

THESIS

MULTI-LITERACIES IN THE 21<sup>ST</sup> CENTURY AND THE ROLE  
OF THE PRINT-BASED TEXT IN PUBLIC EDUCATION

Submitted by

Michael S. Dixon

English Department

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WE HEREBY RECOMMEND THAT THE THESIS PREPARED  
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Committee on Graduate work

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Louann Reid

---

Dawn Mallette

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Advisor: Pamela K. Coke

---

Department Head: Bruce Ronda

## ABSTRACT OF THESIS

### MULTI-LITERACIES IN THE 21<sup>ST</sup> CENTURY AND THE ROLE OF THE PRINT-BASED TEXT IN PUBLIC EDUCATION

This study examines the appeal of print-based and multimodal-based texts in relation to the 21<sup>st</sup> century learner and in context of the modern secondary level public education classroom. A review of literature gives depth to the ways in which print-based and multimodal-based texts have established themselves within the institution of education as well as how each type of text relates to the fields of semiotic systems and technology. The aim of the study is to examine and measure the appeal of print-based and multimodal-based texts to the 21<sup>st</sup> century learner. To achieve this goal, two types of research provided results: a quantitative classroom study in which students engaged and interacted with a print-based assessment and a multimodal-based assessment and provided feedback via a survey, and a qualitative study in which educators provided their thoughts and opinions on the role of print-based and multimodal-based texts at the secondary level of education via an electronic questionnaire.

Michael S. Dixon  
English Department  
Colorado State University  
Fort Collins, CO 80523  
Spring 2010

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## INTRODUCTION

*I was walking the wrong way down the railroad tracks. There were smokestacks to my right and a gravel hill to my left. Snow covered the ground and my frosty breath was freezing the tip of my nose. I was leaving a statistics class – we had just taken an exam and my mind was racing. Not that I liked statistics, but the exam was hard and I couldn't afford to fail it. Something about alphas and betas – patterns in the universe. Strange symbols and ancient languages. It could've been German class and I wouldn't have known the difference. It made me wonder how people ever got on the same page in the first place. Ug the Caveman draws a line in the dirt and Johnson the Wolverine draws a circle. They don't know what they just did, but they make sense of it somehow. Words, sounds – I just wanted a cup of hot chocolate.*

This excerpt from my novel, *World Train*, introduces an array of interesting ideas, and provides an ideal entry point for the conversation and research at the heart of my thesis. The ultimate goal of this study was to examine the appeal of print-based and multi-modal based texts to the 21<sup>st</sup> century learner. Both kinds of text share a common vehicle in language, yet they both offer different kinds of meaning through a variation of representation. Because the discussion to follow is centered on the learner and what arouses their interest in terms of language and methodology employed, it only makes sense that we begin by examining some theory on the origin of language and how human beings learned to communicate effectively in the first place.

While language certainly wasn't started with a wolverine and a caveman, it is not out of the realm of possibility that language did in fact involve drawing circles in the dirt. Author David Armstrong writes in his article, "The Gestural Theory of Language Origins":

The archeological record makes it clear that human beings do not begin to write by first identifying and representing the elementary sound symbols of phonemes of their languages. Instead, they tend first to create visual representations that are relatively independent of their spoken languages. That is, the initial stages in the invention of writing seem to involve direct, pictorial representations of objects or numbers (Armstrong 307).

This concept can be witnessed with toddlers who are learning the alphabet (e.g. ‘A’ is for ‘apple’ with a complementary image). Armstrong continues to write:

What human beings appear to notice first is that the objects and events around them can be represented by signs that have analogous relationships with the objects or events they refer to. Visual representation can be expected to precede auditory representation because of the vastly greater possibility for iconic productivity in the visual medium (Armstrong 307).

This is an important concept to remember as the discussion about multi-modal and print-based texts unfolds.

While the preceding excerpt speaks to the evolution of written representation, the evolution of the spoken language seems to date even farther back. In her book review of Michael Corballis’ *From hand to mouth: The origins of language*, author Mary Copple observes that:

About two million years ago the genus *Homo* evolved. It included various species of hominins with large brains, who systematically made stone tools and possessed truly grammatical language in the form of a signed language. This was punctuated with grunts and other vocal cries that were at first largely involuntary and emotional (Copple 286).

As a matter of fact, many theories on the origin of language begin with the idea that language was enabled by the evolution of bipedalism in our species:

Walking enabled the first hominids to enhance their communication by enabling them to make voluntary movements of the hands...this *protolanguage* comprised a lexicon of iconic and deictic gestures as well as facial expressions. At this stage, the lexicon was not supplemented by a grammar which determined how gestures were combined, but it served as a platform upon which the language faculty was subsequently built (Copple 286).

In other words, ‘visible gesture was the earliest manifestation of the human capacity for language and speech evolved subsequently from an original visible and gestural communication system (Armstrong 290).’

While the information presented thus far might be interesting, you are probably asking yourself why any of it is important to this study. At the time of writing this, I am a graduate student in the English education program at Colorado State University. As part of the prerequisites of completing the program, I had to fulfill a student teaching assignment in which I was placed in a high school and given the responsibilities of an educator on staff. During my student teaching experience in the spring of 2009, I taught three sections of sophomore World Literature (the basic required English class for the 10<sup>th</sup> grade) at a local high school. It was upon meeting my mentor teacher that I learned the class was primarily centered around a textbook called *Springboard*. During our first meeting, he introduced me to the text and I was quick to observe its highly prescriptive nature focused on read-and-write skill-and-drill methodology. The weekly vocabulary was also to be taught out of a manual that merely asked for basic memorization and again, read and write skill-and-drill exercises. There was little actual application or engagement with the content beyond the words on the page. During my first day of

teaching, I asked my students to reflect on the fall semester and suggest changes that they would like to see for the second half of the year. Unanimously, I received requests to get rid of *Springboard*. Unanimously, I received requests to get rid of the weekly vocabulary. Unanimously, I received requests for more engaging content that would allow for more creative expression in thought and assessment. While in the beginning of my student teaching experience – whether I knew it or not – I was receiving a unanimous request for something that went beyond the sphere of traditional instruction that I was accustomed to.

The reason I opened with an investigation of the origins of language is because I think we've gotten away from our roots in regard to effective classroom content and the individual learning experience for students. It is undeniable (as I've witnessed during my student teaching) that the world is changing, students are changing, but education is not. From my experience, and as far as teachers and curricula are concerned, it seems that instruction remains – in large part – stagnant and cemented to outdated content, methodology, and assessment. In the study and subsequent article, "Writing, Technology and Teens", scholar Amanda Lenhart and her research staff observe that 'teens [say] they are motivated to read and write when they can select topics that are relevant to their lives and interests, and report greater enjoyment of school reading and writing when they have the opportunity to read and write creatively (Lenhart, Arafeh, Smith, & Macgill iii).' This shouldn't be ground-breaking by any means, but I think some of us – as educators – have not only lost touch with the topics and interests most relevant to our students, we've also lost touch with what it takes to create and implement effective learning techniques and strategies.

In her article, “Multiliterate Youth in the Time of Scientific Reading Instruction”, researcher Donna Alvermann writes that:

It’s almost ironic, at a time when young people are becoming credible consumers of mass media and popular culture, [that] curricular standards and pedagogical practices move further from real-life engagements with mass media to more traditional approaches of teaching and learning (Alvermann 1).

Some of the questions that educators need to be asking themselves are: Do “traditional” approaches appeal to today’s learner? Are we employing methods and techniques that do not translate well for the 21<sup>st</sup>-century learner? If so, what do we need to change, and how feasible is that change? To tie this back to the origin of language, scholar Anne Wysocki provides an important thought in her article, “Opening New Media to Writing: Openings and Justifications”. She proposes:

[that] writing, like all literate practices, only exists because it functions, circulates, shifts, and has varying value and weight within complexly articulated social, cultural, political, educational, religious, economic, familial, ecological, artistic, affective, and technological webs (Wysocki 2).

Since its creation, language has been – and remains – a staple in community building.

What has changed through the years are the tools and methods by which we choose to communicate with one another. As evidenced by David Armstrong’s claims, human communication (and consequently, learning) began with gestures, sounds, and pictures.

The development of the written word was a direct result of these beginnings – a tool, or alternative if you will, to communicate in a new medium. Somewhere along the way, (in many cultures) it seems that we’ve centered learning around a nucleus of linguistic

(reading and writing; print-based text) study and assessment. But is this what the 21<sup>st</sup> century learner wants? Is this what the 21<sup>st</sup> century learner *needs*? 'In [an] age of multiple modalities [or means of production and presentation], there are now choices about how what is to be represented should be represented, in what mode [or medium], in what genre, in what ensembles of modes [or mediums] and genres [and] on what occasion (Schultz 368).' It is undeniable that the 21<sup>st</sup> century introduces new tools for communication and it falls on the educator to determine the value of these new tools and decide how they will (or will not) affect their own curricula.

With all of this being said, the information and experimentation in this study will strive to answer the following research questions:

1. From the perspectives of five secondary English public education teachers and thirty-seven secondary-level students in a classroom study, do multi-modal texts and technology have a greater appeal than print-based texts to the 21<sup>st</sup> century student?
2. From the same perspectives, what expanding and decreasing roles do print-based texts and multi-modal based texts have in the secondary-level public education classroom? What implications and tangible ramifications do these findings suggest for the 21<sup>st</sup> century learner and the world in which they live?
3. From the same perspectives, and with the idea of semiotic systems used as a foundation for measurement, what additional benefits (if any) do multi-modal texts offer that print-based texts do not?

4. From the same perspectives, what effect does technology have on the implementation of multi-modal texts in the secondary public education classroom (beneficial or not)?

To answer these questions, I will detail some of the most current and relevant information available on related and necessary subjects (e.g. semiotic systems, rhetoric, print-based texts, multi-modal texts, the 21<sup>st</sup> century learners, and technology) in my Review of Literature. In my Methodology section, I will then provide the details and findings of my own classroom experimentation where students were asked to complete a print-based assessment and a multi-modal-based assessment with feedback coming via a simple questionnaire. Also involved in my personal research will be the findings gathered from interviewing teachers at the secondary public education level. After documenting the findings of my research, I will summarize the contents of this paper and my research as they relate to answering the questions detailed above in my Conclusion.

Some of the common reoccurring terms throughout the paper are ‘semiotic systems’, ‘print-based texts’, and ‘multi-modal texts’. For the purposes of my study, semiotic systems refer to five distinguished types of learning (linguistic, visual, auditory, gestural, and spatial) that educators can utilize in instruction and lesson planning. I refer to print-based texts as being limited to the linguistic semiotic system, and multi-modal texts as encompassing more than one semiotic system.

## **REVIEW OF LITERATURE**

In my Review of Literature, I will be examining five key components as they relate to the interests of my thesis: semiotic systems, print-based texts, multi-modal texts, 21<sup>st</sup> century learners, and technology. Each section is intended to provide the reader with necessary background information that is instrumental in the language and subsequent supporting arguments carried within the heart of this paper.

The first section is ‘semiotic systems’. While the documented findings on the topic speak primarily to my third research question, I felt it was important to begin with semiotic systems in my Review of Literature because of their importance in constituting what a text is (both print-based and multi-modal). In addition to the implications of measuring what a text encompasses, many scholars and researchers have used the concept of semiotic systems to ground their own research in the field of education.

The next two sections are ‘print-based texts’ and ‘multi-modal texts’. I’ve placed these two sections next due to their importance in relation to the focus of my thesis. Because the conversation of this paper is centered around the role (and consequent effectiveness) of print-based texts and multi-modal texts, it only seemed to make sense to provide the reader with the appropriate information and key points of each subject before outlining the remaining elements.

Following both text categories is a section on ‘21<sup>st</sup> century learners’. While it would be appropriate to begin my Review of Literature with this topic, I felt the focus of the thesis should remain on print-based and multi-modal-based texts and the roles that

each text type plays in the atmosphere of modern education. Of course, the most prevalent aspect of modern education is its students, and as evidenced by what scholars have documented, there appears to be a difference between today's learner and the learner of previous generations, hence the need to elaborate on 21<sup>st</sup> century learners.

The final section in my Review of Literature is 'technology'. In examining what constituted the 21<sup>st</sup> century learner, the subject of technology continued to present itself. This section is placed last because the preceding section on 21<sup>st</sup> century learners introduces the role of technology and the desire / expectation of technology in education quite nicely. The focus in this section addresses the first and fourth research questions as outlined in my Introduction.

### *Semiotic Systems*

*"It is not a question of whether students are capable of engaging with meaning making in different semiotic systems, but rather a question of finding the appropriate pedagogy. Students can learn semiotic systems if teachers can find a way to teach them."*

*(Anstey & Bull 116)*

My third research question suggests using the idea of semiotic systems as a foundation for measuring the effectiveness of print-based and multi-modal based texts in regard to their advantages and disadvantages to the 21<sup>st</sup> century learner. In Michele Anstey and Geoff Bull's textbook, *Teaching and Learning Multiliteracies: Changing Times, Changing Literacies*, both educators define semiotic systems as 'a set of signs that have shared meaning[s] within a group, whether societal or cultural, that allow members to analyze and discuss how they make meaning [on a more global plane] (Anstey & Bull

107).’ For a more educationally-centered approach, and for the purposes of the research conducted in my Methodology section, Anstey and Bull’s textbook provides a more defined and useful perspective of semiotic systems. They propose that there are five semiotic systems [which are as follows]:

1. Linguistic (oral and written language, for example, use of vocabulary and grammar).
2. Visual (still and moving images; for example, use of color, vectors, and viewpoint).
3. Auditory (music and sound effects, for example, use of volume, pitch, and rhythm).
4. Gestural (facial expression and body language, for example, use of movement, speed, and stillness)
5. Spatial (layout and organization of objects and space, for example, use of proximity, direction, and position) (Anstey & Bull 25)

These five categories will be of use in my personal research later in the study. For the purposes of my Review of Literature, many scholars have argued that educators should keep these principles in mind when designing content for their individual classrooms. Returning to Donna Alvermann and her article, “Multiliterate Youth in the Time of Scientific Reading Instruction”, she writes that ‘[teachers should] listen to and observe youth as they communicate their familiarity with multiple sign systems across space, place, and time as they can provide valuable insight into how to approach both instruction and research (Alvermann 2).’ As teachers approach methodology, experimenting with the principles above and seeing how students interact and engage with (creative) assessment and instruction seems to be most beneficial to the 21<sup>st</sup> century learner.

For a more comprehensive look at the role of semiotic systems in today's world and how they affect the modern classroom, I'd like to examine a pantheon of work by several different scholars. First, Katherine Schultz provides a good entry point for the conversation on semiotic systems in her article, "Qualitative Research on Writing", when she writes: 'We live in a time where there are new semiotic possibilities for presenting ideas and conveying meaning. Schools lag behind community spaces outside of school, where much of this experimentation is occurring (Schultz 369).' This is an important concept for teachers and administrators to acknowledge if they are to make their classrooms and curricula effective within the scope of meaningful learning. Not only do modern students and youth seek platforms and tools that satisfy multiple semiotic systems, they seem to be doing so more outside of school because the stimuli or means to do so in the classroom remain unavailable or not yet implemented to their full potential. Donna Alvermann also echoes a related sentiment when she writes that 'we are in a time when the so-called 'Net generation' is engaging, often simultaneously, with multiple sign systems (image, print, sound, gesture, and digital) and finding their own reasons for becoming literate (Alvermann 1).' The important concept here is that students' motivation for becoming literate in today's world seems to be related to the content or materials that they find which stimulate or touch upon multiple semiotic systems. '[Scholars] have observed that adolescents quite readily integrate art, movement, gesture, and music with language as they talk with their friends, or do research on school-related topics (Alvermann 4).' Furthermore, 'research on young people's engagement with multiple sign systems often helps even the least motivated and underachieving readers

define their literate competence (Alvermann 7).’ If what Katherine Schultz and Donna Alvermann present in regard to semiotic systems is true, then shouldn’t educators and those responsible for the creation and implementation of standards take notice? One would think so, but sadly, this is not always the case. As scholar Maureen Walsh writes in her article, “Worlds have collided and modes have merged: classroom evidence of changed literacy practices”: ‘there is an *articulation* and *interdependence* that occurs when multiple sign systems are processed and this articulation between modalities is quite different from our traditional approaches involved in [the] reading and writing [of] print-based texts (Walsh 106).’ Could it be that teachers and administrators are reluctant to change educational practices because they don’t have a complete understanding of how semiotic systems appeal to the 21<sup>st</sup> century learner?

Regardless of why education seems to lag behind in regard to semiotic systems and how they play a role to today’s learner is a topic worthy of an entirely different paper. The point to acknowledge here is that education does indeed seem to be turning a blind eye to the ideas and consequent ramifications surrounding a variety of semiotic systems, the learner of today, and the classrooms in which they go to gain an education. Anstey and Bull suggest that:

[It is undeniable that] students are now confronted with a variety of semiotic systems before they ever reach school. Young children may arrive at school being highly literate in unexpected ways. They may demonstrate sophisticated and well-developed levels of visual or technological literacy well before they become print literate (Anstey & Bull 101).

While in previous generations, students may have become literate primarily through print, the same cannot be said of today. Because children are growing up (for the most part) in a culture that saturates the individual with many different modes (or mediums) of stimuli, the learner seems to be conditioned to gain and retain information and knowledge best through multiple modes (or mediums) of representation. ‘For the range of communication needed in their future lives, students need to be able to understand, use, and combine these different modes [or mediums] as well as be able to communicate with traditional and non-traditional texts that combine these modes [or mediums] (Walsh 106).’ Anstey and Bull also observe that ‘the diversity of text types has moved the debate away from one about method to one about [the] exploration of semiotic systems (Anstey & Bull 101).’

Because many texts draw on more than one semiotic system, ‘the practice of code breaking [for educators] is important to work out how the different semiotic systems in a text work on their own and in combination with others (Anstey & Bull 44).’ If educators are able to break down a text (or think critically about the way in which they craft lessons and assessment) in terms of their effectiveness related to semiotic systems, the classroom can become an extension of what students experience in their lives outside of school.

Anstey and Bull encourage us to remember that:

as consumers of a text, students can use signals – such as the structure or genre and the way in which semiotic systems have been used – to identify the purpose of the text and how it should be used. As producers of text, students can use the same knowledge and understandings to construct and shape texts that achieve their purposes (Anstey & Bull 28).

So in reality, both educators and students are ‘code breakers’ in terms of semiotic systems. The teacher should find creative ways to design content that adheres to and enables semiotic systems within the learner, and the learner, in turn, should generate interest in the material if multiple modes are being utilized.

In my Methodology section, I will go into greater detail about how I incorporated semiotic systems into my research when looking at the appeal of the print-based text versus the multi-modal text to the 21<sup>st</sup> century learner.

### ***Print-Based Texts***

*“What surprised us was the extent to which [the] paper copy still has power. This indicates that while a shift is happening, the true digital moment has not yet arrived, and may never fully arrive. We are still, perhaps usefully, grounded in the tangible ways of paper.”*

*(Herrington, Hodgson, & Moran 199)*

In planning, executing, and writing a study on the appeal of the print-based text (a text that only satisfies the linguistic semiotic system) versus the multi-modal text (a text that satisfies multiple semiotic systems) to the 21<sup>st</sup> century learner, it makes sense to investigate what others have observed and concluded about the role of the print-based text within the culture of today’s youth.

Before diving into the pool of material written about print-based texts, I feel it would be valuable to tie the idea of rhetoric into the discussion surrounding both print-based texts and multi-modal texts. For such insight, author Erika Lindemann’s work in *A Rhetoric for Writing Teachers* is helpful. Within her book, she writes that:

rhetoric implies choices for both the speaker (or writer) and the audience. When we practice rhetoric, we make decisions about our subject, audience, point of view, purpose, and message. We select our best evidence, the best order in which to present our ideas, and the best resources of language to express them. Our choices aim to create an effect in our audience (Lindemann 41).

This is an important concept for educators to think about as we evaluate the effectiveness of the print-based text within our assessments and lesson plans. When teachers ask students to read and write via the print-based text, are they asking whether or not that

type of assignment or task is allowing the student to interpret the material effectively or express their understanding appropriately? The important concept for educators to think about here is whether or not the print-based texts they've selected to utilize in their curriculum are allowing their students to effectively apply the ideas of rhetoric as stated above.

Regarding the use of print-based texts within the current education system, many scholars believe teachers and classroom content remain dependent upon the linguistic semiotic system. 'One of the conventions of the linguistic semiotic system is the set of grammar rules that organize the words, phrases, and sentences so a reader can make meaning of them (Anstey & Bull 25).' While the linguistic semiotic system (and consequently print-based texts) certainly play a meaningful role in the education of today's learner, it is undeniable that the educator still primarily relies upon the print-based text for instruction. Academic and author, Cynthia Selfe, writes about this in her article, "Multimodal Composition: Resources for Teachers". She points out that 'the formal assignments that many English composition teachers give to students remain alphabetic and are primarily produced via some sort of print media (Selfe 1).' She expands on this observation by stating:

The texts that students have produced in response to composition assignments have remained the same for the past 150 years. They consist of words on a page, arranged into paragraphs...while people on the internet are exchanging texts composed of still and moving images, animations, sounds, graphics, words, and colors, inside of the classrooms, students are producing essays that look much the same as those produced by their parents and grandparents (Selfe 1-2).

The concern here, of course, is that a heavy reliance on print-based texts within the classroom is hampering the student's ability to learn from and engage with lesson content due to its lack of applicability in the outside world.

Author and scholar, James Gee, writes in his book *Good Video Games + Good*

*Learning* that:

if there is one thing we know, it is that humans are not good at learning through or reading lots of words out of contexts of application that give these words situated or experiential meanings. Science textbooks make little sense if one tries to read them before having the chance to apply the concepts to a real situation or simulation. All one gets is lots of words that are confusing, have only quite general or vague meanings, and are quickly forgotten (Gee 38).

Because the focus of his book is on video games and the learning theories behind the making of video games, Gee then provides an interesting example when he says:

Giving students the book, then, is akin to giving them the manual to a video game without the game itself. The manual is boring and makes no sense all by itself. It is hard to read until you have played the game for a while; then it becomes easy to read, because now you have an image, action, experience, or dialogue to associate with each word in the manual, not just dictionary definitions. School gives kids manuals without actual games (Gee 3).

To go along with Cynthia Selfe, James Gee is presenting the argument that the print-based text no longer provides an effective means of learning by itself. As suggested by Cynthia Selfe, the methodology employed by teachers hasn't changed for at least 150 years, while the work of several scholars and researchers suggests that the interests and culture of today's learner has changed and a reliance upon print-based texts is no longer suitable for their individual growth and futures.

Amanda Lenhart and her research staff conducted a battery of questionnaires within their article, “Writing, Technology and Teens”, with the intent of shedding some light on how much teenagers in today’s world use and enjoy the acts of reading and writing. From the results of their study, they conclude that ‘92% of teenagers write for school, while only 31% do the same task for personal enjoyment outside of school (Lenhart, Arafeh, Smith, & Macgill 11).’ Furthermore, ‘49% of teenagers say they enjoy the writing they do for themselves, compared to just 17% of teenagers who say they enjoy the writing they do for school (Lenhart, Arafeh, Smith, & Macgill 54).’ To put it more simplistically, teenagers are writing more inside of the classroom because they are forced to, and enjoying it less, whereas ‘outside of a relatively small group of students, non-school reading and writing is something teenagers do infrequently (Lenhart, Arafeh, Smith, & Macgill 18).’ What does this say in relation to the sphere of print-based texts? Perhaps educators should take a step back from their lesson plans and curricula and re-evaluate whether or not their content is too reliant upon print-based texts in a world that is quickly and constantly changing.

But if it is so apparent to other industries and corridors of the country that the culture in which our youth is growing up within is different than previous generations, why does the world of education apparently remain (for the most part) stagnant and obsessed with instruction centered around the print-based text? For an answer, Maureen Walsh writes in her article, “Worlds have collided and modes have merged: classroom evidence of changed literacy practices”, that ‘educational policy and national testing requirements are still principally focused on the reading and writing of print-based texts

(Walsh 101).’ One of the complaints that teachers seem to have (as displayed in my qualitative research later) is that their lesson-planning and curriculum creation strategies remain handicapped by archaic standardized testing. In her article, “Qualitative Research on Writing”, Katherine Schultz points out that ‘what is most alarming to writing educators and researchers about this reliance on high-stakes testing is that many writing tests – and the curriculum that prepares students to take them – encourage narrow and formulaic writing, and the teaching of writing merely as a skill (Schultz 358-359).’ James Gee echoes this sentiment when he writes that ‘too often today, schools are centered on skill-and-drill and multiple-choice testing that kills deep learning (Gee 2).’ Perhaps it is not only an issue of educators failing to break their dependence on the print-based text in teaching, but also the failings of larger educational policies and expectations that don’t allow teachers to be more dynamic in the content and material that they offer to the learner of today.

Cynthia Selfe warns that ‘if our profession (as educators) continues to focus solely on teaching alphabetic composition – either online or in print – we run the risk of making composition studies increasingly irrelevant to students engaging in contemporary practices of communicating (Selfe 2).’ One could argue that composition studies – for the most part – are already irrelevant and boring to today’s learner due to their dependence on outdated print-based texts that fail to draw connection to the outside world. In her article, “Unleashing Potential with Emerging Technologies”, researcher Sara Kajder writes that:

amidst the data demonstrating the significant number of students who are not finding success in school-based literacy tasks is an emerging trend confirming that students might be reading in school but are not likely to be doing so outside of school. In order to be inclined to read [and learn to read] authentically, students need opportunities to engage with texts that have meaning within the world [outside of the classroom] (Kajder 222).

But not all of the conversation surrounding print-based texts is negative. ‘It is clear that alphabetic writing – and the ability to express oneself in writing – retains a special and privileged position in the education of contemporary citizens. The fact that alphabetic literacy remains a key responsibility of composition educators is difficult to refute (Selfe 9).’ And while most of the conversation amongst scholars and researchers calls for less and less print-based texts within the classroom due to their ineffectiveness with students who grow up in a world where learning and interest is generated by a stimulation of multiple semiotic systems, print-based texts should not be completely ignored or removed. Returning to Erika Lindemann, she reminds us that ‘writers of great literature have employed powerful language to make us cry, to poke fun at our human frailties, and to command our support for important causes (Lindemann 40).’ The print-based text can still be a very valuable educational tool if used within the proper context to other materials. As James Gee suggested, educators need to give students the “manual” (or book) with the “game” (or application that utilizes multiple semiotic domains) if they are to create an atmosphere that maximizes learning potential.

### ***Multi-Modal Texts***

*“Language is like a windowpane. I may throw bricks at it to vent my feelings about something; I may use a chunk of it to chase away an intruder; I may use it to mirror or explore reality; and I may use a stained-glass windowpane to call attention to itself. Windows can be used expressively, persuasively, referentially, and artistically.”*

*(Lindemann 59)*

As demonstrated in the previous section, language has the potential to be a very powerful and necessary tool for students to master. While previous generations have learned to use and craft language primarily through means of the print-based text, the generations growing up and developing in today’s world must learn to utilize language in an entirely different way. To return to the ideas of rhetoric presented earlier by Erika Lindemann:

all human beings practice rhetoric and come under its influence. Every day we use words to shape attitudes and encourage people to act in certain ways. Teaching is a rhetorical act, and language used as a symbolic means of inducing cooperation appears all around us, in literature, advertising, broadcast journalism, politics, religion, art, films, and conversation. Rhetoric enables us to understand the choices and processes [that] we make (Lindemann 38).

In this sense, teaching students to understand the concept of rhetoric equates with the goal of making them literate human beings in the world in which they live. Language is no longer confined to the boundaries of the print-based text. As a matter of fact,

Katherine Schultz points out that:

new research is likely to push past a focus on words on the page. [We are in] an age in which the pictorial [and aural] turn has supplanted the linguistic one, as images [and sounds] push words off of the page and our lives [have] become

increasingly mediated by a visual [and aural] popular culture. This suggests that in our current time, in which visual images [and music] are featured prominently in our daily lives, the methods for researching and teaching [should] begin to change dramatically (Schultz 369).

To this extent, and for additional commentary on what literacy is to today's learner,

Michele Anstey and Geoff Bull write that:

the emerging trend is that literacy and literate practices encompass a greater range of knowledge, skills, processes, and behaviors than ever before and that these practices will continue to change. The concept of literacy as reading, writing, listening, and speaking is no longer a concept only about printed words on paper and oracy, but now also includes digital technology, sound, music, words, still images, and moving images. The texts that students produce, or write, and consume, or read, often require processing several modes simultaneously in order to make meaning (Anstey & Bull 17).

In an ever-changing world filled with texts of all kinds, the bottom line is that 'it is no longer appropriate [for educators] to rely only on print-based texts and the linguistic semiotic system because individual lives, workplaces, occupations, and recreational pastimes [outside of the school curriculum] have moved beyond what were once regarded as the basics to a set of new basics (Anstey & Bull 122).'

But what exactly does the term 'multi-modal text' mean, and how can we take the ideas of others and apply them usefully to the classroom? Throughout the next few paragraphs, I will be presenting what other scholars and researchers have written and documented about multi-modal texts with the hope of enlightening their importance to the modern classroom and curriculum.

Another common term that is mentioned in connection with (or in representation of) the multi-modal text is the more global, encompassing field of '*multiliteracies*'.

Anstey and Bull help shed light on how the term became popularized:

In 1994, a group of international literacy educators met in New London, New Hampshire, to consider how literacy teaching should respond to the rapid change being wrought by increasing globalization, technology, and social diversity. Their discussions began by focusing on the desirable social outcomes of being literate and the pedagogies necessary to achieve them. The result of their discussions was the term *multiliteracies* and a paper titled 'A Pedagogy of Multiliteracies: Designing Social Futures'. The origins of the term and in particular the title of the article are important to understanding the concept[s surrounding the term]. The title emphasizes the notion that fostering multiliteracies is as much about pedagogy as it is about literacy, and that the focus of educational endeavors is to prepare students for social futures in which they actively participate and influence: that is, they are the designers of their own social futures (Anstey & Bull 20).

This meeting seems to be the first real acknowledgement by educators of the evolving world in relation to literacy and the confines of what constitutes a text not only within a social scope, but also within an educational scope. Anstey and Bull then establish that:

in the postindustrial age of the late 20<sup>th</sup> century, the increasing rate of technological innovation produced a plethora of new forms of text. With the advent of film, video gaming, the internet, and the increasing visual content in books and magazines came a whole new range of texts that were not print-based (Anstey & Bull 100).

The suggestion here, of course, is that the field of new texts emerging be classified as multi-modal texts. To Anstey and Bull:

multi-modal texts are those that rely on the processing and interpretation of print information, which blends with visual, audio, spoken, nonverbal, and other forms of expression produced through a range of different technologies [and methods].

This blending produces hybrid texts that are frequently nonlinear (e.g. they no longer read from left to right or top to bottom) and are often interactive and dynamic (Anstey & Bull 102).

One of the unique (and perhaps narrow) connections that Anstey and Bull make about multi-modal texts is their irrefutable relationship with technology. The topic of technology and the multi-modal text is important to elaborate on as many educators remain reluctant to implement new tools and assessment in their classrooms due to a fear or personal lack of knowledge regarding how the two concepts relate. In her article, “Opening New Media to Writing: Openings and Justifications”, Anne Wysocki not only addresses the need to view multi-modal texts outside of the realm of technology, but she also presents another common term that is used when referring to multi-modal texts. She states that ‘in a postmodern world, new literacies [another term for the field of multiliteracies and more locally, the multi-modal text] may play an important role in identity formation, the exercise of power, and the negotiation of new social codes [or ways of being] (Wysocki 9).’ Because of this, Wysocki uses the term *new media texts* when speaking of multi-modal material and methodology. To the extent of technology and the multi-modal text, Wysocki believes that:

new media texts do not have to incorporate technology; instead, any text that has been designed so that its materiality is not effaced can count as new media. New media texts can be made of anything; what is important is that whoever produces the text and whoever consumes it understand that the various materialities of a text contribute to how it, like its producers and consumers, is read and understood (Wysocki 15).

Furthermore, she encourages educators to look beyond the digital and technological stereotypes and expectations surrounding the multi-modal text. ‘To look at texts only through their technological origin is to deflect our attentions [away] from what we might achieve (Wysocki 19).’

But the digital and technological barrier does exist for many educators who sit down to create lesson plans. ‘Many composition teachers – raised and educated in the age and landscape of print – feel hesitant about the task of designing, implementing, and evaluating assignments that call for multi-modal texts (Selfe 2-3).’ In her article, “Multimodal Composition: Resources for Teachers”, Cynthia Selfe acknowledges ‘that one of the challenges of teaching multimodal composition is the learning curve involved for teachers new to thinking about different [varieties of] modalities (Selfe 4).’ But despite the learning curve for educators, Selfe is adamant in her stance that the inclusion of multi-modal texts in education is imperative to an effective curriculum, and that students can in fact aid the teacher in overcoming any potential barrier or learning curve. She proposes that ‘increasing numbers of students coming into composition classrooms have experience in multi-modal composing that teachers can tap (Selfe 4).’ In regard to the popularity and importance of the multi-modal text in the composition classroom, Selfe writes that:

many students are already active consumers of multi-modal compositions by virtue of their involvement in playing and even creating music, watching television, shooting home videos, and communicating within web spaces. As a result, students often bring to the classroom a great deal of implicit, perhaps previously unarticulated, knowledge about what is involved in composing multi-

modal texts, and they commonly respond to multi-modal assignments with excitement (Selfe 4).

To ignore the environments and culture that students are growing up within when designing lesson plans and curricular goals appears to be foolish if educators want to ground their content in a meaningful, and relatable way. Selfe concludes that:

For students, multi-modal instruction is often refreshing because it's different than what they've come to expect in [school], meaningful because the production of multi-modal texts in class resemble many of the real-life texts that they encounter elsewhere, and relevant because the knowledge of how to produce a multi-modal text will matter in their lives outside of the classroom (Selfe 4).

Going back to Maureen Walsh's article, "Worlds have collided and modes have merged: classroom evidence of changed literacy practices", she writes about the definition and implications of multi-modal literacy which proves to be quite useful when attempting to pin down what a multi-modal text is. Walsh writes: 'multi-modal literacy is the way literacy can be defined within the *convergence and interdependence* between [ways] of reading, writing, talking, listening, and viewing while using both print-based and digital texts (Walsh 104).' Because multi-modal texts 'require a different type of reading or writing, a literacy that entails the non-linear and simultaneous processing of image, movement, color, gesture, 3D objects, music, and sound (Walsh 102)', scholars and educators need to have a concrete idea of what exactly multi-modal literacy is. Walsh suggests that 'we can define multi-modal literacy as the meaning-making that occurs at different levels through the reading, viewing, understanding, responding to, producing, and interacting with multi-modal texts and multi-modal communication (Walsh 106).' Walsh then reinforces the ideas that she's presented by writing: 'Multi-modal literacy

incorporates the traditional literacy strategies of reading and writing *combined with* the use of different modalities and semiotic systems (Walsh 106).’ The key concept, or suggestion, here is that multi-modal texts should seek to fuse the printed word with other modalities or semiotic systems. If this is done, the learner will gain a sense of literacy attached to the multi-modal text and the creation of the multi-modal text.

But again, as discovered through our foray into the world of print-based texts, some educators still cannot seem to get past their reliance upon the written word. ‘It is hard to justify why teachers spend so much time on the written text and so little time on the [multi-modal] text. For whatever reason, getting meaning from the [multi-modal] text is not emphasized anywhere nearly as much as with the printed text (Anstey & Bull 108).’ Michele Anstey and Geoff Bull expand on such a concern and tie it back to the multi-modal text in their book, *Teaching and Learning Multiliteracies: Changing Times, Changing Literacies*. They claim that ‘the linguistic semiotic system dominates literacy pedagogy. However, because texts are increasingly multi-modal, a literate person must have mastery of all five semiotic systems and understand how they work together in a text to convey meaning (Anstey & Bull 26).’ This is useful in our pursuit of a multi-modal text definition in that it establishes an assessment or text’s need to stimulate multiple semiotic systems in order to be considered a multi-modal text. From a more global perspective, Anstey and Bull echo what other scholars have written in regard to multi-modal literacy and the need to create a system that encourages the teaching of such literacies. They write that:

literacy programs must include the ability to consume and produce the multi-modal texts that are an increasingly large part of students' lives. This means being literate with still and moving images, music and sound, as well as the printed and oral word, and being able to combine them meaningfully when consuming or producing texts (Anstey & Bull 18).

So why, to return to Anstey and Bull's original concern, do educators still spend so much time on the print-based text and not the multi-modal text? As scholars Anne Herrington, Charles Moran, and Kevin Hodgson point out in their book, *Teaching the New Writing: Technology, Change, and Assessment in the 21<sup>st</sup> Century Classroom*, it may be obvious that 'teenage literacy has changed; no longer exclusively the private book world of the print-based text, but now the more social world of the multi-modal text (Herrington, Hodgson, & Moran 1)', but despite this, the modern composition classroom may remain grounded in methods designed solely for linguistic appeal because of archaic standards and national testing requirements. As explored in the Methodology section of this study, the implementation of multi-modal texts is not always up to the educator. Often times teachers are held to district and national standards that shape their curricula and leave little room for the inclusion of multi-modal texts.

The third research question in my Introduction asks about the potential advantages that multi-modal texts have to offer that print-based texts do not. Put simply, 'multi-modal texts exceed the alphabetic and may include [aspects that would not otherwise be utilized such as] still and moving images, animations, color, music, and sound (Selfe 1).' As research suggests, these underutilized aspects have great appeal to

today's learner because the world outside of school is made up of "texts" that rely on the triggering of multiple semiotic systems. For example, Anne Wysocki encourages us to:

imagine [for a moment] that the text you now hold in your hands were presented on motley pieces of newsprint and notepaper, each chapter written in different colors and handwritten (some of the handwriting large and loopy; some small, tight, and left-leaning). What would you think of this text were it to call such visual attention to itself (Wysocki 12)?

In today's world, one would undoubtedly try to find the reasoning, or meaning behind such choices in presentation.

Taking a step back to reflect on my student teaching for a moment, every week, we did what I called 'World Lit. Friday'. Students were to take anything (it could be a poem, a sign, a picture, a song, etc.), bring it into class and have a brief write-up prepared as to why and how that artifact could or would be interpreted as 'World Literature'. Many times, students typed their responses in different colors and fonts to depict a particular emotion associated with their artifact. In one extreme instance, a student wrote his paragraph using multiple colors in a font that would need decoding. Upon trying to figure out the complicated puzzle (and assignment remember!) that was given to me, the student gave me a "hint". The student informed me that each color represented its own "language", meaning that if I figured out what a symbol (or character) meant in green, it would not translate to the same thing in blue. Impossible, I know (I never did end up figuring out what the student's assignment meant). The point here is, for an assignment that would otherwise be just another bit of homework to worry about every week, my students were (for the most part) enthusiastic about preparing it because they were given

creative freedom to present their materials and results in a multi-modal fashion. Often times students would bring in their ipods and they would use my ipod player to show us their “text”. Another student brought in a video to watch (youtube was a favorite for students to stream through the classroom projector for this assignment). Pictures were also very common. As a matter of fact, I cannot recall a single instance with 100+ kids and at least sixteen ‘World Lit. Fridays’ where a student chose a print-based text (eg. a book, an article, etc.) for this assignment. What should this tell us as educators? Anstey and Bull would suggest that:

teachers need to move away from a focus only on the linguistic semiotic system and print-based texts with their emphasis on such things as grammar and genre. In a multiliterate classroom, the other semiotic systems must form an important part of planning for the teaching and learning of literacy (Anstey & Bull 123).

The primary advantage that multi-modal texts provide that print-based texts cannot is their ability to engage students through multiple modalities (or means of representation).

Anne Wysocki writes:

if we do want something new to come out of new media – if we want to achieve abilities to see and hear voices that we traditionally haven’t, and to open composition even more to those whose ways with words and pictures don’t look like what we’ve come to know and expect – then generous approaches to texts that look different, and practice in making texts that look different and that therefore position us differently, seem worth exploring (Wysocki 23).

The multi-modal text seems worth exploring from an educator’s standpoint if lesson plans and content are to ever gain appeal and real-world meaning to the students who are asked to consume and interact with them. In her article, “Multiliterate Youth in the Time of Scientific Reading Instruction”, Donna Alvermann sums it up quite well when she

writes: ‘multi-modal texts operate with – that is, they build into their designs and encourage – good principles of learning, principles that are better than those in many of our skill-and-drill, back-to-the-basics, test-them-until-they-drop schools (Alvermann 6).’ Multimodal texts, it would appear, have much more to offer to the 21<sup>st</sup> century learner than do print-based texts.

## ***21<sup>st</sup> Century Learners***

*“Today’s students are acquiring 21<sup>st</sup> century skills, and what surprises teachers the most is that they are not the ones teaching them. 21<sup>st</sup> century learners have taught themselves to network and find solutions. Because of this, they expect to have the same experience at school.”*

*(McCoog 1)*

Thus far, the term ‘21<sup>st</sup> century learner’ has come up a few times. The first two research questions in my Introduction inquire about the interest level in relation to the multi-modal text and the print-based text to the 21<sup>st</sup> century learner. The assumption here, of course, is that there is a difference in appeal between text types to the modern student. In this section of my Review of Literature, I will examine what others have written in regard to the 21<sup>st</sup> century learner. How exactly do we define what constitutes the 21<sup>st</sup> century learner, and what would be considered 21<sup>st</sup> century skills? In addition to the findings presented here, I would also like to explore the possibility of a digital class gap (similar to the rich and the poor in society) when speaking in terms of the ramifications surrounding school curricula that include comprehensive 21<sup>st</sup> century instruction versus those that do not.

In his article, “21<sup>st</sup> Century Teaching and Learning”, scholar Ian McCoog offers a historical account on the evolution of the student throughout the years, and how we’ve come to the point in time that we are. He writes that:

for the past thirty years, we have been labeling generations with letters (e.g. Generations X, Y, and Z). The roots of 21<sup>st</sup> century learners can be traced back to this classification system. Generation X is roughly defined as people born in the

1970's and early 1980's. Your stereotypical 'Gen Xer' was experimenting with new forms of technology and grew up with things such as video games and MTV. Speaking in very general terms, it can be said that the tail end of the 'Gen Xers' began using the internet. Generation Y can be defined by the people born in the 1980's and early 1990's. This group has been classified as the first widespread users of the internet and were raised within an atmosphere where technology and the access to technology were commonplace. They are also now the students sitting in America's high schools. The latest generational tag (Z) has been assigned to those born from the late 1990's to the present. Digital technology to them is almost a birthright and schools are being expected to accommodate that. Generation Z is often referred to as the 'Millennials' [and they make up what is considered to be the '21<sup>st</sup> century learner'] (McCoog 1-2).

Ian McCoog continues to write about what constitutes the 21<sup>st</sup> century learner, or Millennial. '21<sup>st</sup> century learners must possess both self-direction and an ability to collaborate with individuals, groups, and machines. Today's students will be required to think critically and create high quality products in order to compete in the global marketplace (McCoog 3-4).' Furthermore, 'millennials realize they are growing up in a technology-driven world and are teaching themselves [even unconsciously] the skills necessary to compete with their peers. 21<sup>st</sup> century learners are asking for a similar environment at school (McCoog 2).' Given what McCoog has provided, it seems that one of the staples that defines the 21<sup>st</sup> century learner is their ability to understand, interpret, and use technology and the texts that rely on technology to generate their meaning.

Related to McCoog's ideas is Donna Alvermann's work on the 'digital native' versus the 'digital immigrant':

Digital natives are "native speakers" of digital language. Digital immigrants, who like all immigrants retain to some degree their "accent", that is, their foot in the past...Digital immigrants don't believe their students can learn successfully while utilizing 21<sup>st</sup> century tools because they (the immigrants) cannot (Alvermann 3).

While Alvermann's generalized statement could be debated in terms of validity, the concept that she presents is valuable to the context of the 21<sup>st</sup> century learner and the modern classroom. Do some teachers exclude or avoid incorporating technology into their curriculum because they themselves are unfamiliar with how to use such technology? We've seen how some educators may adopt the same type of attitude towards incorporating more multi-modal texts into their instruction. And while yes, multi-modal texts and technology do go hand-in-hand quite readily, the teaching of 21<sup>st</sup> century skills can still take place without the presence of technology. From a scholar's point of view, Cynthia Selfe writes that 'every teacher, we believe, even those who teach in schools that have very little access to computer technology and digital equipment like video cameras and audio recorders, can still modify assignments to allow [for the teaching of 21<sup>st</sup> century skills] (Selfe 10).' As presented previously, Cynthia Selfe reminds us of the fact that 'in an increasingly technology-based world, the 21<sup>st</sup> century learner needs to be experienced and skilled not only in [the] reading (consuming) [of] texts that employ multiple modalities, but also [with] composing in multiple modalities (Selfe 3).' Even without access to technology itself, educators can still (via the multi-modal text; still pictures and music being examples) teach students 21<sup>st</sup> century skills (how to interpret the multi-modal texts available) that they can in turn utilize in the world outside of school where technology and more advanced texts await. However, Selfe does write that:

one of the main concerns of composition teachers considering the addition of multi-modal composition assignments [and the teaching of 21<sup>st</sup> century skills] in their courses is that the instruction involved in such projects may take valuable time away from more fundamental instruction on the written word, instruction that many teachers feel is sorely needed among contemporary students (Selfe 9).

If this sentiment proves to be true amongst some composition educators, then perhaps Donna Alvermann is in fact closer to the truth when speaking of teachers and the concepts surrounding digital immigrants together. Do some of today's educators really believe that the contemporary student needs rigorous instruction with the written word? If so, then perhaps education really is behind the curve and the 21<sup>st</sup> century learner is left to bear the consequences.

Speaking of consequences, one of the more intriguing aspects to studying the 21<sup>st</sup> century learner is the hypothesized 'digital class gap' being created amongst and between students who receive 21<sup>st</sup> century instruction in school, and those who don't. In her article, "Performing Working-Class Identity in Composition: Toward a Pedagogy of Textual Practice", scholar Donna LeCourt points out that 'in reality, universities [and schools] don't just reflect class identities, they actively produce class divisions (LeCourt 34).' Furthermore, 'difference is equated with the material practice of producing texts – not some abstract value system implied by those texts, but by the texts themselves (LeCourt 36).' To this extent, schools and teachers that incorporate multi-modal texts and the instruction of 21<sup>st</sup> century skills are empowering their students beyond peers who remain malnourished and underprepared for the outside world. In James Gee's textbook, *Good Video Games + Good Learning*, he makes the point that:

a number of economically well-off people in the United States and elsewhere across the globe use modern technologies and a bevy of language and literacy practices in their homes to introduce their children early on to technical languages, skills, and knowledge. They create and support, as we have seen, “islands of expertise” in their children (Gee 166).

Is it coincidence that the ‘economically well-off’ are funding their own personal instruction of 21<sup>st</sup> century skills to their children? The obvious answer is: no, it appears to be no coincidence at all. In the heavily research-based article, “Writing, Technology and Teens”, Amanda Lenhart and her research staff ‘believe that a new and massive equity gap is growing – one not mitigated by and maybe even enhanced by today’s technologically impoverished schools (Lenhart, Arafeh, Smith, & Macgill 167).’ But beyond the technology itself, the teaching of 21<sup>st</sup> century skills seems to be imperative for students to have a chance to find success outside of school in an unforgiving and competitive world. In their book, *A New Literacies Sampler*, authors Michele Knobel and Colin Lankshear write that:

[James] Gee has argued that leaving new literacies [and multi-modal texts] out of school creates yet another brand of “haves” and “have-nots”. Those who have access to digital worlds outside of school will be educated in the new epistemologies that will provide them with the capital they need for participating as engaged citizens in their social futures. Those who don’t will not have this opportunity because these new epistemologies are not part of the “scope and sequence” or the vision of what it means to be educated (Knobel & Lankshear 236).

Assuming one of the goals in public education is to properly prepare the student for the outside world once they graduate, shouldn’t educators and administrators take a closer look at the reality of the “haves” and the “have-nots” in terms of the 21<sup>st</sup> century learner? If today’s students are unable to gain the knowledge or skills to market

themselves in the 21<sup>st</sup> century at home, shouldn't schools be providing the instruction they lack elsewhere? These are important questions to consider when trying to measure the importance of including more multi-modal texts and technology in the classroom. Going back to Donna LeCourt, the bottom line is that '[class difference] is produced by material differences in power, in income, in consumption, and in education that result from one's relationship to labor (LeCourt 38).' In the world outside of education, labor practices are evolving and in many cases, they are calling for a workforce that can function with 21<sup>st</sup> century demands. LeCourt also points out that 'economists, sociologists, and theorists disagree on precisely what distinguishes the working class from the middle class, but one constant is that it is grounded in the material conditions of labor and one's power over the means of production (LeCourt 38).' The very last part of that sentence should be in bold-faced text for the modern educator. What does it mean to have 'power over the means of production' in the 21<sup>st</sup> century? Are educators giving their students the skills and knowledge to have 'power over the means of production' in today's day and age? And what tangible ramifications are there for the student who fails to gain the 'power over the means of production' in the world outside of school? Could there indeed be a growing gap between the "haves" and the "have-nots" in terms of 21<sup>st</sup> century instruction and the modern day learner? Researchers and scholars believe so.

In terms of the discussion on what constitutes the 21<sup>st</sup> century learner, James Gee has documented several important concepts and ideas on appeal and expectation in relation to the modern student. To this extent, he makes the point that:

human beings are quite poor at using verbal information (e.g. words) when given lots of it out of context and before they can see how it applies in actual situations...today's student gains competence through trial, error, and feedback, not by wading through a lot of text before being able to engage in an activity (Gee 37 & 27).

An example that Gee presents deals with the popular customizable card game, *Yu-Gi-Oh*, which is based off of a televised cartoon show.

The language of *Yu-Gi-Oh* cards is quite complex, but it relates piece by piece to the rules of the game, to the specific moves or actions one takes in the domain. Here language – complex specialist language – is married closely to specific and connected actions (Gee 111).

The point that Gee is trying to make is that if one was to give a child the rules to *Yu-Gi-Oh* to read, they would not learn much until they were actually able to play the game. This is one of the big differences between the 21<sup>st</sup> century learner and students of previous generations. The educator needs to be able to ground their material in application that stimulates multiple modalities. Gee continues to write that ‘the sorts of practices and informal specialist-language lessons that [effectively] exist around *Yu-Gi-Oh* could exist in school to teach valued content, but they don't (Gee 112).’ Instead, methodology and expectations surrounding the 21<sup>st</sup> century learner remain rooted to 20<sup>th</sup> century ideals and practices.

Gee also sides with other scholars on the idea that young people are attempting to educate themselves in regard to 21<sup>st</sup> century skills outside of school due to the lack of effective instruction that they receive within the public education classroom. He writes that:

young people today are producing their own websites, blogs, animation, machinima, music, fan fiction, video – and many other things – in massive amounts outside of school. Many of these activities involve art, technology, computation, and content in a very integrated fashion. Such production [and consequently education] may be, for many young people, an important route for the acquisition of skills that are crucial for our modern, global, and high-tech world (Gee 136).

The mentioning that many of the “texts” that the 21<sup>st</sup> century learner creates involve art, technology, and computation establishes a need (or desire at the very least) for multiple modalities to be stimulated. It is also evident through Gee’s work that the 21<sup>st</sup> century student learns best when the material they are dealing with is rooted in actual application versus a more traditional memorize and skill-and-drill assessment. These are all very important concepts for educators to understand if they wish to develop effective and engaging content for the 21<sup>st</sup> century learner.

In regard to the study and focus of my research, the characteristics of the 21<sup>st</sup> century learner and the skills that define them in a constantly evolving world are important in the establishment of measuring appeal with regard to the print-based and multi-modal based text. As educators, if we are to design a successful curriculum, we need to know what stimulates the modern student so that we can modify our assignments and assessments to create more interest and thus, better learning.

## ***Technology***

*“To understand the state of reading and writing today among youth, we must also understand the technological sphere that teens inhabit and where reading, writing, and technology intersect. To fully understand the strengths and weaknesses of reading and writing instruction today, we must understand the role that technology plays in this realm.”*

*(Lenhart, Arafah, Smith, & Macgill 2)*

‘In the 16<sup>th</sup> century, the Church considered the printing press to be a dangerous new technology – and one not to be trusted because it supported an increased flow of information to the masses and increased vernacular expression (Selfe 7).’ Of course, the printing press would inevitably (despite the efforts of the Church) change the world and the institutions that shaped the world through the production and distribution of the print-based text. With the advent of the 21<sup>st</sup> century, it seems that the world is changing yet again under the influence of technology. As Michele Knobel and Colin Lankshear suggest in their textbook, *A New Literacies Sampler*, there are still arenas in society today that remain reluctant to advance with the rest of the world. They write that ‘even when new technological tools are introduced, these tools fail to change the “look-and-feel” of schooling, marked as it is by the pre-existing, pre-defined categories of knowing and being (Knobel & Lankshear 26).’ The authors continue the conversation by suggesting that ‘school structure and teaching practice has remained substantially unchanged for seven hundred years (Knobel & Lankshear 26).’ Since roughly the invention of the printing press. Many scholars (and even teachers themselves) believe that the immersion and inclusion of technology in school is an inevitable truth. What I am interested in is shedding light on how this apparent reluctance or procrastination of implementing

technology into the classroom affects the inclusion of multi-modal texts as well as how technology is used in circumstances where teachers have shown the initiative to include it.

To begin the conversation about technology and multi-modal texts, it is useful to look at Cynthia Selfe's work once again in her article, "Multimodal Composition: Resources for Teachers". She makes the point that 'if composition instruction is to remain relevant, the definition of "composition" and "texts" needs to grow and change to reflect people's literacy practices in new digital [and technologically-driven] communication environments (Selfe 3).' The assumption here, of course, is that the definition of these terms not only needs to grow, but they need to be recognized and acted upon by educators:

The more channels [that] students have to select from when composing and exchanging meaning, the more resources they [will] have at their disposal for being communicators. Aural and video compositions sometimes reveal and articulate meanings students struggle to articulate with words; audio and visual compositions carry different kinds of meanings that words are not good at capturing (Selfe 3-4).

The fact that technology allows the opportunity for many more channels (or ways) to be opened for the student to communicate (or express) their knowledge with one another is paramount (or should be) to the modern classroom. As Katherine Schultz states in her work, "Qualitative Research on Writing", 'with the advent of new technologies, writing researchers are thinking broadly about composition and exploring new venues, including visual images transmitted on screens, digital stories written on computers, and poetry slams performed for packed audiences (Schultz 368).' All of these methods (and

countless others) would be considered as multi-modal texts due to their ability to stimulate multiple semiotic systems within the learner. Technology – it seems – only goes to support and enhance the inclusion of the multi-modal text. A lack (or reluctance) to fuse technology with daily content not only disinterests the 21<sup>st</sup> century learner, it restricts them from engaging with a wide variety of multi-modal tools that have meaning beyond the confines of the public education classroom.

Sara Kajder states that '[she] firmly believe[s] that valuing and seeing the ways in which kids are engaging with new technologies outside of school can teach us a great deal about possibilities in engaging them as readers and writers in our classrooms (Kajder 214).' As we've seen elsewhere, analyzing and assimilating important underlying ideas in the popular culture surrounding the 21<sup>st</sup> century learner can be of value to the educator. Where then are students finding an appeal with the use of technology? Undoubtedly there is more than one answer to this question, but Amanda Lenhart and her colleagues provide some intriguing research data in their article, "Writing, Technology and Teens". Among their lengthy outcomes, they discovered that '85% of teenagers engage in some form of electronic (or digital) personal communication, which includes text messaging, sending an email or instant message, or posting comments on a social networking website every day (Lenhart, Arafeh, Smith, & Macgill 24).' Also sifting through their results, they determined that '94% of teenagers use the internet daily (Lenhart, Arafeh, Smith, & Macgill iv)' and '58% of teenagers maintain a profile on a social networking site such as Facebook or MySpace (Lenhart, Arafeh, Smith, & Macgill 25).' In their discussion of what their findings suggest, Lenhart and company conclude that 'most teenagers are

driven to particular platforms, communities or technologies by the underlying personal relationships that exist in that space and the content [that] these relationships generate (Lenhart, Arafeh, Smith, & Macgill 63).’ This is an important observation for educators wishing to incorporate technology into their classrooms to observe. The fact that over half of the teenagers studied in Amanda Lenhart’s article had a social networking profile on the internet and eighty-five percent of teenagers communicated digitally on a daily basis suggests a draw towards technology for its ability to create and maintain relationships. Applied to the classroom, perhaps educators would be best served to use technology and multi-modal texts to enhance and encourage communication between their students (something that the print-based text seems – in large part – to fail at).

But what about the instances where educators are trying to implement technology but have been unable to do so effectively. Sara Kajder asks the question:

What is happening with technology [in our schools today]? It’s as if our instincts lead us to take what we’ve done in the past and reproduce the process using different tools to create the same product. Does doing something old with new technology mean that I’m teaching with technology and that I’m doing so in such a way as to really improve the reading and writing skills of the students in my classroom (Kajder 215)?

This is a good point. When technology seems to fail in terms of appeal to the 21<sup>st</sup> century learner, perhaps the educator should take a moment to evaluate how they are asking their students to use technology. Are teachers scheduling time in the computer lab for students to type, or are they creating opportunities that allow their students to collaborate and experiment with music, video, pictures, and more? The point here is that teachers need to

understand what appeals to their students the most, and how to incorporate technology effectively into their curricula based off of such appeal.

Sara Kajder continues to point out that:

in all of our attempts to move forward, we haven't looked to our kids to see what the possibilities are for merging what they know about technology with what we know about what it means to read and write well. We need to think about what happens when we really invent – and offer students, and ourselves, opportunities to do new things in new ways, taking advantage of the unique capacities of the multi-modal [and technological] tools now at our fingertips (Kajder 216).

In other words, educators and their personal curriculums need to evolve with the world, and not despite of the world. Kajder continues to write that:

teaching with technology in the English classroom is always about looking, whether it's seeing kids and the range of talents and literacies that they bring into our classrooms or it's seeing the possibilities in a new tool that allows [the educator] to amplify [their] curricula for the better. As the literacies that kids bring into our classrooms change (alongside the literacies that they need in order to be productive and competitive in the world outside of school), there is a very real pressure to make sure that what we teach is relevant and helps to push students to develop the skills needed to be self-directed, ubiquitous learners (Kajder 229).

To ensure that educators are meeting these goals, they need to be sure that they aren't merely doing something old with new tools to satisfy the demand of including technology into their lessons. In terms of new tools, appeal, and implementation, it seems that the demands of the 21<sup>st</sup> century (and beyond) require the educator to be a learner and innovator in addition to being a teacher.

## **METHODOLOGY**

To this point in the project, I've hoped to outline the research questions at the heart of the study as well as document and explore the key ideas and / or concepts as they relate to and lend meaning to the goals of my research. Right now, it may be helpful to bring my research questions back to the forefront. They are:

1. From the perspectives of five secondary English public education teachers and thirty-seven secondary-level students in a classroom study, do multi-modal texts and technology have a greater appeal than print-based texts to the 21<sup>st</sup> century student?
2. From the same perspectives, what expanding and decreasing roles do print-based texts and multi-modal based texts have in the secondary-level public education classroom? What implications and tangible ramifications do these findings suggest for the 21<sup>st</sup> century learner and the world in which they live?
3. From the same perspectives, and with the idea of semiotic systems used as a foundation for measurement, what additional benefits (if any) do multi-modal texts offer that print-based texts do not?
4. From the same perspectives, what kind of effect does technology have on the implementation of multi-modal texts in the secondary public education classroom (beneficial or not)?

Beyond looking at what others have written with regard to these questions and the topics related to these questions, I've designed two different types of studies with the goal of obtaining more concrete, conclusive, and applicable results that extend the conversation regarding print-based and multi-modal based texts to the 21<sup>st</sup> century learner.

### **Quantitative Study**

The first study employs quantitative elements in a classroom study where secondary-level students worked with both print-based and multi-modal based texts. To elaborate on this a bit, the first study is considered quantitative because the end result 'deals with numbers that can be measured (regentsprep.org)' and places myself (as a researcher) in the role of an 'objective observer that neither participates in nor influences what is being studied (colostate.edu).'

### ***Setting and Assignments***

The setting for this four-week long study was the high school in which I did my student teaching in the spring of 2009. The study was conducted in two separate sections of 'World Literature' which is the required English class for the 10<sup>th</sup> grade at this particular institution. The school is located in the growing region of Northern Colorado, and is a part of an esteemed and well-organized school district.

In regard to the 'World Literature' classroom's curriculum, the unit of study in which my research was embedded was focused on Chinua Achebe's novel, *Things Fall*

*Apart*. In general, the class is loosely designed around a class textbook (previously mentioned in my Introduction) called *Springboard*. The print-based assignment was pulled from the *Springboard* text and modified slightly while the multi-modal assignment was created without assistance from *Springboard*.

The designed study had students completing two separate assignments, one print-based, and one multi-modal based, over the allotted four-week time span. The print-based assignment was pulled straight out of the class *Springboard* textbook. The multi-modal assignment was created through my collaboration with the cooperating teacher for both sections of 'World Literature'.

The print-based assignment dwelled on key themes found in Achebe's novel and asked students to write a personal essay of one to two pages in length that elaborated on one of the themes from the novel and how it related to their lives today.

The multi-modal assignment had students split into groups of three or four and asked them to create a five-to-ten slide Powerpoint presentation on one of the themes or elements found in Achebe's novel as it pertained to global or national culture, both in the past and in the present. Students were given time to research in the school's library and were encouraged to include pictures, Youtube links, and music to help their peers better understand the subject matter they dealt with when the time came at the end of the unit to present their project.

### *Participants*

In order to carry out a classroom study, I would need to have at least one cooperating teacher to assist me. Luckily, I had forged a benevolent relationship with my mentor teacher during my student teaching experience, and he was eager to help me out with my study. For legal reasons, I will refer to him as ‘Mr. Kewl’ from this point forward. Mr. Kewl is a middle-aged teacher who has seven years of teaching experience under his belt at the high school level.

As mentioned previously, two sections of ‘World Literature’ students would create the population for my research results. In the first section of ‘World Literature’, there were eighteen students who agreed to participate in my study. Of these eighteen, half of them were male, and half of them were female. In the second section of ‘World Literature’, there were nineteen students who agreed to participate in my study. Of these nineteen, twelve of them were male, and seven of them were female. In total, thirty-seven students took part in my classroom research, twenty-one of them were male, and sixteen of them were female.

### *Procedures*

The goal of this classroom study was to have students complete each assignment that Mr. Kewl and I came up with (one of course meant to be print-based, representative of the linguistic semiotic system; and one meant to be multi-modal, fusing other semiotic systems with the linguistic) and then give each student a survey afterwards that would gauge their interest level in each type of assessment, as well as what type of “texts” (or

methods of assessment) appealed to them in school, and what their feelings were towards technology in education. The survey that I had students fill out can be viewed in its entirety in Appendix A.

In collaborating with Mr. Kewl, we came to the conclusion that it would be best if I was absent from the classroom until the day the survey was to be given. Although we carefully collaborated on the individual assessments, we felt it was better for the integrity of the study if students were not really aware of my presence as a researcher and their role as research subjects. With this being said, however, students were given a consent form explaining the study in detail that required a parental signature. The consent form was given at the beginning of the four-week span.

Although I did not get consent from the entire student population, Mr. Kewl required all students to complete both types of assignments. Those who had not completed their consent form were not used in the data collection process.

Mr. Kewl carried out the unit on Chinua Achebe's *Things Fall Apart*, instituting and enforcing the completion of the two assignments we had collaborated on prior to the unit's start date. I arrived after students had completed their Powerpoint projects and administered my survey to those who had returned their consent forms with parental permission. I was in the classroom for one day.

In collecting my data, Mr. Kewl allowed me to explain to both sections of 'World Literature' who I was, why I was conducting my study, and how their responses to my questionnaire would be helpful in the construction of my thesis. I encouraged students to

be as honest as possible, offered them a chance to ask questions, and then gave my questionnaire. After collecting their surveys, I thanked them for their time and cooperation and gave the class back over to Mr. Kewl. The process took no longer than twenty minutes.

### **Qualitative Study**

The second study employs qualitative elements as I surveyed five secondary-level teachers about the role of print-based and multi-modal based texts in their curriculum, their school, and to a larger extent, in our society. The second study is considered qualitative because the data obtained ‘can be observed but not measured (regentsprep.org)’, and ‘deals with the study of words and not numbers (colostate.edu).’

### ***Participants***

For this study, I sent questionnaires related to my thesis subject and research questions to five cooperating teachers working in different schools. I chose to sample teachers from multiple content areas to gain a broader perspective as to the roles (and future roles) that print-based texts, multi-modal-based texts, and technology play to the 21<sup>st</sup> century learner. Here is a brief description of each teacher who participated in the qualitative aspect of my study:

Mr. Kewl: works at a high school in Colorado and has been teaching at the secondary level for seven years. His content area is language arts. He is forty-two years old.

Mr. Skinny: works at a different high school in Colorado and is in his first year of teaching at the secondary level. His content area is language arts. He is thirty-two years old.

Ms. Tumbleweed: works at a middle school in Wyoming and is in her first year of teaching at the secondary level. Her content area is language arts. She is twenty-two years old.

Mr. History: works at a middle school in Colorado and has been teaching at the secondary level for three years. His content area is social studies. He is thirty-nine years old.

Mr. Science: works at a high school in Colorado and is in his first year of teaching at the secondary level. His content area is science. He is twenty-four years old.

### ***Procedures***

The goal in having my participants respond to a questionnaire was to gather information on how the educator perceived the role (and subsequent appeal) of the print-based text and the multi-modal based text to the 21<sup>st</sup> century learner. Included in the questionnaire were also prompts on technology and the increasing role / importance of technology in the modern classroom. The questionnaire that I had teachers respond to can be viewed in its entirety in Appendix B.

The questionnaire was emailed to each of the five participants in my study. They were instructed to respond to whichever prompts they felt motivated to, with the

understanding that the more information they were able to provide, the better. Not all of the teachers who participated answered every question, and in the Data and Analysis section, this is reflected as I didn't have a response from everyone for every question.

## **DATA AND ANALYSIS**

Both studies generated a wealth of information that was helpful and applicable to the answering of my initial research questions. After examining the results from each study and discussing the implications of their findings in relation to my overarching research questions, I will then present a synthesis of my findings with the material documented in my Review of Literature and Introduction to create a coherent representation of where we stand in regard to print-based and multi-modal based texts in the 21<sup>st</sup> century classroom, and what further implications and / or questions there are worth pursuing in future research endeavors.

### **Quantitative Study**

To analyze the data, I examined each question of the student survey in the following pages by first restating the question, then documenting the results, followed by what the data implies for the larger questions and topics outlined in my thesis thus far.

The first question of my student survey is shown in *Table 1.1*. The data obtained as a result of the question in *Table 1.1* is shown in *Table 1.2*. The documented data in *Table 1.2* is broken into three columns (S1, S2, & TOT). 'S1' represents the data obtained from the 1<sup>st</sup> section of 'World Literature', 'S2' represents the data obtained from the 2<sup>nd</sup> section of 'World Literature', and 'TOT' represents the total of both sets of data put together (S1 + S2).

Table 1.1

1. On a scale of 1 to 5, please indicate how much you enjoyed the reflective essay portion of the unit (circle one):				
1	2	3	4	5
<b>Hated it</b>		<b>It was alright</b>		<b>Loved it</b>

Table 1.2

# of students who circled:	S1	S2	TOT
'1' (hated it)	3	5	8
'2'	3	4	7
'3' (it was alright)	8	9	17
'4'	4	1	5
'5' (loved it)	0	0	0

Certainly some interesting results. The majority of students (17 of 37; roughly 46%) circled number '3' (it was alright), suggesting that they neither 'hated' nor 'loved' the print-based assignment. The large number of students who responded with a '3' is encouraging for enthusiasts such as Cynthia Selfe and Maureen Walsh who stress the importance of fusing print-based texts with multi-modal texts. Such a large volume of '3's in response to the first question suggests that the print-based text is not completely dead to the 21<sup>st</sup> century learner, and still has a place in the 21<sup>st</sup> century learner's classroom to some extent.

The interesting aspect to look at with this data, however, is where the other 54% of the data falls. 15 of 37 (roughly 40.5%) of students circled a '1' or a '2', both of which would be considered negative responses to the print-based assignment. Only 5 of 37

(roughly 13.5%) of students circled a '4', and zero students circled a '5', both of these numbers are representative of positive responses to the print-based assignment. This shows that the overwhelming majority of students in the remaining 54% who didn't circle a '3' did not care for, or even went as far as stating they 'hated' the print-based assignment.

The second question of my student survey is shown in *Table 2.1*. The data obtained as a result of the question in *Table 2.1* is shown in *Table 2.2*. The documented data in *Table 2.2* is broken into three columns (S1, S2, & TOT). 'S1' represents the data obtained from the 1<sup>st</sup> section of 'World Literature', 'S2' represents the data obtained from the 2<sup>nd</sup> section of 'World Literature', and 'TOT' represents the total of both sets of data put together (S1 + S2).

*Table 2.1*

- |  |
|--|
| <p>2. What did you <i>dislike</i> most about the reflective essay portion of the unit (place an 'X' next to ALL that apply; if none apply, then leave blank):</p> <p>___ It was boring</p> <p>___ The subject matter wasn't appealing</p> <p>___ I felt a constraint on my creativity</p> <p>___ I didn't feel that it fully measured my knowledge of the subject</p> <p>___ I felt it was too much work</p> <p>___ I don't like writing</p> <p>___ Other; use the following space to explain:</p> |
|--|

Table 2.2

# of 'X's given to:	S1	S2	TOT
'It was boring'	9	8	17
'The subject matter wasn't appealing'	5	4	9
'I felt a constraint on my creativity'	6	3	9
'I didn't feel that it fully measured my knowledge of the subject'	7	1	8
'I felt it was too much work'	5	8	13
'I don't like writing'	2	8	10
'Other'	2	8	10

Comments given for 'Other' in 'S1':

-“I feel that writing prompts don't let one express their true creativity.”

-“I'm not the best speller or writer.”

Comments given for 'Other' in 'S2':

-“we had to write too much.”

-“it's just not enjoyable.”

-“I just didn't like the time we had. It felt rushed.”

-“Too little time. Plus, I don't like writing on computers.”

-“I only like writing when I want to write.”

-“If it is not a subject you totally know about, it is harder to write.”

-“I thought we should have been given more time.”

With this set of data, there was a fairly good spread amongst the choices provided for the student with exception to the 'it was boring' category which generated the most responses (at seventeen) of any other option. This kind of data can be used as evidence to

support the idea that the print-based text (by itself) has very little appeal to the 21<sup>st</sup> century learner as their attention spans decrease and their ‘boredom’ increases.

As an educator, one of the disheartening statistics to come out of this question deals with the ‘I felt it was too much work’ category. Coming in as the 2<sup>nd</sup> most popular choice (at thirteen) for why the student disliked the print-based assignment, this can indicate a variety of conclusions. First of all, let me reiterate that the personal essay assigned had a requirement of one to two double-spaced pages and because of the ‘personal’ aspect of the essay, required no research – just individual reflection of memories, experiences, and events. Most educators would agree that such an assignment does not constitute much work at all, yet the students felt it was ‘too much work’. Personally, I wonder if this popular attitude displayed by the student’s responses is at all tied to the overall negativity surrounding the print-based text and the task of writing an essay, regardless of length and subject.

To find an answer, I took all of the students (from both sections of ‘World Literature’) that circled a ‘1’ or ‘2’ (both displayed a strong dislike for the assignment) in the first question and recorded how many of the ‘1’s and ‘2’s placed an ‘X’ next to ‘I felt it was too much work’. What I found was that ten of the fourteen (roughly 71%) students who circled a ‘1’ or ‘2’ for the first question also placed an ‘X’ next to ‘I felt it was too much work’. This suggests that there is a correlation between the negative attitude towards print-based assignments and the perception of those print-based assignments

requiring too much work, even when, in reality, not much is being asked of the student in terms of length or research effort.

Of the comments given, 30% (3 of 10) expressed not having enough time, or feeling rushed. This is interesting considering Mr. Kewl gave the assignment two weeks before it was due. With the requirement being one-to-two double-spaced pages, that would be at most, one page a week (if not one page in two weeks if the student met the minimum requirement). Again, given the context and time frame of the print-based assignment, I think most educators would feel plenty of time was given. As the researcher, I have to wonder if there is a connection between procrastination and the print-based assignment, leading to a feeling of not enough time, or being rushed. Unfortunately, the data I've obtained cannot provide a definitive conclusion as to this hypothesis, but it is interesting nonetheless.

The third question of my student survey is shown in *Table 3.1*. The data obtained as a result of the question in *Table 3.1* is shown in *Table 3.2*. The documented data in *Table 3.2* is broken into three columns (S1, S2, & TOT). 'S1' represents the data obtained from the 1<sup>st</sup> section of 'World Literature', 'S2' represents the data obtained from the 2<sup>nd</sup> section of 'World Literature', and 'TOT' represents the total of both sets of data put together (S1 + S2).

Table 3.1

<p>3. What did you <i>like</i> most about the reflective essay portion of the unit (place an 'X' next to ALL that apply; if none apply, then leave blank):</p> <p>___ It was thought-provoking</p> <p>___ The subject matter was relevant and appealing</p> <p>___ The assignment allowed me to be creative</p> <p>___ It allowed me to convey my knowledge of the subject clearly</p> <p>___ The assignment was fun and easy to put together</p> <p>___ Other; use the following space to explain:</p>
---

Table 3.2

# of 'X's given to:	S1	S2	TOT
'It was thought-provoking'	8	2	10
'The subject matter was relevant and appealing'	7	6	13
'The assignment allowed me to be creative'	4	2	6
'It allowed me to convey my knowledge of the subject clearly'	6	7	13
'The assignment was fun and easy to put together'	3	5	8
'Other'	3	1	4

Comments given for 'Other' in 'S1':

-“we got to use the lab the whole week.”

-“the assignment was easy to write about.”

-“I just like writing essays.”

Comments given for 'Other' in 'S2':

-“it was enjoyable. I liked the topic.”

The two categories that received the most feedback for reasons related to liking the print-based assignment were ‘the subject matter was relevant and appealing’ and ‘it allowed me to convey my knowledge of the subject’ which both came in at thirteen. I suspect that this response has little to do with the fact that it is a print-based assessment, and more to do with the fact that the print-based assignment was oriented around individualized, and personal expression. On a more global level (related to both print-based and multi-modal based assignments), this data goes to strengthen the argument for more student-centered assignments in the educator’s curriculum.

The more telling statistic with this data comes in the category that received the least amount of feedback, which is ‘the assignment allowed me to be creative’, reporting back with only six responses. This tells me that only a small number of students felt that the print-based assignment spurred their creativity, thus lending evidence to the argument that print-based texts lack the appropriate appeal (on a creative level) to the 21<sup>st</sup> century learner.

One of the interesting comments left in the ‘Other’ section was: ‘we got to use the lab all week’. Whether this comment speaks to the student’s desire to use computers and technology in the classroom, or whether this comment relates to the student’s excitement over the prospect of doing things that aren’t class-related (e.g. playing games, checking Facebook, etc.) is up for debate. However, this student has expressed an interest in being

able to access the computer lab for class. This kind of enthusiasm is what teachers need to recognize and productively harness when designing lesson content.

The fourth question of my student survey is shown in *Table 4.1*. The data obtained as a result of the question in *Table 4.1* is shown in *Table 4.2*. The documented data in *Table 4.2* is broken into three columns (S1, S2, & TOT). ‘S1’ represents the data obtained from the 1<sup>st</sup> section of ‘World Literature’, ‘S2’ represents the data obtained from the 2<sup>nd</sup> section of ‘World Literature’, and ‘TOT’ represents the total of both sets of data put together (S1 + S2).

*Table 4.1*

4. On a scale of 1 to 5, please indicate how much you enjoyed the Powerpoint portion of the unit (circle one):				
1	2	3	4	5
<b>Hated it</b>		<b>It was alright</b>		<b>Loved it</b>

*Table 4.2*

# of students who circled:	S1	S2	TOT
‘1’ (hated it)	0	2	2
‘2’	3	0	3
‘3’ (it was alright)	10	4	14
‘4’	4	9	13
‘5’ (loved it)	1	4	5

The data obtained from this question almost mirrors the data obtained in question number one that asked students to circle their interest level with the print-based

assignment. With the multi-modal assignment, 14 of 37 (roughly 38%) circled a '3' which represented 'it was alright'. A large number of students (46%) circled a '3' in question number one. Following the same method of analysis used in question number one, the implications will be revealed in where the remaining 62% of the data falls.

Combining all of the '1's and '2's (both representing a dislike for the multi-modal assignment), it is discovered that 5 of 37 (roughly 13.5%) students did not care, or even 'hated' the multi-modal assignment. Combining all of the '4's and '5's (both representing a like for the multi-modal assignment), it is discovered that 18 of 37 (roughly 49%) students really liked, or even 'loved' the multi-modal assignment. This number is even greater than the number of students who circled a '3'. This means that the majority of students really liked, or even 'loved' the multi-modal assignment.

The fifth question of my student survey is shown in *Table 5.1*. The data obtained as a result of the question in *Table 5.1* is shown in *Table 5.2*. The documented data in *Table 5.2* is broken into three columns (S1, S2, & TOT). 'S1' represents the data obtained from the 1<sup>st</sup> section of 'World Literature', 'S2' represents the data obtained from the 2<sup>nd</sup> section of 'World Literature', and 'TOT' represents the total of both sets of data put together (S1 + S2).

Table 5.1

<p>5. What did you <i>dislike</i> the most about the Powerpoint portion of the unit (place an 'X' next to ALL that apply; if none apply, then leave blank):</p> <p>___ It was boring</p> <p>___ The subject matter wasn't appealing</p> <p>___ I felt a constraint on my creativity</p> <p>___ I didn't feel that it fully measured my knowledge of the subject</p> <p>___ I felt it was too much work</p> <p>___ I was unfamiliar with the technology used</p> <p>___ Other; use the following space to explain:</p>
---

Table 5.2

# of 'X's given to:	S1	S2	TOT
'It was boring'	6	3	9
'The subject matter wasn't appealing'	5	3	8
'I felt a constraint on my creativity'	2	2	4
'I didn't feel that it fully measured my knowledge of the subject'	5	3	8
'I felt it was too much work'	5	5	10
'I don't like writing'	1	3	4
'Other'	4	5	9

Comments given for 'Other' in 'S1':

-“there wasn't enough time to put all the information together.”

-“I'm just not really into doing Powerpoints.”

-“It was just a lot of hard work to research and put everything together.”

-“not enough time to put it together.”

Comments given for 'Other' in 'S2':

-“the directions weren't explained very well.”

-“got no help from my partners.”

-“didn’t have the time I wish I did.”

-“it’s hard to take notes when you’re on a time constraint.”

-“some of the information is really hard to find no matter what you do.”

-“the amount of time we had was not enough.”

As was the case with the print-based assignment, most students felt that the multi-modal based assignment was ‘too much work’, which received the most feedback at ten. For the purposes of my thesis, however, the categories that received the least amount of feedback will be the most telling.

‘I felt a constraint on my creativity’ and ‘I was unfamiliar with the technology used’ both garnered four responses, half of the next highest total. This kind of data suggests two things. First, that multi-modal assignments allow students to be more creative than they feel they could be with print-based texts (which received nine in the ‘constraint on creativity’ grouping in question number two, more than double the result for the multi-modal assignment). And second, that the majority of students are versed with the technology that was utilized for this multi-modal assessment.

The sixth question of my student survey is shown in *Table 6.1*. The data obtained as a result of the question in *Table 6.1* is shown in *Table 6.2*. The documented data in *Table 6.2* is broken into three columns (S1, S2, & TOT). ‘S1’ represents the data obtained from the 1<sup>st</sup> section of ‘World Literature’, ‘S2’ represents the data obtained from the 2<sup>nd</sup> section of ‘World Literature’, and ‘TOT’ represents the total of both sets of data put together (S1 + S2).

Table 6.1

<p>6. What did you <i>like</i> the most about the Powerpoint portion of the unit (place an 'X' next to ALL that apply; if none apply, then leave blank):</p> <p>___ It was thought-provoking</p> <p>___ The subject matter was relevant and appealing</p> <p>___ The assignment allowed me to be creative</p> <p>___ It allowed me to convey my knowledge of the subject clearly</p> <p>___ The assignment was fun and easy to put together</p> <p>___ Working with technology was good for a change</p> <p>___ Other; use the following space to explain:</p>
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Table 6.2

# of 'X's given to:	S1	S2	TOT
'It was thought-provoking'	5	2	7
'The subject matter was relevant and appealing'	3	4	7
'The assignment allowed me to be creative'	9	9	18
'It allowed me to convey my knowledge of the subject clearly'	6	5	11
'The assignment was fun and easy to put together'	6	7	13
'Working with technology was good for a change'	10	11	21
'Other'	2	3	5

Comments given for 'Other' in 'S1':

-“I liked working with Youtube.”

-“the assignment was easy to do.”

Comments given for 'Other' in 'S2':

-“it was easier than writing an essay.”

-“was easier to do.”

This question provided a bounty of telling results. In question number five, only four students placed an 'X' next to 'I felt a constraint on my creativity' while the category 'the assignment allowed me to be creative' in this question was given eighteen 'X's. This goes to confirm the idea that students felt the multi-modal assignment allowed them to be more creative than the print-based assignment.

Probably the most notable result from this question comes in the 'working with technology was good for a change' category. Twenty-one students (roughly 57% of the entire population of the study) put an 'X' next to this option, indicating that the majority of students would like to see more technology utilized in the classroom. This type of data suggests that the modern classroom and curriculum may still be rooted in 20<sup>th</sup> century ideals that don't equate to the skills and stimuli that the 21<sup>st</sup> century learner needs and desires.

One note about the commentary. Of the four comments left by students in the 'Other' category, three of them dealt with how 'easy' the assignment was to put together in comparison to the print-based (reflective essay) assignment. On the surface, which sounds 'easier': a one-to-two page reflective essay, or a five-to-ten slide Powerpoint presentation? Given that the volume of writing involved in a five-to-ten slide Powerpoint may in fact be less than a one-to-two page essay, the process of putting together a Powerpoint project could be greater in terms of time consumption. I find it fascinating that students are expressing a greater ease in task with regard to the Powerpoint project considering that it is substantially larger in scope and requirement than the reflective

essay. My hypothesis here is that students felt the Powerpoint project was easier for three primary reasons: 1. Because they were able to work in groups and collaborate, 2. Because the assignment allowed them to work within multiple semiotic channels or systems, and 3. Because they were able to utilize more relevant tools and technologies to express their knowledge and understanding of the subject.

The seventh question of my student survey is shown in *Table 7.1*. The data obtained as a result of the question in *Table 7.1* is shown in *Table 7.2*. The documented data in *Table 7.2* is broken into three columns (S1, S2, & TOT). ‘S1’ represents the data obtained from the 1<sup>st</sup> section of ‘World Literature’, ‘S2’ represents the data obtained from the 2<sup>nd</sup> section of ‘World Literature’, and ‘TOT’ represents the total of both sets of data put together (S1 + S2).

*Table 7.1*

7. On a scale of 1 to 5, please indicate what you think of incorporating technology (e.g. Youtube, filmmaking, ipods, etc.) in the classroom (circle one):				
1	2	3	4	5
<b>Less of it</b>		<b>Eh, whatever</b>		<b>More of it!</b>

*Table 7.2*

# of students who circled:	S1	S2	TOT
‘1’ (less of it)	0	0	0
‘2’	1	0	1
‘3’ (eh, whatever)	2	0	2
‘4’	8	6	14
‘5’ (more of it!)	8	12	20

A very straightforward question with a very straightforward response. If we are to examine this data as a '3' being a neutral response, a '1' and a '2' being a negative response, and a '4' and a '5' being a positive response, a resounding 92% of students (34 of 37) gave a positive response. This clearly illustrates the 21<sup>st</sup> century learner's desire for more technology and technology-use in the modern classroom. Only one student gave what would be considered a negative response, and it came in the form of a '2'. No student circled a '1'.

The eighth question of my student survey is shown in *Table 8.1*. The data obtained as a result of the question in *Table 8.1* is shown in *Table 8.2*. The documented data in *Table 8.2* is broken into three columns (S1, S2, & TOT). 'S1' represents the data obtained from the 1<sup>st</sup> section of 'World Literature', 'S2' represents the data obtained from the 2<sup>nd</sup> section of 'World Literature', and 'TOT' represents the total of both sets of data put together (S1 + S2).

Table 8.1

<p>8. Which of the following aspects appeals most to you when learning in school (place an 'X' next to ALL that apply):</p> <p><input type="checkbox"/> reading (<i>e.g. Books</i>)</p> <p><input type="checkbox"/> writing (<i>e.g. Essays, journal entries</i>)</p> <p><input type="checkbox"/> moving images (<i>e.g. Films</i>)</p> <p><input type="checkbox"/> still images (<i>e.g. Pictures, graphics</i>)</p> <p><input type="checkbox"/> music (<i>e.g. Songs, sound effects</i>)</p> <p><input type="checkbox"/> expression (<i>e.g. Acting, conversation</i>)</p> <p><input type="checkbox"/> gestures (<i>e.g. Body language, facial expression</i>)</p> <p><input type="checkbox"/> directions (<i>e.g. Rubrics, guidelines</i>)</p> <p><input type="checkbox"/> layout (<i>e.g. Organization of objects</i>)</p> <p>Please use the following space to explain why some of these aspects appeal to you in your learning:</p>
---

Table 8.2

# of 'X's given to:	S1	S2	TOT
'reading' ( <i>e.g. Books</i> )	5	5	10
'writing' ( <i>e.g. Essays, journal entries</i> )	6	3	9
'moving images' ( <i>e.g. Films</i> )	15	16	31
'still images' ( <i>e.g. Pictures, graphics</i> )	10	11	21
'music' ( <i>e.g. Songs, sound effects</i> )	15	17	32
'expression' ( <i>e.g. Acting, conversation</i> )	7	9	16
'gestures' ( <i>e.g. Body language, facial expression</i> )	4	6	10
'directions' ( <i>e.g. Rubrics, guidelines</i> )	6	6	12
'layout' ( <i>e.g. Organization of objects</i> )	6	6	12

Comments of why these aspects appeal in 'S1':

-“because they are more interactive and less lecture and note-taking.”

-“I am a visual learner and work better with hands-on work.”

-“I think they help me put information together better.”

-“Because I enjoy them. If I enjoy something then I'll put more effort into it.”

Comments of why these aspects appeal in 'S2':

-“I like seeing and picturing what I am learning about.”

-“moving images, still images, pictures; they are something different to class and create different skills.”

-“No one wants to just sit and take notes. They want to interact.”

-“I learn better with videos or activities that I can be a part of. But when we just write and do essays, I can't fully understand the material.”

-“I like to be hands-on and I don't like to sit and read.”

This question and the next question were asked to see what kinds of semiotic systems, or channels, appealed (or didn't appeal) to the 21<sup>st</sup> century learner. For question number eight, I was attempting to measure which aspects of learning (both technique and methodology) appealed to the student, and came away with some useful data.

The two categories, 'reading' and 'writing', were meant to represent the linguistic semiotic system (and thus the print-based text). Both of these categories received the least amount of feedback ('reading' had ten responses and 'writing' had nine responses out of a possible thirty-seven responses). This data suggests that there is little appeal for the print-based text amongst 21<sup>st</sup> century learners.

The next two categories, 'moving images' and 'still images', were meant to represent the visual semiotic system. Both categories were popular choices for students ('moving images' had thirty-one responses, coming in as the second most popular choice of any category, and 'still images' had twenty-one responses, coming in as the third most

popular choice of any category). This data suggests that students want much more stimulation to the visual semiotic channel when learning.

The next category, 'music', was meant to represent the aural semiotic system. This category was the most popular choice amongst students, gathering thirty-two responses, and edging 'moving images' by one. In addition to the data related to 'moving images' and 'still images', this data suggests that students would also like more stimulation to the aural semiotic channel in school.

The next two categories, 'expression' and 'gestures', were meant to represent the gestural semiotic system. Both categories received a moderate amount of responses ('expression' had sixteen responses, and 'gestures' had fifteen responses; 43% and 40.5% of the respective population). As the middle point of the data, these numbers suggest that while students are not expressing a desire for more stimulation to the gestural semiotic system, they also aren't annoyed with its current role in their classroom environments.

The last two categories, 'directions' and 'layout', were meant to represent the spatial semiotic system. Both categories gathered the same amount of responses (at twelve, or 32% of the student population), neither of which being that popular in comparison to the other listed categories. This data suggests that rubrics, assignment sheets, and other related kinds of materials have a moderately low level of appeal to the 21<sup>st</sup> century student.

On the whole, if I was to decode each of the categories from question number eight into their respective semiotic systems, their appeal level to the 21<sup>st</sup> century student would look like this ('1' having the most appeal, and '5' having the least appeal):

1. Aural
2. Visual
3. Gestural
4. Spatial
5. Linguistic

If this data is true, then our results in question number nine should confirm it and gather similar results except in reverse (since we are measuring which types of learning appeal *least* to the learner).

The ninth question of my student survey is shown in *Table 9.1*. The data obtained as a result of the question in *Table 9.1* is shown in *Table 9.2*. The documented data in *Table 9.2* is broken into three columns (S1, S2, & TOT). 'S1' represents the data obtained from the 1<sup>st</sup> section of 'World Literature', 'S2' represents the data obtained from the 2<sup>nd</sup> section of 'World Literature', and 'TOT' represents the total of both sets of data put together (S1 + S2).

Table 9.1

9. Which of the following aspects appeals least to you when learning in school (place an 'X' next to ALL that apply):

\_\_\_ reading (e.g. Books)

\_\_\_ writing (e.g. Essays, journal entries)

\_\_\_ moving images (e.g. Films)

\_\_\_ still images (e.g. Pictures, graphics)

\_\_\_ music (e.g. Songs, sound effects)

\_\_\_ expression (e.g. Acting, conversation)

\_\_\_ gestures (e.g. Body language, facial expression)

\_\_\_ directions (e.g. Rubrics, guidelines)

\_\_\_ layout (e.g. Organization of objects)

Please use the following space to explain why some of these aspects *don't* appeal to you in your learning:

Table 9.2

# of 'X's given to:	S1	S2	TOT
'reading' (e.g. Books)	10	13	23
'writing' (e.g. Essays, journal entries)	10	12	22
'moving images' (e.g. Films)	2	2	4
'still images' (e.g. Pictures, graphics)	3	5	8
'music' (e.g. Songs, sound effects)	0	2	2
'expression' (e.g. Acting, conversation)	4	3	7
'gestures' (e.g. Body language, facial expression)	5	3	8
'directions' (e.g. Rubrics, guidelines)	9	9	18
'layout' (e.g. Organization of objects)	5	9	14

Comments of why these aspects don't appeal in 'S1':

-“these don't appeal to me because I find them over-used in the classroom.”

-“It's boring to do these things.”

-“these aspects don't appeal to me because they are monotonous and do not allow much creativity.”

-“they are too structured with no freedom.”

-“they are too boring.”

Comments of why these aspects don't appeal to you:

-“I really don't like to read and it does not do much for me.”

-“really boring.”

-“because they can get boring and pointless after a while.”

-“reading isn't fun and so I zone out and don't pay attention even when I try.”

-“If we always see the same things, we will tune-out.”

-“They don't appeal to me because I get side-tracked when reading.”

-“I don't like writing long essays.”

-“I would rather discuss something rather than writing.”

The data confirms a resistance or reluctance towards the linguistic semiotic system as the categories of 'reading' and 'writing' generated the most responses (twenty-three and twenty-two respectively). The second least popular categories were 'directions' (at eighteen) and 'layout' (at fourteen), both representing the spatial semiotic system. After that comes 'gestures' (at eight) and 'expression' (at seven) which parallel the gestural semiotic system. The visual semiotic system, as represented by 'still images' (at eight) and 'moving images' (at four) is next in line with the aural semiotic system as represented by 'music' (at two) bringing up the back end of the data. As I did with question number eight, I will create a list based on the semiotic systems as represented by the data starting with the least popular. If the data is sound, we should see a correlation between the list generated for question number eight and this list, with the exception

being that this list is flipped. Here are the results ('1' having the least appeal and '5' having the most appeal):

1. Linguistic
2. Spatial
3. Gestural
4. Visual
5. Aural

As you can see, there indeed is a correlation between the two lists. Both sets of data provide evidence that the print-based text has lost its appeal to the 21<sup>st</sup> century learner. The data suggests that all four of the other semiotic systems have a greater appeal in today's curriculum than the linguistic (as exemplified by print-based texts).

The commentary presented in question number nine also establishes another trend. Eight of the Thirteen comments provided (roughly 61.5%) expressed 'boredom', or an aptness to 'tune out' / 'zone out'. All eight students who provided such feedback placed an 'X' next to 'reading' and 'writing'. This data gives insight to the question of why print-based texts are losing appeal to the 21<sup>st</sup> century learner.

The tenth question of my student survey is shown in *Table 10.1*. The data obtained as a result of the question in *Table 10.1* is shown in *Table 10.2*. The documented data in *Table 10.2* is broken into three columns (S1, S2, & TOT). 'S1' represents the data obtained from the 1<sup>st</sup> section of 'World Literature', 'S2' represents the data obtained from the 2<sup>nd</sup> section of 'World Literature', and 'TOT' represents the total of both sets of data put together (S1 + S2).

Table 10.1

10. If you had to pick, which of the following would you rather put together as the final assignment to a unit (circle one):	
<b>Powerpoint presentation</b>	<b>Reflective Essay</b>

Table 10.2

# of students who circled:	S1	S2	TOT
Powerpoint presentation	13	16	29
Reflective Essay	5	3	8

Essentially, this question is asking students whether or not they would choose the print-based assignment, or the multi-modal based assignment if given a choice. 29 of 37 (roughly 78%) of students opted for the multi-modal based Powerpoint presentation, while only 8 of 37 (roughly 22%) preferred the print-based assignment. This data shows that the majority of 21<sup>st</sup> century learners would gravitate towards the multi-modal assignment.

### ***Discussion***

Overall, the data provides plenty of useable results with regard to the appeal level surrounding print-based and multi-modal based texts to the 21<sup>st</sup> century learner. The data also demonstrates a decisive verdict with regard to the role of technology in the classroom and the student's desire for inclusion in daily content.

The reflective essay (print-based component) of the study was not well-received by the majority of students. While 46% of students had a neutral attitude towards the

print-based assignment, an almost equally as large 40.5% of students expressed a negative attitude towards the reflective essay. Amongst the most popular reasons why students disliked the print-based assignment were: 'it was boring' (17 of 37; roughly 46% of the student population) and 'I felt it was too much work' (13 of 37; roughly 35% of the student population). The expressed claim that the assignment was 'too much work' is peculiar given that it was a mere one-to-two page paper in which no research was required. The expressed claim that 'it was boring' could indicate the lack of stimulation (in terms of semiotic systems) for the learner.

The Powerpoint presentation (multi-modal component) of the study was received far better than its print-based counterpart. While 38% of students displayed a neutral attitude towards the multi-modal based assignment, a much larger 49% of the students expressed a positive attitude for the Powerpoint project. Examining the reasons why students liked the Powerpoint project, 21 of 37 (roughly 57%) of students replied by saying it 'was good to work with technology for a change'. In addition to this, 18 of 37 (roughly 48.5%) of students replied by saying 'the assignment allowed me to be creative'. This could be a result of the assignment's demand to utilize multiple semiotic channels.

With regard to technology, 34 of 37 (roughly 92%) of students expressed a desire for more of it in the classroom. This was one of the more resounding and definitive results to come out of the study. This type of data gives value to the James Gee's and

Amanda Lenhart's of the academic world who stress the importance of technology to today's learner.

Another part of the study focused on the kinds of learning that appealed and didn't appeal to the 21<sup>st</sup> century learner. Questions eight and nine were designed to measure which types of learning engaged the student population the most. Each semiotic system was represented by two different categories of methods (e.g. the linguistic semiotic system was represented by 'reading' and 'writing') with the exception to the aural semiotic system which was only represented by 'music'. In both questions, the linguistic semiotic system came out as the least popular by a wide margin, suggesting that the print-based text has lost appeal to the 21<sup>st</sup> century learner. The most popular semiotic systems that students expressed wanting to see more of in education were the visual and aural semiotic channels.

Being that the study was centered around a print-based assignment and a multi-modal based assignment, the last question asked students straightforwardly which of the two they would prefer if given a choice. 29 of 37 students (roughly 78%) chose the multi-modal assignment while only 8 of 37 students (roughly 22%) chose the print-based assignment. This clearly indicated that the multi-modal based assignment appealed more to the student population than the print-based assignment.

### ***Limitations***

One of the limitations to this study may turn out to be the sample size used to obtain data. There were eight students who didn't return their consent forms in time for

the survey, so their data could not be used in the study. Had those eight students been able to participate, the student population size would have been forty-five. My original goal was to have at least fifty students participate, but circumstance and situation only allowed for thirty-seven. Whether that is ultimately too small of a sample size or not remains unknown.

Another aspect to the study that I would have liked to manipulate better was location. It would have been nice to work with multiple teachers at multiple schools to obtain data from a more diverse range of sources. Being able to do so may have added an element of consistency to the more global issue of appeal in print-based and multi-modal based texts at the high school level.

### *Qualitative Study*

To analyze the data, I will examine most of the questions from my teacher questionnaire in the following pages by first restating the question, then documenting selected responses, followed by what the data implies to the larger questions and topics outlined in my thesis thus far. The first question on my teacher questionnaire was:

1. Do you believe print-based texts are losing value in modern day curricula? Why or why not, and how?

#### RESPONSES:

Mr. Kewl: Yes. In my opinion, print-based texts are losing value for a variety of reasons. One such reason has to do with the limited scope of print-based texts as a delivery system. In short, the printed word is only one vehicle through which content is delivered. That sense of singularity carries with it the limitation of one kind of delivery system. And

if you consider multiple learning styles, we know that one size does not fit all. Aside from this, we are in an ever-increasing technological age that models itself on fast retrieval of information, visual appeal, and interconnectedness. Print-based texts are not traditionally a way to retrieve information quickly, nor does it carry with it any visual appeal—aside from the cover,—but you can't judge a book by its cover, right?—and likewise with interconnectivity, reading a print-based text is generally an isolating activity. In an age where cooperation is increasingly demanded from the workforce, it would seem that interconnectivity is the way to go.

Ms. Tumbleweed: I think [print-based texts are] being utilized in different ways. For instance, dictionaries are a thing of the past since you can just go to dictionary.com and look up a word. It's easier and faster for students to look up words that way. At the same time, we still read books/textbooks in class. My school is looking at Kindles and iPod touches to replace books, but that will take years.

Mr. History: I am a Middle School Social Studies teacher. My current classroom texts were printed in the mid 1990's. I use them only for vocabulary and to teach students how to use textbooks. I use them as a tool for teaching pre-reading strategies and research. I am lucky enough to have thirteen computers in my classroom. I try to use the computers as my 'texts.'

Mr. Skinny: I honestly don't feel that print-based texts are losing too much value in modern day curricula. Visual texts and the like are becoming far more prevalent in modern classrooms, but print-based texts are still the backbone of the language arts curriculum, at least at [my school].

Mr. Science: I do believe print-based texts are losing value in modern day curricula due to the fact that more technology is being incorporated into the classrooms as well as online texts. I am not even using traditional books in class and instead using online resources to allow the students to learn how to use different tools to find information.

It is interesting to observe how quickly most of the responses cite technology as a reason for either de-valuing the print-based text, or altering the use / role of print-based texts to the 21<sup>st</sup> century learner. While Mr. Skinny believes that print-based texts are still the 'backbone of the language arts curriculum', he concedes that 'visual texts and the like

are becoming far more prevalent in modern classrooms.’ Mr. Kewl echoes this sentiment when he speaks about the lack of visual appeal in print-based texts. He goes on to say that ‘the printed word is only one vehicle through which content is delivered’, which is problematic in a world where the student is being bombarded with a variety of texts that utilize multiple semiotic domains.

3. In what ways do you think print-based texts still appeal to the 21<sup>st</sup> century learner? In what ways don’t they appeal to the 21<sup>st</sup> century learner? How do you know?

#### RESPONSES:

Mr. Kewl: Print-based texts still appeal to the 21<sup>st</sup>-century learner insofar as they still hold a place in traditional 21<sup>st</sup>-century schooling. Much like older teachers have to adapt to technology, younger learners have to adapt to print-based texts. The skill required is the same: adaptation. Moreover, the 21<sup>st</sup>-century learner, in some ways, is no different from other turn-of-the-century learners. And print-based texts have served as a transition from one age to the next. For example, each English literary age is marked by its genre-of-choice in the delivery of the printed word. The Medieval period preferred lyrical poetry; the Renaissance drew heavily from drama, the Victorians held the novel as king, and as now, the 21<sup>st</sup>-century holds the website as perhaps the preferred forum in which to highlight print-based texts. The constant in all of this is print-based texts. The difference is in its delivery system. As far as ways in which print-based texts do not appeal to the 21<sup>st</sup>-century learner, much of the answer may be gleaned from my response to question one. Otherwise, time is a limited asset these days. With the speed at which information is processed via technology, print-based texts are too time-consuming.

Mr. History: I’m not sure how print based texts appeal to students. For as much as I feel students are bombarded with information on a daily basis, when a student opens a textbook today, I think the first reaction is one of being overwhelmed.

Mr. Skinny: I think the trick with using print-based texts with 21<sup>st</sup> century learners is in convincing them that the texts are worth their time. With students who are so accustomed to the immediacy of technology and various visual and multi-modal texts, it takes effort to convince learners that they will benefit from pouring over the words of masters such as

Hemingway or Shakespeare. So many of my students would rather watch movies or somehow short-circuit the effort it takes to truly comprehend and appreciate the craft of great writers and I think that is one of the greatest obstacles that I face as a language arts teacher of 21<sup>st</sup> century learners.

One of the interesting aspects that I pulled out of these responses was the idea that the 21<sup>st</sup> century learner doesn't seem well-versed in how to interact and decipher meaning from a print-based text. Mr. Kewl talks about teaching the 21<sup>st</sup> century learner how to 'adapt' to a print-based text in order to create meaning. Mr. History feels that students are overwhelmed when they open a textbook due to a lack of knowledge on how to extract meaning. And Mr. Skinny talks about 'tricking' the learner out of their reluctance and into dealing with print-based texts. Thus far, it seems fairly evident that there is very little appeal amongst 21<sup>st</sup> century learners for the print-based text in the eyes of the educator.

5. In what ways do you think multi-modal texts appeal to the 21<sup>st</sup> century learner? In what ways don't they appeal to the 21<sup>st</sup> century learner? How do you know?

#### RESPONSES:

Ms. Tumbleweed: [Multi-modal texts make it] easier for students to work together and show off their work. Students might have to make a presentation and learning how to project those onto a Smartboard and not have it be dull is a skill they'll need to sell themselves or a product. It doesn't appeal to some of my learners who, I hate to say it, most likely will not make it through high school.

Mr. History: Multi Modal texts appeal to today's students because they are fast. They give lots of information quickly. There is a trap though. Unless students learn how to use any text, they will be left trying to use surface level information. I think to an extent, students are lazy. They want the information given to them. They want to type a question and have the computer spit out the answer. Students are frustrated when they figure out that they still need to dig.

Mr. Skinny: In our visual world, multi-modal texts allow students of this visually-based modern age to connect to various aspects or elements of the text. Even a student who is not a great “reader” of print-based texts may be quite adept at “reading” a visual or multi-modal text. And I know that during the research phase of my graduate research project, I uncovered some research that indicated that students can indeed become better readers of print-based texts by developing their skills as readers of other visual or multi-modal texts.

Both Mr. History and Mr. Skinny give responses that speak to a multi-modal text’s ability to convey much more information, in a more engaging fashion, and much quicker than the print-based text. Mr. History also emphasizes the importance of teaching students how to decipher or unpack the meaning within different types of multi-modal texts. The problem here lies in the educator’s ability to understand and convey such an understanding to the students they teach. This reminds me of what Cynthia Selfe wrote in her article, “Multimodal Composition: Resources for Teachers”, ‘that one of the challenges of teaching multimodal composition is the learning curve involved for teachers new to thinking about different modalities (Selfe 4).’ Ms. Tumbleweed indirectly conveys the knowledge of how to use a Smartboard to present multi-modal projects. The assumption here is that she will teach her students the necessary skills to build their own multi-modal projects and use a Smartboard. But what about the teacher who has been teaching for a long time and already has a set curriculum that they don’t want to deviate from? Or the teacher who doesn’t even know what a Smartboard is, let alone use it? As evidenced by Mr. History and Mr. Skinny’s comments, I think it is useful to acknowledge that multi-modal texts do have more appeal in 21<sup>st</sup> century times than print-based texts, but that learning with multi-modal texts and how to utilize them is not an endeavor that is placed on the student alone.

The topic of the teacher as learner in the 21<sup>st</sup> century classroom is touched upon in greater detail with the responses to the next question.

6. In what ways do multi-modal texts appeal to secondary teachers in public education? What challenges do multi-modal texts present for secondary teachers in public education?

#### RESPONSES:

Mr. Kewl: Multi-modal texts appeal to secondary teachers in public education by making the curriculum relevant to the students. It is clear that 21<sup>st</sup>-century learners have adapted to technology; whereas, teachers of my age have had to adapt to technology. In short, kids today are born into a world of multi-modal texts. Because of this, teachers who use multi-modal texts provide their students with a platform from which to learn that is more closely related to what they are already comfortable with. The challenges for secondary teachers are finding new and innovative ways to adapt their curriculum to the ever-changing demands of technology. Indeed, not all curriculums are best presented through a variety of modes. So the teacher will have to revise and edit what he or she deems appropriate for the multi-modal delivery system. Likewise, he or she may have to learn such systems before implementing any of them in the class. The appeal of Blackboard and its corresponding professional development class offerings attest to as much.

Ms. Tumbleweed: It gives teachers multiple ways to reach all types of learners: visual, audio, and kinesthetic and it keeps your lesson from getting dull as well. Teachers are always struggling to reach all learners, well this is how, by using technology such as the Smartboard.

Mr. History: I love using multi modal methods. I like the graphics. I am of the MTV generation. But, much like the students, teachers need to learn how to use multi modal texts/methods. I think teachers get frustrated because they are afraid to try new things themselves.

Mr. Skinny: Multi-modal texts are appealing to educators in that they appeal to our students—students are far less intimidated by a two-hour film than a 300-page novel. Having said that, the challenge of teaching multi-modal texts is that many teachers do not feel comfortable or that they have the experience required to teach them. I think there is a real risk involved with teaching multi-modal texts because there is a very real possibility

that students may at times intuitively understand the texts better than even the teacher and for some (perhaps many) teachers, this is a scary possibility.

Again, we see the concern amongst educators regarding a gap in individualized knowledge of *modern* multi-modal texts and the methods employed to convey such multi-modal texts. I have italicized *modern* in the previous sentence because that seems to be an important distinction to make considering how often the teacher panel refers to and cites technology and an understanding of how to apply 21<sup>st</sup> century skills to classroom instruction.

One of the most telling lines from the previous responses comes from Mr. Kewl. He says: ‘In short, kids today are born into a world of multi-modal texts.’ This is an important aspect of society that all educators need to acknowledge, and upon doing so, it is an important aspect of society that needs to be included in daily lessons plans given a goal of truly effective education.

8. Multi-modal texts are often times associated with technology as they depend on a variety of methods (often times new) to implement effectively. What do you think the role of the print-based text in the classroom is as the world becomes more dependent on technology?

#### RESPONSES:

Mr. Kewl: One role includes simply allowing for another means through which content is delivered, as well as received. That will appeal to certain students; albeit, they might find themselves in the minority. Otherwise, print-based texts—the act of reading and writing in and of itself—still continues to exercise analytical and critical thinking skills, which are very transferrable. We may have to broaden our view of what reading and writing is. For example, visual literacy is every bit as valid as a reading skill as print-based literacy. On the other hand, I think that print-based texts will offer a relief to some students from the pervasiveness of technology. There is a privacy that is being lost to technology. Via print-based texts, students are offered the opportunity for personal reflection without

public scrutiny. I think it's a valuable resource through which one can come to learn of him or herself.

Ms. Tumbleweed: I think print based [texts are] a good resource for students to have especially when technology fails. We were without computers and internet for over 6 weeks this year and being a first year teacher I had a ton of resources to fall back on when I didn't have my technology. (I even had to make a print based gradebook...) It's always good to have plan B and that's how I view my print based texts and my chalkboards.

Mr. History: My Christmas wish list...No printed text books. Every student is issued a laptop. The walls of the classroom are lined with primary source materials. Works of fiction, autobiographies, works of art, propaganda posters, a computer designated to download music and videos...as a primary source. But...no printed text books.

While Ms. Tumbleweed primarily sees the role of the print-based text as a back-up for when technology fails, and Mr. History comically expresses his hope that the print-based text would become a permanent absence in the future classroom, Mr. Kewl goes counter to such perspectives and speaks to the value of the print-based text, even in light of technology and a culture where the learner (as suggested by Mr. Kewl in a previous response) is born and raised in environments saturated with multi-modal texts. His perspective is that 'we may need to broaden our view of what reading and writing is.' As Maureen Walsh wrote in her article, "Worlds have collided and modes have merged: classroom evidence of changed literacy practices", 'multimodal literacy is the way literacy can be defined within the *convergence and interdependence* between modes of reading, writing, talking, listening, and viewing while using both print-based and digital texts (Walsh 104).' The '*convergence*' and '*interdependence*' that Maureen Walsh writes

about seems to be what Mr. Kewl is referencing to in his testimony to the role of print-based texts in a continually multi-modal world.

9. Does technology provide you with a platform for incorporating multi-modal texts more efficiently in your curriculum? If so, how? (An example would be: trying to scaffold an idea / topic of study by using a projector to show the class a video from Youtube)

#### RESPONSES:

Ms. Tumbleweed: It makes it SO much easier. I can't express how easy my technology makes my teaching. We'll do something on the Smartboard then the students will do it on their computers. They get to see videos from Youtube. One time I was teaching theme and the students were not getting it, so I showed them a video from the Beatles then asked them what the theme was and they got it. Once they realized what the Beatles were trying to say, they could read a text and understand what the author was trying to say.

Mr. History: Just one of the many instances where I had students use technology was when I had them research five signers of the Declaration of Independence on Wikipedia. They checked the credibility/background information of the article writers. They gathered more information from a .gov website. They then created a 'skit' to describe the figures involvement in the signing of the Declaration. They filmed the skits. They created/edited/trimmed the film into a 1 minute podcast that effectively summarized the process of writing and signing the Declaration of Independence.

I've included these responses from question number nine to provide some real-world examples of how educators have been able to effectively implement technology while also creating a '*convergence*' or '*interdependence*' between print-based texts, multi-modal texts, and technology. By showing students a Beatles video, Ms.

Tumbleweed was able to help students scaffold how to discover theme when *reading*. For Mr. History, he was still able to stimulate the linguistic semiotic system by having his

students reference electronic texts such as Wikipedia and .gov websites. All of his student's efforts culminated in a multi-modal skit and subsequent short film creation.

10. With the creation of things such as Kindles and ebooks, do you think print-based texts will ever be completely eliminated from public education? Why or why not?  
 - what about in the larger context of society? Why or why not?

#### RESPONSES:

Ms. Tumbleweed: I think it'll be a slow moving process. We are going one to one computers next year but still using print based text. In the long run I can see Kindles, iPods, and ebooks taking over in classrooms. They are cheaper to purchase and even known classics can be downloaded for free onto the iPod touch using applications. My school is looking into it because in the long run, Kindles pay for themselves and you get more books for your buck. This will be a slow transition because people don't like to give up what they know which is printed text. It's like any new technology, people are reluctant to change; it reminds me of CD players and such, we went from tape players to portable CD players to the iPod. There are still people who use CD players and I think the same will be for print based texts. So someday yes, any time in the near future, no.

Mr. Science: I do think print texts are heading out the door due to all the new technology and the affordability of the same information. When the price of these ebooks become cheaper than the regular texts it will force the print texts to become cheaper or stop producing those prints.

Mr. Skinny: I really don't know. I think if a shift does occur, it will take place more quickly in mainstream society than in modern educational settings primarily because of budget issues. In my brief experience in education, I have already surmised that educational funding will prevent rapid shifts in the technology available to educate students.

Each teacher provides an important point in their response to this question. Ms. Tumbleweed compares the print-based text to the CD player when faced with methodological or technological change, saying 'there are still people who use CD

players and I think the same will be for print based texts.’ While simply stated, the problematic implications are complex and detrimental to the learning of modern students. Again, we arrive back at the suggestion that in the face of change, many teachers will remain stagnant and continue to rely on traditional methodology and assessment.

Mr. Science speaks to the economic aspect of the print-based text’s survival. In a world where the dollar dictates, he feels that it is only a matter of time before the print-based text is eliminated for financial reasons.

Mr. Skinny acknowledges the idea that education is much further behind mainstream society in terms of technology, and perhaps, in terms of what appeals to the 21<sup>st</sup> century learner. Referring back to Maureen Walsh’s article, she writes that ‘educational policy and national testing requirements are still principally focused on the reading and writing of print-based texts (Walsh 101).’ In a day-and-age where the multi-modal text dominates, it seems that Walsh would agree with Mr. Skinny that education appears to be behind the times.

11. Do you think a social divide (similar to the divide between the rich and the poor) between the technologically-savvy and the technologically-impaired is being created (or is already in place), and to what extent?

#### RESPONSES:

Mr. Kewl: Yes. But the premise of both divides is still based on money. Technology is not cheap. And as long as technology is primarily viewed by society as a money-making machine, it will neglect the underrepresented in society. Being technologically-savvy or not is a condition of education. And if there is a hope to bridge the divide between the haves and the have-nots, then such education should be provided to all via a public education system, which I see fundamentally as a public good. In my experience, economically disadvantaged students are not afforded the same access to technology as

their economically advantaged peers are. A computer in the home goes a long way in accounting for a positive learning environment than simply having an accessible computer with restrictions that might include limited time, being in the public, or being miles from home, etc.

Mr. History: Sure, a social divide has been created between tech savvy and tech challenged people. But, computers are not going away. So...

Mr. Skinny: Perhaps. Yeah, I would wager that there certainly is a divide and furthermore that is widening, but I would also probably have to admit that many of us in this country who feel technologically-impaired or technologically-illiterate are closer to the technologically-savvy than we would initially realize.

In the eyes of the surveyed teachers, a gap similar to the rich and poor (and perhaps more correlated to the rich and poor than some would like to recognize) is forming (or has already formed) between the technologically-savvy and the technologically-impaired. These type of responses prompt the last question on my survey:

12. Does it become our job as educators to implement technology into the curriculum and classroom based on a possible social divide?

#### RESPONSES:

Mr. Kewl: Yes.

Ms. Tumbleweed: It is our job to implement technology and teach kids how to responsibly use it. A lot of my kids come from super poor backgrounds and they don't have a computer at home so they are divided from their peers, but we're all learning and they like to use it.

Mr. History: It does become the job of educators to implement technology into curriculum to help bridge any gap that may be created. And, it doesn't bother me. I am a Social Studies teacher, which means that I am a glorified reading, math, science teacher that merely uses those other contents in a social context. This is no different than with technology. The proper way to teach a kid to use MicroSoft Excel is to have them create

tables with figures relating to the economic boom and bust of the 1920's and 30's, and then to have them create graphs and charts using the proper Excel tools. We no longer have "Tech" teachers in our schools because our district believes in this approach. I love it...

Mr. Science: Yeah if we don't teach them how to use the technology then who will?

Mr. Skinny: As language arts educators, I think we are charged with educating our students to the best of our abilities in their endeavors to become better readers, writers, listeners, and speakers. Thus, we should employ whatever skills and resources we have at our disposal toward that end.

One of the key lines from all of the teacher panel's responses to this question comes at the end of what Mr. Skinny had said. 'We should employ whatever skills and resources *we have at our disposal* toward that end.' Unfortunately, because many schools (and districts) lack the funding or motive of progressive thought, their environments and subsequent content remains rooted in outdated 20<sup>th</sup> century ideals. It is clear from my teacher questionnaire that the educators interviewed recognize the need to adapt and modify content to keep pace with a rapidly changing world, but to a certain degree, it also sounds like their hands are tied (so-to-speak) by a lack of financial stimulus in their school or district and / or the archaic perspective (from a more global standpoint) that what is happening in schools today is still applicable to the world outside of school.

### ***Discussion***

Overall, the data from the teacher questionnaire portion of the study nets some pretty consistent results. There seems to be a general acknowledgement that the print-based text is indeed losing appeal to the 21<sup>st</sup> century learner primarily because

it is not as applicable in a world where the learner grows up with an abundance of multi-modal texts. The issue of applicability seems to be paramount when discussing the advantages that multi-modal texts allow that print-based texts do not. Because modern students are so familiarized with multi-modal texts, there seems to be a common thread of thought amongst the surveyed teacher panel that their students are overwhelmed by print-based texts, or simply lack the skills and / or desire to extract meaning from print-based texts.

With regard to technology, there also seemed to be universal interest among the teachers who participated in this study to incorporate more technology into the classroom and their individual daily content. To a certain degree (as illustrated by Ms. Tumbleweed and Mr. History's examples provided in response to question number nine), it appears that teachers are already finding creative ways to bring technology to their classrooms in an attempt to make their content relatable to their students. One of the chief concerns expressed through this study, however, was the lack of economic means (at a district or national level) to bring updated and relevant technology to the classroom. The teachers in this study also expressed concern that many of their peers and colleagues remained reluctant to learn how to use and incorporate technology into their classrooms, and in some instances (as Mr. Skinny pointed out), some teachers may fear the possibility that their students know more than they do in terms of technology and technology use. These concerns aside, it still appears that the teacher panel involved in this study acknowledged the importance, relevance, and usefulness of technology in the modern classroom both in terms of applicable content access and to the future success of their students.

### *Limitations*

The most obvious limitation to this study is the fact that all of the teachers who participated were fairly young and new to the teaching profession. The most experienced of the group was Mr. Kewl who has been teaching for seven years and is forty-two years young. Aside from his opinions and thoughts, the rest of the teacher panel was fairly new to the profession (three of the other four participating teachers being in their first year of teaching). Originally, an older teacher (with 30+ years of teaching to his credit) had agreed to partake in answering my teacher questionnaire, but due to circumstance, was unable to get his responses back to me before I had to write my Methodology section. It would have been nice to get feedback from a demographic of educators who had been teaching long before the 21<sup>st</sup> century learner even existed.

## CONCLUSION

*Not long after, the ship harbored against the coastline and dug itself deep in the wet sand along the water's edge. The savages shouted in a timid, yet oddly brave manner. "Oh master, this sounds dreadful." Cad cried. I jumped down from the navigation wheel and briefly entered the captain's quarters, grabbing handfuls of gold coins and returning to the ship's rail to shower them over the tribesmen who waited.*

*"Hello down there." I greeted them. They were puzzled at first, but after realizing the riches I gave to them freely, one of the tribesmen jumped in the air with a smile and a friendly shout.*

*"Boon boon, navi eu tactan bei Nannanon!" another tribesmen shouted to his peers. "Bei Nannanon!" he repeated.*

*Some of the remaining tribesmen scattered to their colony with excitement. I returned to the captain's quarters and grabbed more coins, showering them down as I returned to the rail. "You're a fool." Phoon scowled. "This is a waste of your time."*

*"Nani cahn bot wali." One of tribesmen beckoned me down. Others rushed back from their dwellings with food and drink – one carried a cloak as a gift. I used one of the many severed ropes lying on the deck to descend my way down. The tribesmen bowed low and praised me as I touched the ground. The men carrying the food, water, and cloak stepped forward and offered them to me in a humble manner. I accepted the cloak and admired its craftsmanship. It was black on one side and blood red on the other. It was made of a finely worked skin of some sort. I placed it around my shoulders and gestured that I didn't care for any food. "No thank you." I told them.*

*"Bei Nannanon eu jilt tabba bot wanna." The tribesman who most looked like a leader pointed to their small assortment of homes. I understood what he was trying to say without understanding his words. It was relieving in comparison to the foreign writings on the subway train before the city of books in Helios. We walked to the village, an older man appearing from the depths of a tent – he looked me over with a careful eye.*

*"Kane botta don refulo alla chanchin." The wrinkled man said with his aged voice.*

*"I'm sorry." I explained using as many hand gestures as possible. "I can't understand what you're saying."*

*"Ah." The old man nodded. "Forgive broken tongue. It take effort to learn wild speech. Come." He turned and I followed him into his home.*

In the *Introduction* to my thesis, I quoted David Armstrong in his article, "The Gestural Theory of Language Origins", as suggesting that 'visible gesture was the earliest manifestation of the human capacity for language and speech evolved subsequently from an original visible and gestural communication system (Armstrong 290).' Seeing as the

thesis began with an excerpt from my novel, *World Train*, it only seemed fitting that I ended it with one as well. The excerpt provides a situation in which language has failed and the human communication system is reduced to a series of gestures, and actions (presumably) based off of voice inflection. There are no print texts involved as the narrator and the tribesmen attempt to learn from one another. In her article, “Multimodal Composition: Resources for Teachers”, Cynthia Selfe writes that:

‘organizations, institutions, and individual[s] acknowledge the realities of changing communication practices in which people are increasingly exchanging information and using a variety of semiotic resources and systems to make meaning as they compose: not only words, but also still and moving images, sound, and color among other modalities (Selfe 8).’

Of course, the title of the thesis is: *Multi-literacies in the 21<sup>st</sup> Century and the Role of the Print-Based Text in Public Education*. While there may not be any print-based texts involved in our fictional excerpt from *World Train*, the scholars and educators that took part in this study have made it clear that the printed word appears in abundance, and is heavily relied upon in today’s public education setting. Cynthia Selfe’s quote is meant to highlight the apparent need in the modern classroom for recognition of various multi-modal texts and methods of communication for learning.

At the heart of this study, there were four research questions. Let me now evaluate what we’ve discovered in relation to each one:

1. From the perspectives of five secondary English public education teachers and thirty-seven secondary-level students in a classroom study, do multi-modal texts and technology have a greater appeal than print-based texts to the 21<sup>st</sup> century student?

FINDINGS: Before conducting the classroom study and giving teachers a questionnaire, previous scholars had documented their claims and thoughts that multi-modal texts did appeal to the 21<sup>st</sup> century learner more than the print-based text due to the fast-paced, visually driven nature of modern society. Both the classroom study and the teacher questionnaire that I conducted confirmed such claims and provided evidence that the 21<sup>st</sup> century learner desires more technology in the classroom and finds greater appeal in multi-modal texts than print-based texts.

In their study titled “Writing Technology and Teens”, Amanda Lenhart and her research staff observe that ‘a key theme in what teens said motivated them [to work with texts in the classroom] was “relevance”. Teens said, in varying ways, that they wanted to be doing things that mattered socially, in their own lives, and elsewhere (Lenhart, Arafeh, Smith, & Macgill 54).’ This seemed evident in the feedback that I got from both aspects of the study that I conducted. Students displayed an eagerness to work with technology because of its relevance to their own lives, and teachers found ways to integrate technology with their curricular and daily objectives within the classroom.

With regard to the overall appeal of print-based and multi-modal based texts in the public education classroom, scholar Sara Kajder writes that:

‘there’s no denying it. We’re past the point where we can keep doing old things with old tools, or old things with new tools. No matter how savvy [students] might be or not be, they are all looking to [teachers] to push them, to stretch their thinking, and to teach them to use the tools of the truly literate in a rapidly changing world (Kajder 229).’

Because of such desire and appeal on the part of the 21<sup>st</sup> century learner, teachers need to find ways to change with the world around them. Teachers need to find ways to incorporate more multi-modal texts in the classroom.

2. From the same perspectives, what expanding and decreasing roles do print-based texts and multi-modal based texts have in the secondary-level public education classroom? What implications and tangible ramifications do these findings suggest for the 21<sup>st</sup> century learner and the world in which they live?

**FINDINGS:** It was pretty clear from the teacher questionnaire in my study that educators felt a need for the role of the print-based text to decrease in today's classroom. Not only was there an inadequacy in applicability regarding print-based texts, but there was a deficiency in the 21<sup>st</sup> century learner's ability to understand and deconstruct a print-based text. While this may actually suggest that the 21<sup>st</sup> century learner needs more education with print-based texts, one must remember that our current curricular models are built on the foundation of print-based texts. Regarding the role of multi-modal texts in the secondary public education classroom, the teachers who participated in the study expressed the need for an expanding role as the 21<sup>st</sup> century learner seemed to engage and perform better when confronted with them.

In relation to the second part of the research question, it is important to acknowledge the connection between the multi-modal text and technology in the modern world. For the purposes of this study, every teacher that provided feedback expressed the possibility of a growing gap between the technologically-savvy and the technologically-

impoverished. In his book, *Good Video Games + Good Learning*, James Gee

acknowledges that:

‘for years now we have attempted to speak to the literacy gap in our schools – the fact that poorer children learn to read less quickly and less well than do better off children. But modern technologies are opening up possibilities for new gaps on top of this old one, gaps in knowledge and in access to tech-savvy skills and identities (Gee 172).’

Furthermore, Gee states that:

‘evidence is already building that this new gap is, indeed being created. This evidence is beginning to show that just giving young people access to technologies is not enough. They need – just as they do for books – adult mentoring and rich learning systems built around the technologies, otherwise the full potential of these technologies is not realized for these children. At the same time, a crucial question arises: Can we speak to the new gap (the tech-savvy gap) in such a way that we also address the old gap, the gap in regard to traditional print-based literacy (Gee 138)?’

The answer to Gee’s question is related to the line where he says: ‘They (the students) need adult mentoring and *rich learning systems built around the technologies*’. The concern here then becomes a matter of defining what *rich learning systems* are, and if the information documented and researched in this study is of any relevance, it suggests that *rich learning systems* to the 21<sup>st</sup> century learner are rooted within multi-modal texts and multi-modal methodology.

3. From the same perspectives, and with the idea of semiotic systems used as a foundation for measurement, what additional benefits (if any) do multi-modal texts offer that print-based texts do not?

FINDINGS: In the classroom study of my research, students were asked to complete a print-based assignment and a multi-modal based assignment. While the print-based assignment only allowed opportunities for the linguistic semiotic system to be stimulated, the multi-modal assignment allowed opportunities for all of the semiotic systems (linguistic, visual, audio, gestural, and spatial) to be activated. The results were clear and the students overwhelmingly preferred the multi-modal assignment even though its scope of required work and effort was greater than the print-based assignment. This demonstrated the 21<sup>st</sup> century learner's desire to have multiple semiotic systems stimulated, as well as the multi-modal text's ability to stimulate various semiotic channels. In their book, *Teaching the New Writing: Technology, Change, and Assessment in the 21<sup>st</sup> Century Classroom*, Anne Herrington, Kevin Hodgson, and Charles Moran write that:

‘it is no longer possible to think about literacy in isolation from a vast array of social, technological, and economic factors. These factors include: the broad move from the now centuries-long dominance of writing to the new dominance of the image and, on the other hand, the move from the dominance of the medium of the book to the dominance of the medium of the screen. In this screen-based and visual present we need to think of student writers not as producers of print text, but as designers and composers [of many texts] who are able to use all available resources to make the meanings they need to make (Herrington, Hodgson, & Moran 4).’

In other words, it is no longer possible to think about the educational landscape solely in terms of the print-based text. Multi-modal texts operate on a variety of semiotic domains, and provide the modern student with more diverse expectations and development of skills that are applicable to the outside world than the print-based text ever did.

4. From the same perspectives, what kind of effect does technology have on the implementation of multi-modal texts in the secondary public education classroom (beneficial or not)?

FINDINGS: In her article, “Opening New Media to Writing: Openings and Justifications”, Anne Wysocki confesses that she ‘cannot deny that it is easier now with computers than it was with printing presses to compose, produce, and distribute texts using combinations of the alphabet, photographs, video, sound, color, and animations (Wysocki 19).’ The sentiment that technology allowed for easier (and more engaging) implementation of multi-modal texts was echoed by the teacher panel within the qualitative study portion of the thesis.

Although both researchers are adamantly for the inclusion of more multi-modal texts (and even via technology) in the classroom, scholars Michele Anstey and Geoff Bull highlight some potential barriers of technology implementation in their textbook, *Teaching and Learning Multiliteracies: Changing Times, Changing Literacies*. They write that ‘students must master not only the technology but also the associated literacy practices required by the inclusion of still and moving images, sound effects, and music (Anstey & Bull 12).’ Furthermore, they suggest that ‘the literate person must be able to combine and recombine existing and new literacy knowledge, skills, and purposes for new purposes and new contexts using new technologies (Anstey & Bull 1).’ The learning curve involved for both educators and students in relation to technology and technology

implementation does seem to have an effect on how well multi-modal texts are utilized and interacted with in the classroom.

So all-in-all, this study seems to establish the idea that today's schools are still firmly rooted in methodology related to the print-based text, yet it also documents and gathers research detailing the advantages and appeal of multi-modal based texts to the 21<sup>st</sup> century learner. In this conflict of pedagogical thought, it seems that many teachers want to advance their old classroom curricula to include more multi-modal texts and technology, but lack the means (or budget) to do so effectively. It is also suggested that students enrolled in schools and school districts that make overt efforts to be a part of the 21<sup>st</sup> century are empowered over their peers who remain deficient in applicable skill and knowledge while enrolled in archaic and outdated educational programs.

One thing to keep in mind, however, is the importance of not completely eliminating the print-based text from the modern classroom. Educators should instead strive for a balance between print-based texts and multi-modal-based texts. To this extent, Maureen Walsh provides some useful ideas and recommendations in her article, "Worlds have collided and modes have merged: classroom evidence of changed literacy practices". She suggests that 'traditional aspects of literacy [need to be] *combined with other modalities and semiotic systems*. [This] process involve[s] a *convergence, an interconnection, and an interdependence* between the modalities of written text, image, and sound (Walsh 103).' Furthermore, she suggests that 'teachers should construct learning experiences with multiple layers of learning ensembles, combining concrete

experiences and print-based texts with [multi-modal texts] (Walsh 107).’ Idealistically, the modern classroom should display a balance between the print-based text and the multi-modal based text, instead of the current model which seems to be built on an outdated foundation of print-based materials and methodology. In an ideal classroom, technology and the opportunity to engage, interact, and compose with technology also plays a role. As the modern world outside of the classroom continues to shift in terms of textual representation and variety of presentation, the 21<sup>st</sup> century learner’s expectations regarding their in-school experiences seem to have been modified as well, reflecting the technologically advanced and multi-modal-rich environments and conditions that they were raised in. Education itself still seems to be behind (for the most part) the modern curve and expectations of 21<sup>st</sup> century ideals, thus creating lackluster lessons and curricula in which students struggle to understand, engage with, and apply to their lives outside of school. There seems to be a need for more gesturing tribesmen, more technologically-integrated opportunities, and more multi-modal based texts in general.

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**APPENDIX A**

1. On a scale of 1 to 5, please indicate how much you enjoyed the reflective essay portion of the unit (circle one):

1	2	3	4	5
<b>Hated it</b>		<b>It was alright</b>		<b>Loved it</b>

2. What did you *dislike* most about the reflective essay portion of the unit (place an 'X' next to ALL that apply; if none apply, then leave blank):

It was boring  
 The subject matter wasn't appealing  
 I felt a constraint on my creativity  
 I didn't feel that it fully measured my knowledge of the subject  
 I felt it was too much work  
 I don't like writing  
 Other; use the following space to explain:

3. What did you *like* most about the reflective essay portion of the unit (place an 'X' next to ALL that apply; if none apply, then leave blank):

It was thought-provoking  
 The subject matter was relevant and appealing  
 The assignment allowed me to be creative  
 It allowed me to convey my knowledge of the subject clearly  
 The assignment was fun and easy to put together  
 Other; use the following space to explain:

4. On a scale of 1 to 5, please indicate how much you enjoyed the Powerpoint portion of the unit (circle one):

1	2	3	4	5
<b>Hated it</b>		<b>It was alright</b>		<b>Loved it</b>

5. What did you *dislike* the most about the Powerpoint portion of the unit (place an 'X' next to ALL that apply; if none apply, then leave blank):

It was boring  
 The subject matter wasn't appealing  
 I felt a constraint on my creativity

- I didn't feel that it fully measured my knowledge of the subject
- I felt it was too much work
- I was unfamiliar with the technology used
- Other; use the following space to explain:

6. What did you *like* the most about the Powerpoint portion of the unit (place an 'X' next to ALL that apply; if none apply, then leave blank):

- It was thought-provoking
- The subject matter was relevant and appealing
- The assignment allowed me to be creative
- It allowed me to convey my knowledge of the subject clearly
- The assignment was fun and easy to put together
- Working with technology was good for a change
- Other; use the following space to explain:

7. On a scale of 1 to 5, please indicate what you think of incorporating technology (*e.g. Youtube, filmmaking, ipods, etc.*) in the classroom (circle one):

1	2	3	4	5
<b>Less of it</b>		<b>Eh, whatever</b>		<b>More of it!</b>

8. Which of the following aspects appeals most to you when learning in school (place an 'X' next to ALL that apply):

- reading (*e.g. Books*)
- writing (*e.g. Essays, journal entries*)
- moving images (*e.g. Films*)
- still images (*e.g. Pictures, graphics*)
- music (*e.g. Songs, sound effects*)
- expression (*e.g. Acting, conversation*)
- gestures (*e.g. Body language, facial expression*)
- directions (*e.g. Rubrics, guidelines*)
- layout (*e.g. Organization of objects*)

Please use the following space to explain why some of these aspects appeal to you in your learning:

9. Which of the following aspects appeals least to you when learning in school (place an 'X' next to ALL that apply):

- reading (*e.g. Books*)
- writing (*e.g. Essays, journal entries*)

- \_\_\_ moving images (*e.g. Films*)
- \_\_\_ still images (*e.g. Pictures, graphics*)
- \_\_\_ music (*e.g. Songs, sound effects*)
- \_\_\_ expression (*e.g. Acting, conversation*)
- \_\_\_ gestures (*e.g. Body language, facial expression*)
- \_\_\_ directions (*e.g. Rubrics, guidelines*)
- \_\_\_ layout (*e.g. Organization of objects*)

Please use the following space to explain why some of these aspects don't appeal to you in your learning:

10. If you had to pick, which of the following would you rather put together as the final assignment to a unit (circle one):

**Powerpoint presentation**

**Reflective Essay**

## **APPENDIX B**

1. Do you believe print-based texts are losing value in modern day curricula? Why or why not, and how?
2. What does the term '21<sup>st</sup> century learner' mean to you?
3. In what ways do you think print-based texts still appeal to the 21<sup>st</sup> century learner? In what ways don't they appeal to the 21<sup>st</sup> century learner? How do you know?
4. Could you briefly describe what your idea of a multi-modal text is? (For the purposes of this study, I'm primarily looking at a multi-modal text as a teaching tool that goes beyond the linguistic functions of learning)
5. In what ways do you think multi-modal texts appeal to the 21<sup>st</sup> century learner? In what ways don't they appeal to the 21<sup>st</sup> century learner? How do you know?
6. In what ways do multi-modal texts appeal to secondary teachers in public education? What challenges do multi-modal texts present for secondary teachers in public education?
7. What advantages do multi-modal texts allow you as an educator in the classroom that print-based texts don't?
8. Multi-modal texts are often times associated with technology as they depend on a variety of methods (often times new) to implement effectively. What do you think the role of the print-based text in the classroom is as the world becomes more dependent on technology?
9. Does technology provide you with a platform for incorporating multi-modal texts more efficiently in your curriculum? If so, how? (An example would be: trying to scaffold an idea / topic of study by using a projector to show the class a video from Youtube)
10. With the creation of things such as Kindles and ebooks, do you think print-based texts will ever be completely eliminated from public education? Why or why not?  
- what about in the larger context of society? Why or why not?
11. Do you think a social divide (similar to the divide between the rich and the poor) between the technologically-savvy and the technologically-impaired is being created (or is already in place), and to what extent?

12. Does it become our job as educators to implement technology into the curriculum and classroom based on a possible social divide?