K student enrollment or less. Medium school districts had 49,9K – 25K student enrollment. Large school districts had 50K or more students enrolled. This range of school district sizes provided a comprehensive view of reading strategies, tools, and visual media used on a large scale in multiple levels of pedagogical alignment. Purposive sampling was used. Purposive sampling is used to select specific segments of a population for study (Merriam, 1998). Qualitative samples are usually purposive, rather than random (Kuzel, 1992; Morse, 1989). Miles & Huberman (1994) explained purposive sampling in qualitative research has social processes and have a logic and coherence that random sampling can be rendered uninterpretable. Also, with small numbers of cases random sampling can deal researchers a biased hand (Miles & Huberman, 1994). Miles & Huberman (1994) explained qualitative sampling is often decidedly theory driven and up front. Researchers hoped to find equal distribution of panelists from small, medium, and large school districts with equal representation. However, panelists consisted of 17 participants from large districts, 8 participants from medium school districts, and 10 from small school districts. This occurrence was contended as acceptable due to the valid expertise of each participant. Researchers recognized large school districts' participants affected larger numbers of students with their decisions concerning reading strategies, tools, and visual media. All participants were volunteers. The panelists were selected because they must develop, design, write, and teach

educators how to implement reading curricula for school districts on a large scale. These experts affect students' reading pedagogy across multiple levels of alignment and grade levels. They prepare the next generation of students by creating better readers who will hopefully require less developmental coursework in higher education.

Data Collection & Analysis

The Delphi Method requires three rounds of data collection by means of three surveys. The first round of data collection offered a survey containing two open-ended research questions to allow participants to generate raw data responses. In the second round of data collection a five-point Likert Scale survey was used to start the development of the consensus process. In the third and final round of data collection a modified version of the survey from the previous round was used to confirm and clarify that participants agreed on important items. In each of the three rounds of data collection participants were given the opportunity to add comments and clarification if they wished. A textbox was provided under each survey question.

Round one consisted of two open-ended research questions to generate lists of important items and followed this statement: The purpose of this study is to investigate strategies, tools, and visual media used in Texas's school districts by K-12 level reading & ELA curriculum directors, instructional coaches,

specialists, and writers to teach reading. (Visual media is defined as communication with visual images, print, and or technologies).

RQ1. What types of visual media do curriculum directors, instructional coaches, specialists, and writers incorporate to teach reading?

RQ2. What types of visual media are encouraged during professional development courses to teach reading?

Participants generated 50 items related to teaching reading in the first round. These items were identified, coded, categorized, and collapsed. The items were categorized into the main groups of strategies, tools, and visual media. After cleaning the data 25 items remained. Duplicate answers and outliers were identified and removed.

In round two researchers developed a questionnaire containing the 25 remaining items related to reading strategies, tools, and visual media. In the survey a Likert scale was used. It asked participants to rate the importance of each item. Powell (2003) explained consensus can be accomplished in multiple ways, with some researchers establishing a percentage level for inclusion items, while other researchers (Lindeman, 1975, Bond & Bond, 1982, Gabby & Francis, 1988, Hartley, 1995, Gibson, 1998) indicated interpretation is left to the reader. Powell (2003) detailed percentage levels for inclusion items can be set according to the design of the individual Delphi study with common mean percentage thresholds of 2.5, 3, and 4. In this study ratings of importance were determined

based on the percentage of items getting a mean score between 1 and 5. In the second round of data collection items that were rated with a mean score of 3 or higher were considered important. Items rated with a mean score of 2.9 or less were considered as unimportant. Multiple descriptive statistics methods were used to determine consensus. Researchers calculated the mean, median, mode, and converted the mode to a percentage. Anderson (2003) also used a similar evaluation rating system to determine if items were important and not important. The directions for completing the second round of data collection read as follows:

The following questions are related to strategies, tools, and visual media, identified in round one that K-12 reading & ELA curriculum directors, instructional coaches, specialists, and writers use to teach reading. Please answer each question and select only one answer per question. You will indicate your choices by using a five-point Likert Scale where 1 = Not Important, 2 = Somewhat Important, 3 = Neutral, 4 = Is Important, and 5 = Is Very Important. You may also add comments and clarification if you wish.

After analyzing and removing unimportant items from the second round of data collection 21 items were rated as important by the expert panel. Anderson (2003) explained the degree of consensus and the percentage of importance and priority rank will help identify the rank order of key characteristics for related research questions and help participants come to consensus. Linestone and Turoff

(1975) noted in the final round of data collection usually outlined a consensus of opinion among panelists.

The 21 items had average mean ratings of 3 or higher from the second round of data collection. In the third and final round of data collection participants were given the results from the previous round. Once again, participants were given the opportunity to add comments and clarification if they desired. Participants were asked to agree or disagree if the remaining 21 items from the second round of data collection were important to teaching reading. Although the panelists did not have 100% agreement with each of the remaining 21 items, consensus was realized when the majority or at least 51% or more of participants agreed each item in question was important to reading. In this study for instance, in the final round consensus meant that at least 18/35 participants per item needed to agree whether or not the item was important. At the conclusion of the study all 35 expert panelists agreed and reached consensus. The remaining 21 items were identified as important strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading.

Ethical Concerns

Prior to conducting this study great detail in preparation and planning was considered before working with human subjects. The purpose of this study was to investigate the strategies, tools, and visual media used by K-12 curriculum

directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. All participants were one of the aforementioned experts. Researchers followed all Institutional Review Board rules and regulations outlined at the University of Texas at Arlington. Proper documentation of research study design, protocols, and instruments were submitted and approved before conducting any research. During the initial stages of panel selection researchers provided emails containing a letter of informed consent to all potential participants. The initial contact email letter outlined in detail the overall design of the study. McQuillan & Muncey (1990) explained researchers are ethically bound to inform participants on the following research issues and these are just a few examples questions to be answered:

What is the focus? What research questions are to be asked? How will data collection take place? Who are the target participants? What role will the institution's personnel be asked perform? How will participant confidentiality be protected? Will research participants assist in data analysis? What feedback will the school or institution receive and in what form? What is the timeline for the study?

It was important to inform all participants about the voluntary nature of this study, because from the initial contact potential participants could determine if the study caused any potential risks to themselves. There were instances when potential participants expressed interest in participating, but for either personal or

professional reasons later declined to take part. When conducting research Sieber (1992) noted researchers must protect participants' privacy, confidentiality, and anonymity. In this study all participants' identities were kept anonymous. The Delphi Method disallows participants from being cognizant of each other nor having any physical or electronic contact with other participants. All participants were contacted via separate and individual emails and there were never any mass emails with names, lists, and or schools sent. Only aggregate data was reported in the findings with no identifiable individual participant's responses disclosed. When participants accessed the Survey Monkey software tool all participants used a unique access code to protect themselves. Access codes were only discernable by primary researchers of the study. After completion of the study all data collected electronically via the Survey Monkey software tool was purged. The remaining data was transferred to a pass-coded USB drive and placed under lock and key only accessible by primary researchers. This study and its researchers aimed to uphold the utmost integrity concerning any and all ethical practices, procedures, rules and regulations.

Conclusions

In this chapter the study's methodology was examined. The execution of the Delphi Research Method to collect data was explained. The research procedures and the Institutional Review Board were conferred. The data collection and analysis were methodically discussed. The participant selection

process was reviewed. Lastly, ethical concerns of the study were explained. The purpose of this study was to investigate the strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading. Also, the study examined what strategies, tools, and visual media were encouraged to use during professional development courses among participants. Specifically, the potential of using visual media such as graphic novels, comic books, and Japanese manga were investigated. Upon completion of the Delphi Method 21 items were rated as important by participants to teach reading. In the subsequent chapters researchers will further unravel the tapestry of in-depth data analysis and findings of the study and infer about conclusions and discussions for future research.

Chapter 4

Data Analysis

The purpose of this study was to investigate what strategies, tools, and visual media are currently used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. Also, the study examined what strategies, tools, and visual media were encouraged to use during professional development training among participants. Specifically, the study examined if visual media such as graphic novels, comic books, and Japanese manga style comic books were used to teach reading. The Delphi Method was used to collect all data for this study. The Delphi Method used three rounds of data collection in the form of three surveys. Expert participants answered questions concerning strategies, tools, and visual media they used in their K-12 school districts to teach reading. The findings are important to reading educators. Reading educators try to develop proficient readers to produce more college ready students. This chapter discusses participant selection for the Delphi, a detailed summary of the data, and an in-depth data analysis of quantitative and qualitative participant responses revealed in the study.

Participants

The process of recruiting qualified participants to be a part of the expert panel was challenging. The Texas Education Agency (TEA) website was used to identify possible participants from 1226 large, medium, and small school districts

in Texas. Large school districts were identified as having student enrollment of 50K or more students registered. Medium size school districts were identified as having student enrollment of 49,9K – 25K students. Small size districts were identified as having student enrollment of 24,9K or less. Purposive sampling was used to ensure only qualified participants participated (Kuzel, 1992; Morse, 1989). The participants' positions and expertise in the field qualified them for the study. Participants were K-12 reading curriculum directors, instructional coaches, specialists, and writers. Researchers identified 460 potential candidates for the study. After sending 460 invitational emails 37 respondents agreed to take part in the study from 12 different school districts. At the end of the study 35 out of 37 participants completed the study. Panelists consisted of 17 participants from large districts, 8 participants from medium school districts, and 10 from small school districts. The names of the school districts and their participants were not included to maintain anonymity. There was a wide range of participant representation. Participating school districts' student enrollment was rounded to the nearest one thousandth.

Table 4-1 includes the Delphi participants by district size and the number of student enrollment.

Table 4-1 Delphi Participants by District Size and Student Enrollment

Delphi Participants	District Size	Student Enrollment
1. 17	Large	> 50,000
2. 8	Medium	49,900 – 25,000
3. 10	Small	< 24,900

Data Summary

Round One of the Delphi Survey Results

After receiving confirmed consent from eligible participants the first round email was sent to participants. This email contained a link to the Survey Monkey software tool. Participants were assigned a unique access code so participants could be sent reminder emails if they did not complete any of the survey rounds. In the first round of data collection there were two open-ended questions. All 37 participants completed the first round of data collection. Participants generated 50 items. In this round participants indicated the lists of items generated in the first research question were the same as the second research question. Items they used to teach reading were also the same items encouraged during their professional development courses. The items were identified, coded, categorized, and collapsed. Items were categorized into strategies, tools, and visual media. 'Reading Strategies' were practices and methods aimed at improving and teaching reading skills (Tierney & Readence, 2000). A 'Tool' was an instrument or apparatus used in performing an operation or necessary in the practice of a vocation or a profession and was primarily a

machine (Cayne & Bolander, 1991). 'Visual Media' was communication with visual images, print, and or technologies (New London Group, 1996).

After analyzing and cleaning the data 25 items remained from round one. Duplicate answers and outliers were identified and removed. Participants generated 25 important items used to teach reading in K-12. At this point in the study there were 2 strategies, 12 tools, and 11 visual media items. These 25 introductory items would progress to the second round of data collection. The following is a list of the remaining 25 items after the first round of data collection:

Strategies:

1. Receiving professional development training for educators to use visual media
2. Promoting reading clubs and organizations

Tools:

1. Using computers and laptops
2. Using educational reading software
3. Using internet blogs
4. Using projectors and document cameras
5. Using Promethean Boards and interactive whiteboards
6. Using smartphones, iPods, texting, applications (apps)
7. Using tablets, iPads, e-readers that incorporate e-books

8. Using tablets, iPads, e-readers that incorporate e-books, e-graphic novels, e-manga Japanese style comic books

9. Using video websites such as YouTube and DailyMotion

10. Using websites that offer interactive visual reading programs

11. Using websites that allow making movies, animated cartoons, and video streaming

12. Using word processing and presentation software such as Microsoft Office, Prezi, and Google Docs

Visual Media:

1. Using art, paintings, and drawings

2. Using books and short story readers with only text and no images

3. Using books and short story readers that include text, images, and pictures

4. Using comic books

5. Using flashcards, graphs, charts, and graphic organizers

6. Using graphic novels

7. Using Japanese style manga comic books

Visual Media Continued:

8. Using movies, movie clips, and animated cartoons

9. Using newspapers and magazines that include text, images, and pictures

10. Using political cartoons and comic strips

11. Using still pictures, photos, and digital images

Round Two of the Delphi Survey Results

After the completion of the first round, 35 of the initial 37 participants completed round two. Reminder emails were sent to the two participants who failed to complete round two. Researchers realized participant attrition would be an important variable to consider. Researchers over recruited the desired number of 30 participants suggested by the Delphi Method. Fortunately, attrition for the remainder of the study was low and all remaining 35 participants completed the second and third rounds. In round two participants completed the second survey instrument composed of 25 questions based on items generated in round one. Participants rated items using a 5-point Likert Scale where 1 = Not Important, 2 = Somewhat Important, 3 = Neutral, 4 = Is Important, and 5 = Is Very Important. Participants were able to add comments and clarification if they wished. The comments gave clarity and helped determine the progression of items from rounds two and three. Table 4-2 displays all participant responses from the second round of data collection, and the number of K-12 curriculum directors, instructional coaches, specialists, and writers' who selected each scale.

Table 4-2 Round 2 Raw Survey Responses

1 = Not Important (NI), 2 = Somewhat Important (SI), 3 = Neutral (N), 4 = Is Important (II), 5 = Is Very Important (IVI)

ITEM	NI	SI	N	II	IVI
1. Using books and short story readers with only text and no images	10	6	8	6	5
2. Using books and short story readers that include text, images, and pictures	0	0	3	18	14
3. Using newspapers and magazines that include text, images, and pictures	1	7	3	14	10
4. Using still pictures, photos, and digital images	2	5	2	18	8
5. Using political cartoons and comic strips	1	5	5	11	13
6. Using comic books	4	9	6	15	1
7. Using graphic novels	1	10	6	13	5
8. Using Japanese style manga comic books	7	4	16	7	1
9. Receiving professional development training for educators to use visual media	0	2	0	6	27
10. Promoting reading clubs and and organizations	0	3	3	12	17
11. Using flashcards, graphs, charts, and graphic organizers	0	3	1	8	23
12. Using art, paintings, and drawings	3	2	4	17	9
13. Using Promethean Boards and interactive whiteboards	3	5	7	12	8
14. Using computers and laptops	1	7	6	15	6
15. Using projectors and document cameras	0	7	3	17	8
16. Using tablets, iPads, e-readers that incorporate e-books	1	4	8	11	11

Table 4.2—*Continued*

1 = Not Important (NI), 2 = Somewhat Important (SI), 3 = Neutral (N), 4 = Is Important (II), 5 = Is Very Important (IVI)

ITEM	NI	SI	N	II	IVI
17. Using tablets, iPads, e-readers that incorporate e-books, e-graphic novels, e-manga Japanese style comic books	2	5	13	12	3
18. Using smartphones, iPods, texting, and apps	12	3	6	11	3
19. Using software such as Microsoft Office, Prezi, and Google Docs	3	8	3	13	8
20. Using educational reading software	1	2	9	19	4
21. Using movies, movie clips, and animated cartoons	4	5	4	19	3
22. Using websites such as YouTube and DailyMotion	7	7	7	12	2
23. Using websites that allow making movies, animated cartoons, and video streaming	4	5	10	15	1
24. Using websites that offer interactive visual reading programs	0	5	5	19	6
25. Using internet blogs	7	6	7	15	0

In addition, table 4-3 shows a summary of the mean, median, mode, and the converted mode percentage for each survey item response selected by participants in the second round of data collection. According to Salkind (2008) the mean is a type of average where scores are summed and divided by the number of observations. The sample mean is the measure of central tendency that most accurately reflects the population mean (Salkind, 2008). The mean is the

fulcrum and is the centermost point where all values on one side of the mean are equal in weight to all values on the other side of the mean (Salkind, 2008). The mean is very sensitive to extreme scores and an extreme score can pull the mean in one direction or the other and make it less useful as a measure of central tendency (Salkind, 2008). Researchers monitored for extreme scores and outliers. The first way consensus among participants was established was by calculating the mean of each item. A mean score of 3 or greater specified a high degree of consensus. A mean score of 2.9 or less specified a low degree of consensus. In round two means ranged from 2.7 – 4.7. The majority of mean scores with the highest percentage of scale ratings of 3 or higher progressed to the third round.

The second central tendency that was used to form consensus was the median. According to Salkind (2008) the median is the point at which 50% of the cases in a distribution fall below and 50% fall above. The median was computed by listing the values in order from lowest to highest and identifying the middle score. On the occasion there is an even number of values then the median is the mean between the two values (Salkind, 2008).

The third central tendency that was used to form consensus was the mode. According to Salkind (2008) the mode is the most frequently occurring score in a distribution. The mode is the most general and least precise measure of central tendency, however the mode plays a very important role in understanding the characteristics of a special set of scores (Salkind, 2008). In this study the mode

was calculated by listing all values in a distribution only once. Then, the number of times each value occurred was tallied and the value that occurred the most was identified as the mode (Salkind, 2008). In this study the mode was converted to a percentage for visual clarity and representation. The mode percentage indicated the most frequently selected rating per item. Consensus continued to form when items had high mode percentages of 4 = Is Important (II) and or 5 = Is Very Important (IVI). Items that were rated with the high mode percentages of 4 = Is Important (II) and 5 = Is Very Important (IVI) progressed to round three. Conversely, items that were rated with the high mode percentages of 3 and under where 3 = Neutral (N), 2 = Somewhat Important (SI), and 1 = Not Important (NI) did not advance to the third round.

Table 4-3 Round 2 Survey Responses: Mean, Median, Mode, & Mode %

1 = Not Important (NI), 2 = Somewhat Important (SI), 3 = Neutral (N), 4 = Is Important (II), 5 = Is Very Important (IVI)

Item	Mean	Median	Mode	Mode %
1. Using books and short story readers with only text and no images	2.7	3	1	(NI) 28.6%
2. Using books and short story readers that include text, images and pictures	4.1	4	4	(II) 51.4%
3. Using newspapers and magazines that include text, images, and pictures	3.7	4	4	(II) 40.0%

Table 4.3--*Continued*

1 = Not Important (NI), 2 = Somewhat Important (SI), 3 = Neutral (N), 4 = Is Important (II), 5 = Is Very Important (IVI)

Item	Mean	Median	Mode	Mode %
4. Using still pictures, photos, and digital images	3.7	4	4	(II) 51.4%
5. Using political cartoons and comic strips	3.9	4	5	(IVI) 37.1%
6. Using comic books	3.0	3	4	(II) 42.9%
7. Using graphic novels	3.3	3.5	4	(II) 37.1%
8. Using Japanese style manga comic books	2.7	3	3	(N) 45.7%
9. Receiving professional development training for educators to use visual media	4.7	5	5	(IVI) 77.1%
10. Promoting reading clubs and organizations	4.2	4	5	(IVI) 48.6%
11. Using flashcards, graphs, charts, and graphic organizers	4.5	5	5	(IVI) 65.7%
12. Using art, paintings, and drawings	3.8	4	4	(II) 48.6%
13. Using Promethean Boards and interactive whiteboards	3.5	4	4	(II) 34.3%
14. Using computers and laptops	3.5	4	4	(II) 42.9%
15. Using projectors and document cameras e-books	3.7	4	4	(II) 48.6%
16. Using tablets, iPads, and e-readers that incorporate	3.8	4	4/5	(II) (IVI) 31.4%
17. Using tablets, iPads, e-readers that incorporate e-books, e-graphic novels, e-manga Japanese style comic books	3.3	3	3	(N) 37.1%
18. Using smartphones, iPods, texting, and apps	2.7	3	1	(NI) 34.3%

Table 4.3--*Continued*

1 = Not Important (NI), 2 = Somewhat Important (SI), 3 = Neutral (N), 4 = Is Important (II), 5 = Is Very Important (IVI)

Item	Mean	Median	Mode	Mode %
19. Using software such as Microsoft Office, Prezi, and Google Docs	3.4	4	4	(II) 37.1%
20. Using educational reading software	3.6	4	4	(II) 54.3%
21. Using movies, movie clips and animated movies	3.3	4	4	(II) 54.3%
22. Using websites such as YouTube and DailyMotion	2.9	3	4	(II) 34.3%
23. Using websites that allow making movies, animated cartoons and video streaming	3.1	3	4	(II) 42.9%
24. Using websites that offer interactive visual reading programs	3.7	4	4	(II) 54.3%
25. Using internet blogs	2.9	3	4	(II) 42.9%

At the conclusion of the second round of data collection 21 out of 25 items progressed to the third and final round of data collection. Researchers noted in table 4-4 the following four survey item numbers 1, 8, 17, and 18 did not progress to the third and final round of data collection due to low mean averages and high mode percentages of 3 = Neutral (N), 2 = Somewhat Important (SI), and 1 = Not Important (NI) by expert panelists. Calculating the mean, median, mode, and converting the mode percentage, and analyzing participants' additional comments helped the process of building consensus among participants. Using descriptive

statistics and analyzing the data using central tendencies was important between the three rounds of data collection.

Table 4-4 Round 2 Survey Responses: Non Progressing Items to Round 3

1 = Not Important (NI), 2 = Somewhat Important (SI), 3 = Neutral (N), 4 = Is Important (II), 5 = Is Very Important (IVI)

Item	Mean			Mode %
1. Using books and short story readers with only text and no images	2.7	Not Important	(NI)	28.6 %
8. Using Japanese style manga comic books	2.7	Neutral	(N)	45.7 %
17. Using tablets, iPads, e-readers that incorporate e-books, e-graphic novels, e-manga Japanese style comic books	3.3	Neutral	(N)	37.1 %
18. Using smartphones, iPods, texting, and apps	2.7	Not Important	(NI)	34.3 %

First, item number *1-using books and short story readers with only text and no images* had a low mean of 2.7, and its highest mode percent was 1 = Not Important (NI) at 28.6%. It was clear to researchers that participants thought text without images was not important to use to teach reading. According to the additional comments provided by participants, they indicated that text with images was more useful to teach reading than text without images. Next, item number *8-using Japanese style manga comic books* had a low mean of 2.7, and its highest mode percent was 3 = Neutral (N) at 45.7%. For this item the data suggests, participants were unsure of what this item was and how to use this form of visual media. Participants' additional comments expressed unfamiliarity with

the Japanese manga comic book item. However, even though many participants were unfamiliar with the item, their comments and high neutral rating suggests they may be willing to try using the item because participants did not rate the item with a high mode of 1 or 2. Then, item number *17-using tablets, iPads, and e-readers that incorporate e-books, e-graphic novels, and e-manga Japanese style comic books* had a higher mean of 3.3, and its highest mode percent was 3 = Neutral (N) at 37.1%. Similar to the previous item that had the Japanese manga component, participants' additional comments and higher mean of 3.3 suggest they may be willing to use the item given the chance since participants did not rate the item with a high mode of 1 or 2. However, similar items numbers *7-using graphic novels*, and item *16-using tablets, iPads, and e-readers that incorporate e-books* progressed to round three of data collection. Researchers identified the defining difference was the incorporation of Japanese manga style comic books and Japanese e-manga comic books in items 8 and 17 and participants' unfamiliarity or exposure to these items.

The final item that did not progress to the third round of data collection was item number *18-using smartphones, texting, and apps* had a low mean of 2.7, and its highest mode percent was 1 = Not Important (NI) at 34.3%. Expert panelists' data and additional comments indicated using smartphones, texting, and apps were not important nor acceptable for teaching reading. Researchers noted this to be of importance, because the Pew Research Center's Internet & American

Life Project (2006) found that students of all age's most common form of mobile telecommunications devices are smartphones. Frequently, students use these devices to access information through applications (apps), text information to others, and most importantly use them to read (Moorefield-Lang & Gavigan, 2012). Also, the Pew Research Center's Internet & American Life Project (2006) found the average American accesses a smartphone and its apps nine times per hour each day. There was a disconnect between expert panelists' data and additional comments that suggests using smartphones, texting, and apps were not important to teaching reading, because adolescents avidly use smartphones, texting, and apps to read.

In addition, researchers noted there were two items with average mean scores with 2.9% that did progress to round three. These two specific items, item number *22-using video websites such as YouTube and DailyMotion* and item number *25-using internet blogs* progressed to the third and final round of data collection, because respondents selected their highest mode percentages of 34.3% Is Important (II) and 42.9% Is Important (II) respectively. Participants' additional comments indicated prior exposure and experience using these two forms of visual media and that they were important to teaching reading. At the end of the second round of data collection 21 items remained composed of 2 strategies, 10 tools, and 9 visual media items.

Round Three of the Delphi Survey Results

In the third and final round of data collection panelists were given the same survey from the second round of data collection minus the four items that did not progress. In this round participants rated whether or not they agreed or disagreed if each of the remaining 21 strategies, tools, and visual media items were important to use to teach reading in K-12 education. Consensus was reached when at least 51% of the total responses of participants selected they agreed each item was important to teaching reading. Participants did not have 100% unanimous agreement on all items. Only one item was rated at 100% agreement by all participants. However, all items did surpass 51% agreement and were identified as important. The expert panelists agreed all remaining 21 items composed of 2 strategies, 10 tools, and 9 visual media were important and used to teach reading in K-12 education. Table 4-5 shows the remaining 21 important items and expert panelist agreement and disagreement percentages.

Table 4-5 Round 3 Survey Responses: Agreement and Disagreement %

Item	Agree %	Disagree %
1. Using books and short story readers that include text, images, and pictures	94.3%	5.7%
2. Using newspapers and magazines that include text, images, and pictures	97.1%	2.9%

Table 4.5--*Continued*

Item	Agree %	Disagree %
3. Using still photos, pictures and digital images	77.1%	22.9%
4. Using political cartoons and comic strips	88.6%	11.4%
5. Using comic books	71.4%	28.6%
6. Using graphic novels	74.3%	25.7%
7. Receiving professional development training for educators to use visual media	100.0%	0.0%
8. Promoting reading clubs and organizations	88.6%	11.4%
9. Using graphs, charts, and graphic organizers	97.1%	2.9%
10. Using art, paintings, and drawings	80.0%	20.0%
11. Using Promethean Boards and interactive whiteboards	68.6%	31.4%
12. Using computers and laptops	80.0%	20.0%
13. Using projectors and document cameras	74.3%	25.7%
14. Using tablets, iPads, and e-readers that incorporate e-books	74.3%	25.7%
15. Using software such as Microsoft Office, Prezi, and Google Docs	71.4%	28.6%
16. Using educational reading software	80.0%	20.0%
17. Using movie clips and animated movies	74.3%	25.7%
18. Using websites such as YouTube and DailyMotion	65.7%	34.3%
19. Using websites that allow making movies, animated cartoons, and video streaming	60.0%	40.0%

Table 4.5--*Continued*

Item	Agree %	Disagree %
20. Using websites that offer interactive reading programs	80.0%	20.0%
21. Using internet blogs	54.3%	45.7%

In the third and final round of the Delphi data collection participants agreed on 21 important items composed of 2 strategies, 10 tools, and 9 visual media items they used to teach reading in their K-12 school districts across the state of Texas. At the end of round three of the Delphi researchers reflected back to the original two qualitative research questions in the first round of data collection. The two research questions followed this statement: The purpose of this study is to investigate strategies, tools, and visual media used in Texas's school districts by K-12 level reading & ELA curriculum directors, instructional coaches, specialists, and writers to teach reading. (Visual media is defined as communication with visual images, print, and or technologies).

RQ1. What types of visual media do curriculum directors, instructional coaches, specialists, and writers incorporate to teach reading?

RQ2. What types of visual media are encouraged during professional development courses to teach reading?

Researchers were able to answer the two research questions after methodically executing the Delphi Method and all three rounds of its quantitative and qualitative data collection. The first research question was answered by the

21 important items participants agreed were important to teaching reading. Participants answered the second research question by indicating the 21 important items were also the same items that were encouraged to use in their professional development courses to teach reading. This chapter has already discussed the quantitative data analysis of participants' numeric responses. Next, researchers analyzed qualitative responses given by expert panelists from the second and third rounds of data collection. Participants' comments were categorized from the highest to lowest average means of items from the second round. Then, participants' comments secondary categorization was by the percentage of agreement of the final 21 items from the third round. The additional qualitative comments provided by participants during the second and third rounds of data collection helped researchers crystalize a more in-depth meaning and salient understanding of their preceeding quantitative responses.

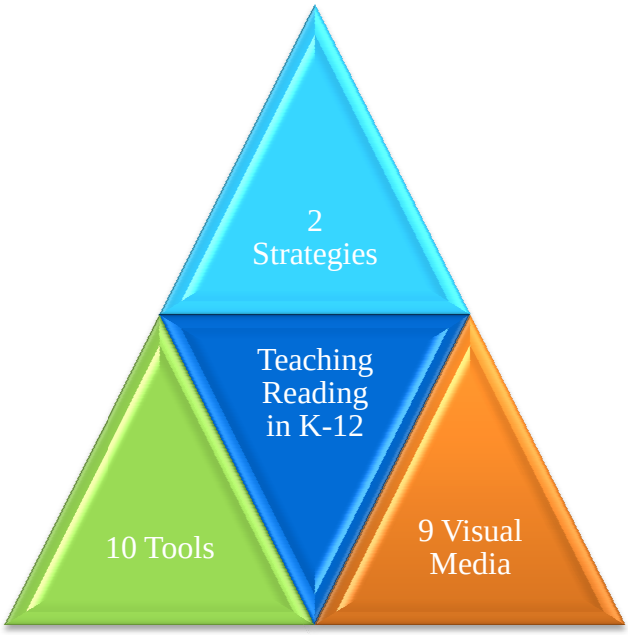

Figure 4-1 Strategies, Tools, and Visual Media

Strategies

1. It is important for reading, ELA, curriculum directors, instructional coaches, specialists, and writers to receive professional development training to design and implement reading curriculum that incorporates the use of visual media to teach reading. (Round 2 Mean = 4.7) (Round 3 Agreement = 100.0%)

In the additional comments box provided in both the second and third rounds of data collection participants indicated it was crucial for them to receive professional development training on how to use visual media in their school districts. A participant said, "I would do much more if taught how to incorporate this into my curriculum and teaching." Another participant explained, "In order to be effective educational leaders, staff should be up to date on current

instructional strategies, especially the new use of visual media." An additional participant said, "This method of literacy education resonates well with me, and I believe it should be implemented uniformly. Ongoing development not only provides educators with these tools, it also makes sure everyone is on the same page." The next participant clarified, "Only when all individuals who are responsible for designing curriculum see the value in such things will we have ready access to resources and the time to incorporate these materials into the curriculum." A different participant thought, "Obviously there are more types of visual media than I had originally thought. I would need more training in seeing how to incorporate all forms of visual media." Additionally, another participant thought "Many are unaware of the values and lessons that can be imparted." Next, another participant gave qualified comments and said,

> Educators are required to use visual media to teach with and students are tested on their ability to interpret and formulate answers to questions about the media representation. If that is the case, these resources should be incorporated into the curriculum.

All participants deemed this strategy item to have the utmost importance for teaching reading. This was the only item rated by participants at 100% agreement.

2. It is important to promote reading clubs and organizations to teach reading. (Round 2 Mean = 4.2) (Round 3 Agreement = 88.6%)

Participants explained in their additional comments that it was important for reading clubs and organizations to be promoted to encourage reading and lifelong readers. A participant said, "Showing students that others are interested in reading is vital." Another participant explained, "Students need to see that reading has value and enjoyment outside the classroom setting." A different participant said,

> Students do what other students are doing. The more fun we make something, and the more included we make students feel in a club, event, or other organization, the more likely they are to improve in the given area.

The next participant added, "Reluctant readers who can see their peers reading for enjoyment are more likely to read themselves, and readers who also have a love for reading can bond with like-minded students." Additionally, another participant gave relevant reasons for using reading clubs and said,

> Due to state testing requirements, the curriculum has been adjusted to focus much more on non-fiction than fictional literature, and students are given less of an opportunity to foster a love for reading. This will negatively impact reading skills. Clubs and organizations may become a very useful outlet to create lifelong learners and readers.

Participants found this strategy item important and indicated it was vital for students to see their own peers reading in groups.

Tools

1. It is important to use tablets, iPads, and (electronic readers) e-readers that incorporate (electronic books) e-books to teach reading. (Round 2 Mean = 3.8) (Round 3 Agreement = 74.3%)

Participants spoke with clarity about the importance of using tablets, iPads, e-readers, and e-books in the classroom. One participant explained, "As our entire world shifts to the digital realm, this will continue to move towards the new form of reading." The next participant said, "Different types of text students will encounter in real-world settings are useful for reading." Another participant said, "I think they are good assistive technology devices that can enhance the teaching of reading." Another participant thought, "Students have to use them in a classroom or career setting in the future, so they should at least be exposed to it." Next, a participant explained, "With so much technology being used among children, it would certainly peak their interest for reading more if you incorporate technology." Participants believed this tool item was important to use to teach reading due to students' desire to use new technologies.

2. It is important to use word processing and presentation software such as Microsoft Word, PowerPoint, Prezi, and Google Docs to teach reading. (Round 2 Mean = 3.8) (Round 3 Agreement = 74.3%)

Expert panelists said it was important to use word processing and presentation software to teach reading. A participant explained, "I would say

word processing and Google Docs are important for writing and reading. PowerPoint can be used for almost anything, they are most useful for teaching vocabulary in sync with images." Another participant added, "I know teachers create different presentations to help teach reading, so it could be useful at helping students learn." Then, a different participant said, "This would also be preparing students for use possibly after they graduate." An additional participant thought, "This software helps with interactive reading." Participants iterated this item was important to teaching reading because it forces students to engage in skills for future studies and potentially use in the workforce.

3. It is important to use websites that offer interactive visual reading programs to teach reading. (Round 2 Mean = 3.7) (Round 3 Agreement = 80.0%)

Participants clarified the importance of using websites that offer interactive visual reading programs to teach reading. A participant said, "Interactive reading should be any educator's primary goal." Another participant explained, "These kinds of programs if geared correctly, instill context to written language within the mind of a student." Then, another participant added, "These programs could be helpful and engaging." Participants explained this item was useful for teaching reading since the tool was highly interactive and engaged students.

4. It is important to use educational reading software to teach reading. (Round 2 Mean = 3.6) (Round 3 Agreement = 80.0%)

Participants discussed the importance of using educational reading software to teach reading. A participant explained, "This software normally makes the lessons being taught manageable and fun." Another participant expressed, "My school district has been very pleased with the I-station software." An additional participant thought, "Our literature launcher software is excellent for introducing literary time periods." This particular tool item appeals to different student learning styles and preferences.

5. It is important to use computers and laptops to teach reading. (Round 2 Mean = 3.5) (Round 3 Agreement = 80.0%)

Participants emphasized the importance of using computers and laptops to teach reading. A participant said, "Technology is on the rise and should be incorporated into every curriculum." Another participant expressed, "Students will have to use computers and laptops in a college or work environment so they need practice." A participant explained clearly, "The kids like getting their hands on the technology and in general just respond better to text on a screen than text on paper." Participants pointed out students are a part of the rejuvenation of today's society and embrace new reading technologies.

6. It is important to use Promethean Boards and interactive whiteboards to teach reading. (Round 2 Mean = 3.5) (Round 3 Agreement = 68.6%)

Participants explained this item had value because of its visual component and its tactile ability to physically engage students. A participant said, "It's a

good engaging way to practice close reading techniques." Another participant thought, "Promethean Boards and interactive whiteboards are important for modeling good reading behaviors for a whole class." A different participant explained, "I have seen where Promethean Boards help the students to be more engaged." Participants believed using Promethean Boards and the interactive whiteboard tool item was important for teaching reading.

7. It is important to use projectors and document cameras to teach reading. (Round 2 Mean = 3.4) (Round 3 Agreement = 71.4%)

Participants confirmed the importance of using projectors and document cameras to teach reading by highlighting the items' ability to draw in visual learners. A participant said, "This is a means of changing up the learning process in the classroom which keeps reading new and fresh." A different participant believed, "Projectors and document cameras are good assistive technology devices that can enhance the teaching of reading." Another participant gave good insight and said,

> I use the document camera for projecting the text when I read aloud to the kids. I can use it almost like a teleprompter, and the kids whose eyes and minds wander have an opportunity to get back on task. Also, sometimes the movement of my finger under the text I'm emphasizing helps them follow it more easily. I don't know why it works, but it does.

Participants found value in the tool item's ability to allow students to visually follow along and highlight pertinent information while reading aloud.

8. It is important to use websites that allow you to make movies, animated cartoons, and video streaming to teach reading. (Round 2 Mean = 3.1) (Round 3 Agreement = 60.0%)

For this item participants expressed it was important to use websites that allow movie making, animated cartoon making, and video streaming. A participant explained, "These kinds of programs if geared correctly, instill context to written language within the mind of a student." Another participant added, "The hope is that as students read they will become better writers too." Participants rated this item lower, yet the item still surpassed the 51.0% agreement level of importance with a rating of 60.0% agreement. Some participants expressed they did not have much experience using this item. However, participants saw the potential value in using this tool item due to its ability to add written text to visuals and supplement reading.

9. It is important to use video websites such as YouTube and DailyMotion to teach reading. (Round 2 Mean = 2.9) (Round 3 Agreement = 65.7%)

Participants underlined the importance of using video websites such as YouTube and DailyMotion to teach reading. The mean average for this item was lower than previous items with a 2.9, and the agreement rating was also lower than previous items. However, this item did surpass the agreement level of 51.0%

with an agreement rating of 65.7% importance. A participant said, "These websites can help grab the students' attention to get them engaged." Another participant added, "YouTube is helpful for discovering new reading strategies." Then, the next participant expressed concern for using video websites and said,

> Within reason these can be used. I think educators misuse this many times. They have to be very mindful that it correlates well with what they are teaching.

Participants agreed it was important to use video websites such as YouTube and DailyMotion to teach reading, yet participants pointed out this tool item needed to be used correctly and be aligned with the reading curriculum.

10. It is important to use internet blogs to teach reading. (Round 2 Mean = 2.9) (Round 3 Agreement = 54.3%)

Participants explained the importance of using internet blogs to teach reading. This item had a low mean of 2.9 and had the lowest agreement rating of 54.3% yet exceeded the 51.0% agreement threshold of importance. A participant said,

> Blogs are one of the current sources of news writing. Also, blogs are a form of modern prose that should be encouraged for readers to then turn into writers with their own voice and writing styles. Validity and reliability remain the biggest concern with educational blog usage.

Another participant explained, “It depends on the origin and the quality of the blog.” For this tool item the majority of participants argued using internet blogs were beneficial to teaching reading. The quality control, source, and contextual usage of blogs needed to be carefully considered for teaching reading.

Visual Media

1. It is important to use flashcard, graphs, charts, and graphic organizers to teach reading. (Round 2 Mean = 4.5) (Round 3 Agreement = 97.1%)

Participants explained the importance of using flashcards, graphs, charts, and graphic organizers to teach reading. Participants rated this visual media item with the highest mean score of 4.5, and the highest percentage of agreement at 97.1%. A participant said, “Flashcards are a huge part of my vocabulary instruction which leads to reading.” Another participant added, “Visual learners need this form of stimulation to effectively digest the concepts being taught.” The next participant said, “This works well for very early readers.” Additionally, another participant said,

> Graphic organizers are very useful when teaching comprehension skills. Teachers should complete the graphic organizers with the students during a read aloud. Then, students can complete their own graphic organizers with the books they are reading.

Participants thought this visual media item was important for developing reading comprehension and making visual connections to reading texts.

2. It is important to use books and short story readers that include text (words), images, and pictures to teach reading. (Round 2 Mean = 4.1) (Round 3 Agreement = 94.3%)

Participants gave a lot of feedback concerning the importance of using books and short story readers that include text, images, and pictures to teach reading. A participant commented, "It changes the dynamic between the reader and the text. It activates other parts of the brain and allows students to attach to the story in multiple facets." Another participant exclaimed, "Images make reading more appealing!" The next participant said, "Using books with images is important, this is especially true of struggling readers." Another participant explained, "In the early stages images are critical." Additionally, a participant thought, "The kids need to be able to read all formats. For English as a Second Language (ESL), it is very important for them to have images." The next participant explained, "Images contribute to understanding as well as interest in reading." Another participant expressed, "I feel that it is very important to expose children to all types of reading." Then, a participant emphasized the importance of transitioning to other texts with less visual images and more text and said,

> I think it is equally important to have books and short stories with images as well early on first before leading into books that are only text. This will help engage and begin giving them visual images that follow along with a story.

One participant gave genuine feedback about books with images, text, and pictures and said,

> Good readers begin to create mental images of what the text is saying. If they are emergent readers, those students need the images to help create images. Once they become better readers, they need fewer images. Creating a movie in your head, being able to predict, draw conclusions, and other reading techniques are pertinent to becoming a good reader!

Another participant explained, "Associating words and images provides context as well as interest. I would say you couldn't teach reading without images." Other participants expressed their concerns explaining their school districts did not provide many resources of books and short story readers that contained a lot of images, text, and pictures. However, they wished they had access to these resources. This visual media item was rated as very important to teaching reading.

3. It is important to use traditional newspapers and magazines that include text (words), images, and pictures to teach reading. (Round 2 Mean = 4.1) (Round 3 Agreement = 94.3%)

Participants expressed a variety of comments concerning the importance of using this visual media item. A participant said, "Genuine texts and documents give students a context for reading in the real world." The pictures and images serve as informal graphic organizers that aid in comprehension." Another

participant followed with, “Using newspapers with images allows the reader to understand the differences between fiction and nonfiction text.” Then, a participant exclaimed, “Reading magazines and newspapers, this is everyday reading!” Another participant said, “The point here is whether it is traditional newspaper or digital resources is to provide authentic text for students to read.” Then, a participant made academic connections to using newspapers and magazines with images and text and said,

> These sources are used in some careers as well as college classrooms and on common tests like the Scholastic Aptitude Test (SAT), American College Test (ACT), and or Advanced Placement Test (AP). So, students need to feel comfortable with what they will find there and how different styles are important depending on purpose and audience.

Regardless of whether the newspaper or magazine was traditional print or digital publication, participants found it imperative for students to be able to analyze, interpret, and find meaning from images and text while using this visual media item to read.

4. It is important to use political cartoons and comic strips to teach reading. (Round 2 Mean = 3.9) (Round 3 Agreement = 88.6%)

Participants articulated the importance of using political cartoons and comic strips to teach reading. A participant explained, “The comic strips could be good to engage those struggling readers, because there is less text to read and

more meaning." Another participant thought, "These political cartoons and comic strips are of high interest to children and would encourage reading and comprehension." Another participant explained, "Comic strips allow for words to guide a message, while the visual portion of the image provides context. Contextual reading is a very necessary skill outside of the classroom and should be focused on." The next participant articulated, "During reading using political cartoons are important for rhetorical analysis." Another participant described, "Lots of layers, subtleties, nuances, and context in media like this. It's important to practice dissecting these things." The next participant thought, "I think the story progression inherent in comic strips would be useful." The next participant believed, "I honestly cannot speak so much to the political cartoons in Elementary, but possibly yes in High School. I do believe using comic strips could certainly build interest among students." Another participant said,

> I like the idea of comic strips as it promotes a sense of progression in the story. The visual progression itself makes the lesson more interesting for students who would otherwise have a hard time following the events.

Participants thought political cartoons and comic strips were important to teaching reading. Some participants expressed inexperience using both, yet participants saw the value in using this form of visual media at different reading stages of development.

5. It is important to use art, paintings, and drawings to teach reading. (Round 2 Mean = 3.8) (Round 3 Agreement = 80.0%)

Participants gave insightful comments about the importance of using art, paintings, and drawings to teach reading. A participant articulated, "I believe this is extremely important; not only to promote reading, but also to create connections between reading and other aspects of knowledge." The next participant said, "Using art media helps students to see patterns, infer meaning, and make connections which can transfer to reading text." A different participant explained, "Some children are better visual learners, therefore they are more engaged if they can draw things out." Participants' comments expressed it was important to use this visual media item.

6. It is important to use still pictures, photos, and digital images to teach reading. (Round 2 Mean = 3.7) (Round 3 Agreement = 77.1%)

Participants provided intuitive feedback about the importance of using still pictures, photos, and digital images to teach reading. A participant explained, "Through photo analysis students can learn inference and analysis skills that they struggle with while reading." The next participant said, "The relationship between words and the real world depicted in photographs helps readers to establish connections between printed text and our society at large." Another participant added, "Readers can gain meaning from all forms of media." A participant explained, "Pictures are important for emergent readers." Another

participant clarified, “Photos can be useful as a prelude to a reading and writing assignment.” A participant gave an example by saying, “Reading teachers can write what the students say about the pictures. Then students can read their own words back to the teacher. This is the *Language Experience Approach*.” Participants’ comments about using still pictures, photos, and digital images clarified this visual media item.

7. It is important to use graphic novels to teach reading. (Round 2 Mean = 3.3) (Round 3 Agreement = 74.3%)

Participants gave many comments explaining the importance of using graphic novels to teach reading. A participant expressed, “As comic strips are a truly an American art form, graphic novels are the most evolved version of them. They should be treated like novels and give readers access to stories otherwise left untold.” The next participant explained, “Graphic novels could be beneficial to motivate students to read.” Another participant thought, “Graphic novels and comics are definitely ways to grab students’ interests, especially reluctant ones.” A different participant added, “Graphic novels are excellent for struggling readers.” The next participant followed by saying, “When reading graphic novels struggling readers or English Language Learners (ELL’s) still get the content and can participate in discussions concerning the same content that others may be receiving at higher reading levels.” The next participant clarified, “Graphic novels are very appealing to children. They break up the text.” A different

participant said, “Graphic novels are of high interest, especially for the males in the class.” Another participant commented, “Graphic novels can have the same reading affect as using comics or cartoons.” Some participants expressed concern and unfamiliarity using graphic novels due to their relatively novel use in pedagogy. A participant said,

> I don’t really understand the difference between this question and the last. I thought graphic novels were the new euphemism for comic books. I know that kids respond well when you use them, but I think their utility is questionable.

The majority of participants found value in using graphic novels to teach reading. It was clear some participants had experience using graphic novels to teach reading while others were inexperienced using this visual media item.

8. It is important to use movies, movie clips, and animated cartoons to teach reading. (Round 2 Mean = 3.3) (Round 3 Agreement = 74.3%)

Participants gave valuable feedback about using movies, movie clips, and animated cartoons to teach reading. A participant commented, “Depending on the material, it can be extremely educational to give context to reading words, famous works, and concepts.” A different participant explained, “Using movies at the introductory stages of teaching certain reading concepts was helpful.” Some participants expressed discretion for using movies, movie clips, and animated cartoons efficiently and effectively. A different participant explained, “I like the

idea of this, but I believe the method of implementation to be key in making this useful or effective." Participants found using movies, movie clips, and animated cartoons to be important to teaching reading with some reservations about implementation and purpose.

9. It is important to use comic books to teach reading. (Round 2 Mean = 3.0) (Round 3 Agreement = 71.4%)

Participants exemplified the importance of using comic books to teach reading. A participant said,

> Comic books present similar positives as comic strips. However, comic books also give readers access to larger vocabulary in many cases and exposure to new imaginative concepts. Given their short nature, comic books are good for in class reading lesson.

The next participant added, "If the comic book is of interest it could be a big motivator to read." The next participant commented, "Comic books have a plethora of literary devices that are incorporated in them." Another participant explained, "Comic books use large and scientific vocabulary which teaches children polysyllabic word recognition and contextual understanding language." The next participant said,

> I know that my curriculum doesn't give time to use comic books; however, I see there could be value in using comics and graphic novels.

Because, it causes students to interpret dialogue and make inferences more often than a narrative might.

A different participant pointed out the layout presentation of using comic books and said,

> Using comic books could help engage your struggling readers. Comic books don't look like as much text for a student to read, yet comic books still can have quite a bit of text. It doesn't look like it because of the boxes that are usually put around each scene, but there is plenty.

Participants exemplified the importance of using comic books to teach reading. As this was the last of the visual media items, researchers noted as items progressed and the lower the mean average was per item the lower the agreement was among participants. Participants were able to qualify the importance of strategies, tools, and visual media items through their additional comments. Participants' comments gave researchers insight into understanding the importance of each item.

Chapter Summary

Chapter four reviewed participant selection for the Delphi Method. This chapter also gave an overview of the data collected in all three rounds of the Delphi data collection. In the first round of data collection participants were asked to answer two open-ended questions designed to develop lists of important strategies, tools, and visual media items used by K-12 reading curriculum

directors, instructional coaches, specialists, and writers to teach reading. Next, in the second round of data collection participants were asked to rate the importance of 25 items using a Likert-scale. In the third and final round of data collection participants were asked to agree or disagree if items were important. Then, this chapter presented a comprehensive analysis of the quantitative and qualitative participant responses. Ultimately, participants unearthed 21 important items composed of 2 strategies, 10 tools, and 9 visual media items used by K-12 reading curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. The data analysis also revealed visual media such graphic novels, comic books, and Japanese manga style comic books were rarely used by some participants to teach reading. Participants indicated they were open to using graphic novels, comic books, and Japanese manga style comic books, yet they were unfamiliar with them and needed resources and training to use them to teach reading. Chapter 5 discusses the meaning of the findings of the study, implications, conclusions, limitations, and recommendations for future research.

Chapter 5

Findings, Discussion, & Conclusion

Educators in K-16 education have been challenged with the complex problem of college readiness. Vast numbers of students are leaving high school without the necessary basic reading, writing, math, and science skills to succeed in higher education. Entering freshman at two and four-year institutions are not ready to do college level work (Hoyt & Sorenson 2001; Ignash, 1997; Kozeracki, 2002; Levin, 2001; McCabe, 2000; Roueche & Roueche, 1999; Shults, 2000). When these ill-prepared college admits arrive at two and four-year community colleges and universities they must immediately enroll in costly developmental courses. According to the National Center for Education Statistics (2011) at four-year institutions 40% of incoming freshman were required to take developmental courses in reading, writing, science, and mathematics and 51% at community colleges. Developmental courses cost the K-16 educational system, universities, and taxpayers nearly $2.5 billion a year (Schacter, 2008).

In conjunction with the growing need for developmental courses, in recent years, college assessment standardized verbal reading and written test scores have steadily declined (Bracey, 2006). Precisely, reading is the fundamental skill needed most in relation to college readiness, because it affects all other academic disciplines (Adelman, 1999). Therefore, the purpose of this study was to investigate the reading strategies, tools, and visual media used by K-12

curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. Also, the study examined what strategies, tools, and visual media were encouraged to use during professional development courses among participants. The study was also interested in examining if visual media such as graphic novels, comic books, and Japanese manga style comic books that contain high volumes of integrated images and text were used to teach reading. The attainment of a deeper understanding of how reading strategies, tools, and visual media are being used and taught may better align K-16 reading curriculum. Understanding this phenomena may aid in reducing the growing need for developmental reading coursework in K-16 education and develop more university ready students.

In this study qualified expert panelists were identified by using purposive sampling. Participants' positions as K-12 reading and ELA curriculum directors, instructional coaches, specialists, and writers qualified their expertise. Participants represented large, medium, and small school districts only in the state of Texas. The Delphi Method was used. Three rounds of quantitative and qualitative data were collected. This study was conducted because educators are challenged with college readiness problems. These problems include the increasing demand for developmental courses and the need to create more college ready readers. This chapter discusses a summary of the study findings, a

thorough discussion of the meaning of the results, the implications for K-16 education, a conclusion, limitations, and recommendations for future research.

Summary of Study Findings

This study used the Delphi Method and identified 21 important items composed of 2 strategies, 10 tools, and 9 visual media items used by K-12 reading curriculum directors, instructional coaches, specialists, and writers to teach reading in school districts in Texas. In the first round of data collection expert participants generated 50 items. In round one participants indicated items that were used to teach reading in their districts were the same items that were encouraged during their professional development coursework to teach reading. Next, the 50 items were coded, collapsed, and categorized into the main groups of strategies, tools, and visual media. After the categorization process, 25 items progressed to the second round. In the second round the 35 expert panelists were given a survey instrument and asked to rate the 25 items using a Likert-scale. Participants rated items by using a five-point Likert Scale where 1 = Not Important, 2 = Somewhat Important, 3 = Neutral, 4 = Is Important, and 5 = Is Very Important. In rounds two and three participants were given the opportunity to add comments and clarification in a text box underneath each question. After analyzing responses from the second round of data collection 21 items progressed to the third and final round. The items progressed due to their mean scores of 3 or greater, and high mode percent of 4 = Is Important (II) and 5 = Is Very Important

(IVI). Participants' additional comments also aided in determining progression and consensus. In round three participants were asked if they agreed or disagreed if each of the 21 items were important to teaching reading. Consensus was achieved when 51% or more of the expert panelists agreed each individual item was important to teaching reading. Participants agreed each of the 21 items composed of 2 strategies, 10 tools, and 9 visual media items were important to teaching reading in K-12 education in Texas. The following is an alphabetical list of the 21 important items:

Strategies

1. It is important for reading, ELA, curriculum directors, instructional coaches, specialists, and writers to receive professional development training to design and implement reading curriculum that incorporates the use of visual media to teach reading.
2. It is important to promote reading clubs and organizations to teach reading.

Tools

1. It is important to use computers and laptops to teach reading.
2. It is important to use educational reading software to teach reading.
3. It is important to use internet blogs to teach reading.
4. It is important to use projectors and document cameras to teach reading.

5. It is important to use Promethean Boards and interactive whiteboards to teach reading.

6. It is important to use tablets, iPads, and (electronic readers) e-readers that incorporate (electronic books) e-books to teach reading.

7. It is important to use video websites such as YouTube and DailyMotion to teach reading.

8. It is important to use websites that offer interactive visual reading programs to teach reading.

9. It is important to use websites that allow you to make movies, animated cartoons, and video streaming to teach reading.

10. It is important to use word processing and presentation software such as Microsoft Word, PowerPoint, Prezi, and Google Docs to teach reading.

Visual Media

1. It is important to use art, paintings, and drawings to teach reading.

2. It is important to use books and short story readers that include text (words), images, and pictures to teach reading.

3. It is important to use comic books to teach reading.

4. It is important to use flashcard, graphs, charts, and graphic organizers to teach reading.

5. It is important to use graphic novels to teach reading.

6. It is important to use movies, movie clips, and animated cartoons to teach reading.

7. It is important to use political cartoons and comic strips to teach reading.

8. It is important to use still pictures, photos, and digital images to teach reading.

9. It is important to use traditional newspapers and magazines that include text (words), images, and pictures to teach reading.

The 35 participants made of K-12 reading curriculum directors, instructional coaches, specialists, and writers confirmed each of the 21 items were important to teaching reading. At the beginning of the study researchers set out to investigate the following two research questions:

1. What types of visual media do curriculum directors, instructional coaches, specialists, and writers incorporate to teach reading?

2. What types of visual media are encouraged during professional development courses to teach reading?

Also, researchers investigated if participants were using visual media such as graphic novels, comic books, and Japanese manga to teach reading. At the conclusion of the study researchers discovered the aforementioned 21 items were important to teaching reading in K-12 school districts in Texas. Also, researchers found the same items that the experts used to teach reading were the same items

that were encouraged during their professional development courses to teach reading. Additionally, the study found visual media such graphic novels, comic books, and Japanese manga style comic books were rarely used by participants to teach reading. However, participants indicated they saw the value in using visual media such as graphic novels, comics, and Japanese manga style comic books to teach reading. Some participants explained they were unfamiliar with these items and needed more professional development training and physical resources to incorporate them into the reading curriculum. The findings in this study concerning the strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas were valuable to K-16 reading education.

Discussion of the Meaning of the Results

College readiness is an overarching challenge educators at all levels of K-16 education are combating. Problems within the systems such as the necessity to create more proficient readers and the spiraling need for developmental courses continue to negatively affect college readiness among students. These issues cultivate as long as educators approach these problems without scrutinizing smaller segments of the overarching challenge such as basic reading skills. The ability to read proficiently affects disciplines and levels across the educational spectrum. Research is growing in key areas linked to college readiness. As revealed in this study, constituents and decision makers will learn to implement

curriculum with important strategies, tools, and forms of visual media to ameliorate reading education. This struggle may endure for some time before educators align reading pedagogy and student learning preferences. It is possible that educators and students may never fully understand and or accept the needs of one another. What is important is that all parties persevere and try.

Applying the New London Group's multiliteracies framework to reading pedagogy and the Delphi Method made it clear that there are multiple modalities from which educators and students teach and learn to read. Today's students read through multiple mechanisms and are very technologically savvy. As the modernization of education and the gradual integration of technologies proliferate, educators must overcome and adapt to this dynamic environment. In this study K-12 reading curriculum directors, instructional coaches, specialists, and writers agreed they used 21 important items composed of 2 strategies, 10 tools, and 9 forms of visual media to teach reading. This study suggests that there are further implications and a need for more research to be conducted on this phenomena.

Implications for K-16 Higher Education Leadership

The findings of the study identified 21 important items consisting of 2 strategies, 10 tools, and 9 visual media items used to teach reading. The study revealed visual media such as graphic novels, comic books, and Japanese manga style comic books were rarely used by participants to teach reading. Participants

indicated they were open to using graphic novels, comic books, and Japanese manga style comic books, yet unfamiliarity, few resources, and a lack of training were concerns. The study found the participants were primarily using some strategies, large amounts of technology tools, and traditional visual print media to teach reading. Thus, this study revealed a disconnect between how educators are teaching reading and student reading learning preferences. This study revealed many educators are still using texts without images to teach reading. Participants in this study indicated their students prefer texts with images for more comprehension of concepts. Participants in this study confirmed texts without images are not important to teaching reading. Graphic novel, comic book, and Japanese manga researchers argue using visual media that contain high volumes of text and images together help students of all ages and developmental stages learn to read. However, participants in this study revealed this visual media is not consistently used to teach reading in their school districts. Researchers noted it was important to acknowledge that what people say they should do in theory may not be what people actually do in practice.

The findings in this study also revealed educators are trying to fill the void by integrating large amounts of technology tools such as computers, projectors, and reading software to teach reading. On the contrary, participants in this study revealed using smartphones, texting, and applications (apps) and similar mobile telecommunication devices are not important to use to teach reading. The Pew

Research Center's Internet & American Life Project (2006) found smartphones and mobile telecommunications devices are students' most commonly accessible form of technology. Students frequently use these devices as a mechanism for communicating, gathering information, and reading (Gavigan, 2012). Literacy and technology researchers the New London Group (1996) explained students learn to read from multiple modalities including audio, spatial, linguistics, gestural, and visual modes of learning. The New London Group (2001) refers to this generation of students as 'screenagers', because they are highly receptive to learning through the vehicles of technology and visual media. The findings in this study revealed currently some of educators' reading methodologies and student reading learning preferences ebb and flow in different directions.

Perpetually, educators strive to manifest engaging methods to teach students to read. Educators aim for students to be better readers and more college ready. Students who struggle with reading may require additional strategies, tools, and forms of visual media to help them traverse the gap into proficiency and higher education. The following is a list of implications concerning college readiness, developmental courses, and reading for K-16 higher education leaders to consider:

1. College readiness is a complex problem involving all levels of K-16 education. College readiness issues affect students gravely. This

overarching issue challenges all educators, and later the workforce, and society as a whole.

2. The growing need for reading developmental courses may continue as American students become more diverse and global. There are many non-traditional students coming through the K-16 educational systems and educators cannot afford to overlook the need to develop and nurture substantial reading skills and literacy at all levels.

3. Learning to read does not end in elementary school. Participants in this study noted while reading, students of all ages have difficulty making inferences about the texts they read and need visuals to guide them. This study revealed many reading educators were inexperienced with using new forms of visual media. Graphic novels, comic books, and Japanese manga style comic books are often preferred by students, and researchers argue their benefits. Educators would do well to try some of the strategies, tools, and visual media examined in this study to engage students where their interests lie or risk losing them in antiquated reading curricula.

4. This study's findings imply students progressively integrate new forms of visual media and phase out old mediums. This implies reading preferences and literacy is changing. Educators must constantly be trained to use current strategies, tools, and visual media that reaches their

students. In this study participants expressed the desire for more professional development courses on how to use reading strategies, tools, and visual media. Educators must move onward, because their students already have.

5. This study revealed 2 strategies, 10 tools, and 9 forms of visual media used to teach reading in K-12 education. More research needs to be conducted in this area of reading pedagogy. By conducting more research in the areas of college readiness, developmental courses, and reading pedagogy educators may be able to align strategies, tools, and visual media items used in their corresponding levels and improve students' overall reading proficiency.

Conclusion

College readiness remains a herculean task for educators to overcome. Many students enter two and four-year institutions without fundamental reading skills they should have obtained in K-12 schooling. These students arrive in higher education and are required to register for developmental courses before being allowed to take credit bearing courses. The literature explains reading proficiently is the skill students need most to be college ready.

This study examined the overarching problem of college readiness and its related concerns of developmental coursework, and reading proficiency. Drilling down further, this study investigated the strategies, tools, and visual media used

by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. Understanding how reading is being taught in K-12 may help better align reading curriculum in K-16 education. This understanding may help reduce the need for developmental reading courses, and produce more college ready students.

The study found 21 important items consisting of 2 strategies, 10 tools, and 9 visual media items were used to teach reading in Texas. Participants indicated the same items they used to teach reading in their K-12 school districts were the same items encouraged during professional development courses to teach reading. The study also revealed visual media such graphic novels, comic books, and Japanese manga style comic books were rarely used by participants to teach reading. Participants indicated they were open to using graphic novels, comic books, and Japanese manga style comic books, yet they were unfamiliar with them and needed resources and training to use them to teach reading.

This study fits into the current body of research concerning college readiness, developmental courses, and reading pedagogy by adding new findings. There is little research similar to the phenomena examined in this study. This study's findings were an original contribution to the base of knowledge in the specific areas of visual media and reading pedagogy, because it uniquely incorporated the usage of the Delphi Method and the New London Group's multiliteracies framework during its investigation. Specifically, this study's

design expanded knowledge in these areas because it localized a set of distinct expert participants and asked them how they were teaching reading in their K-12 school districts and only in Texas. Also, the findings in this study may influence decision makers in the profession who in the future may consider using visual media such as graphic novels, comic books, and Japanese manga to teach reading in their school districts. The findings in this study may affect the practices of reading educators. They can use this new information and try to vertically align and coordinate the reading strategies, tools, and visual media they use with other professionals in K-16 reading education. Also, the findings in this study may generate potential future studies related to college readiness, reading pedagogy, and visual media. By disseminating the findings in this study educators' base of reading knowledge will increase and hopefully help them to create more college ready students.

Limitations

In this study there were two major limitations. A key limitation to this study was participant recruitment. The Delphi Method called for a range of 15-30 participants to take part in the study (Clayton, 1997). Ideally, researchers desired between 40-50 participants to ensure a good full-bodied Delphi study developed. Researchers anticipated potential high attrition rates of panelists during the three rounds of data collection, because participants become busy with other obligations. For that reason researchers meticulously examined all 1226 school

districts' websites and identified 460 potential participants from across Texas. The process of participant identification took researchers approximately three months to conduct. With diligence and tenacity researchers were able to initially recruit 37 qualified volunteers to participate in the study and finished with 35 total participants.

There were several reasons recruiting participants was a challenge. First, contact information for potential participants displayed on school district websites was often difficult to find. Sometimes, the contact information was incorrect, outdated, and or not listed to the public. Also, some district websites required login identification and passwords to obtain contact information. Some district websites were not technologically maintained correctly. Some small school districts listed between 3-5 employees in the district office, and their titles and duties were ambiguous. Occasionally, potential participants' emails were screened by office aids. Researchers did not know if information was communicated to the target participants unless response emails returned. It was evident that potential participants often changed occupations due to advancement, relocation, and retirement.

Another key limitation to the study was access to large school districts with student enrollment of 50K or greater. They had their own intuitional review boards (IRB). Potential research projects must be filed and approved with each large school district before any research could be conducted. The IRB

departments indicated approval may take 3-6 months and there was no guarantee for research study approval. Several participants in large school districts committed to taking part in the study, yet later retracted when they asked upper management if it was okay to participate. Researchers would have preferred to have access to more large school districts' participants. On the other hand, researchers were content with the overall comprehensive representation of all school districts, because participants were chosen for their expertise not volume in numbers. Overall, recruiting the desired number of participants for the study and having more access to participants in large school districts were the main limitations. Researchers were able to recruit an acceptable number of participants to complete the Delphi study.

Recommendations for Future Research

This study examined strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in the state of Texas. This study can serve as a foothold for additional studies in this unique area of research. This study focused on the state of Texas. It would be interesting to examine the same phenomena in similarly populated states across America. This would foster very strong quantitative and qualitative Delphi studies.

Another thought provoking study in this area could examine the strategies, tools, and visual media that students think are important to teaching reading. This

study could be examined from an epistemological and cultural standpoint. Students could be grouped by gender, age, ethnicities, and grade levels. Researchers could examine how students think they learn to read best.

Additionally, researchers could conduct a similar study to this one and increase the expert participant panel size to over 100 respondents and explore if more important items could be generated. Researchers could investigate if there was a saturation point of items found similar to this study.

Next, it would be intriguing to investigate what strategies, tools, and visual media are used to teach reading to English Language Learners (ELL's). Participants in this study suggested ELL's benefit from using visual media such as graphic novels, comic books, and Japanese manga while learning to read. The need to help English language learners learn to read will continue to increase as the U.S. population diversifies, and exploring visual media may help reading education.

Another fascinating study could examine what strategies, tools, and visual media are used to teach reading to student participants with learning disabilities. As revealed by participants in this study, many students with learning disabilities benefit from using multimodal forms of visual media. Creating new knowledge to improve the lives' of students who are frequently disregarded could better their opportunities for success in higher education.

In reflection, this study investigated the strategies, tools, and visual media used by K-12 curriculum directors, instructional coaches, specialists, and writers to teach reading in school districts across the state of Texas. Also, the study examined what strategies, tools, and visual media were encouraged to use during professional development courses among participants. Specifically, the potential of using visual media such as graphic novels, comic books, and Japanese manga were investigated. The study used the Delphi Method to collect three rounds of quantitative and qualitative data. At the conclusion of the study, the 35 expert participant panelists came to consensus on 21 important items composed of 2 strategies, 10 tools, and 9 visual media items used to teach reading. Participants indicated the same items they used to teach reading in their K-12 school districts were the same items encouraged during professional development courses to teach reading. The study also revealed visual media such graphic novels, comic books, and Japanese manga style comic books were rarely used by participants to teach reading. Participants indicated they were open to using graphic novels, comic books, and Japanese manga style comic books, yet they were unfamiliar with them and needed resources and training to use them to teach reading. The two important strategies were: 1-receiving professional development training to incorporate visual media and, 2-promoting reading clubs and organizations.

The ten important tools were: 1-computers and laptops, 2-educational reading software, 3-internet blogs, 4-projectors and document cameras, 5-

Promethean Boards and interactive whiteboards, 6-tablets, iPads, and (electronic readers) e-readers that incorporate (electronic books) e-books, 7-video websites such as YouTube and DailyMotion, 8-websites that offer interactive visual reading programs, 9-websites that allow making movies, animated cartoons, and video streaming, 10-word processing and presentation software such as Microsoft Word, PowerPoint, Prezi, and Google Docs.

The nine visual media items were: 1-art, paintings, and drawings, 2-books and short story readers that include text (words), images, and pictures, 3-comic books, 4-flashcard, graphs, charts, and graphic organizers, 5-graphic novels, 6-movies, movie clips, and animated cartoons, 7-political cartoons and comic strips, 8-still pictures, photos, and digital images, 9-traditional newspapers and magazines that include text (words), images, and pictures used to teach reading.

In the current educational environment college readiness continues to be a challenge for educators. Developmental courses plague students' ambitions and dreams to attend higher education. Educators at all levels of K-16 education must continue to find engaging methods such as strategies, tools, and visual media and use them as vehicles to teach reading. Developing more proficient readers and college ready students will foster a more literate society for the future of tomorrow today.

Appendix A

Round 1 Delphi Questions

The Purpose of this study is to investigate strategies, tools, and visual media used in Texas's school districts by K-12 level reading and ELA curriculum directors, instructional coaches, specialists, and writers to teach reading. (Visual media is defined as communication with visual images, print, and or technologies).

1. What types of visual media do curriculum directors, instructional coaches, specialists, and writers incorporate to teach reading?
2. What types of visual media are encouraged during professional development courses to teach reading?

Appendix B

Round 2 Delphi Survey Questions

Instructions

The following questions are related to strategies, tools, and visual media identified in round one that K-12 reading and ELA curriculum directors, instructional coaches, specialists, and writers use to teach reading. Please answer each question and only select one answer per question. You will indicate your choices by using a five-point Likert scale where

1 = Not Important, 2 = Somewhat Important, 3 = Neutral, 4 = Is Important, and 5 = Is Very Important. You may add comments and clarification if you wish.

1. How important is it to use books and short story readers with only text (words only) and no images to teach reading?
2. How important is it to use books and short story readers that include text (words), images, and pictures to teach reading?
3. How important is it to use traditional newspapers and magazines that include text (words), images, and pictures to teach reading?
4. How important is it to use still pictures, photos, and digital images to teach reading?
5. How important is it to use political cartoons and comic strips to teach reading?
6. How important is it to use comic books to teach reading?
7. How important is it to use graphic novels to teach reading?
8. How important is it to use Japanese style manga comic books to teach reading?
9. How important is it for reading, ELA, curriculum directors, instructional coaches, specialists, and writers to receive professional development training to

design and implement reading curriculum that incorporates the use of visual media to teach reading?

10. How important is it to promote reading clubs and organizations to teach reading?
11. How important is it to use flashcards, graphs, charts, and graphic organizers to teach reading?
12. How important is it to use art, paintings, and drawings to teach reading?
13. How important is it to use Promethean Boards and interactive whiteboards to teach reading?
14. How important is it to use computers and laptops to teach reading?
15. How important is it to use projectors and document cameras to teach reading?
16. How important is it to use tablets, iPads, and (electronic readers) e-readers that incorporate (electronic books) e-books to teach reading?
17. How important is it to use tablets, iPads, and (electronic readers) e-readers that incorporate (electronic graphic novels) e-graphic novels, (electronic comic books) e-comic books, (electronic Japanese manga style comic books) e-manga to teach reading?
18. How important is it to use smartphones, iPods, texting, and applications (apps) to teach reading?
19. How important is it to use word processing and presentation software such as Microsoft Word, PowerPoint, Prezi, and Google Docs to teach reading?
20. How important is it to use educational reading software to teach reading?

21. How important is it to use movies, movie clips, and animated cartoons to teach reading?
22. How important is it to use video websites such as YouTube and DailyMotion to teach reading?
23. How important is it to use websites that allow you to make movies, animated cartoons, and video streaming to teach reading?
24. How important is it to use websites that offer interactive visual reading programs to teach reading?
25. How important is it to use internet blogs to teach reading?

Appendix C

Round 3 Delphi Survey Questions

Instructions

The following are the results from the second round. During the third and final round you will have an opportunity to clarify your responses. These items below had a mean score of 3 or greater from round two. Please indicate if you agree or disagree with the items.

1. It is important to use books and short story readers that include text (words), images, and pictures to teach reading.
2. It is important to use traditional newspapers and magazines that include text (words), images, and pictures to teach reading.
3. It is important to use still pictures, photos, and digital images to teach reading.
4. It is important to use political cartoons and comic strips to teach reading.
5. It is important to use comic books to teach reading.
6. It is important to use graphic novels to teach reading.
7. It is important for reading, ELA, curriculum directors, instructional coaches, specialists, and writers to receive professional development training to design and implement reading curriculum that incorporates the use of visual media to teach reading.
8. It is important to promote reading clubs and organizations to teach reading.
9. It is important to use flashcards, graphs, charts, and graphic organizers to teach reading.
10. It is important to use art, paintings, and drawings to teach reading.

11. It is important to use Promethean Boards and interactive whiteboards to teach reading.
12. It is important to use computers and laptops to teach reading.
13. It is important to use projectors and document cameras to teach reading.
14. It is important to use tablets, iPads, and (electronic readers) e-readers that incorporate (electronic books) e-books to teach reading.
15. It is important to use word processing and presentation software such as Microsoft Word, PowerPoint, Prezi, and Google Docs to teach reading.
16. It is important to use educational reading software to teach reading.
17. It is important to use movies, movie clips, and animated cartoons to teach reading.
18. It is important to use video websites such as YouTube and DailyMotion to teach reading.
19. It is important to use websites that allow you to make movies, animated cartoons, and video streaming to teach reading.
20. It is important to use websites that offer interactive visual reading programs to teach reading.
21. It is important to use internet blogs to teach reading.

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Biographical Information

Alexander Frasier received his undergraduate degrees with a Bachelor's of Science in Communication Studies: Concentration in Corporate Communication, a Bachelor's of Arts in French, and a minor in Spanish from the University of Texas at Austin. Also, he earned a Master's of Arts degree in Communication from the University of Texas at Arlington. In addition, he holds the State of Texas Secondary Teaching Certificates in French and Speech Communication, and has been teaching in public education for 12 years. Upon the completion of this dissertation and degree of Doctor of Philosophy in K-16 Educational Leadership and Policy Studies Alexander would like to explore the world of teaching in higher education. In the future he will pursue his research interests in communication, diversity, and global education.