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Facilitating Media Literacy Through CNN.com Comments: The Construction of Knowledge via Non-Academic Computer-Mediated Discussion

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FACILITATING MEDIA LITERACY THROUGH CNN.COM COMMENTS:
THE CONSTRUCTION OF KNOWLEDGE VIA
NON-ACADEMIC COMPUTER-MEDIATED DISCUSSION

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Philosophy

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August 2014

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The purpose of this study was to explore the relationship between a publicly accessible forum intended for commenting on political news stories and the presence of skills indicating media literacy. The data to be examined came from comment threads on CNN.com articles directly related to politics. A randomly constructed seven-day week was formed from seven actual weeks of comment posts pulled from the website. Through a content analysis approach, each comment was coded as having material either related or not related to the core topics of the article to which it was posted. If a comment was deemed task-related, it received additional coding under at least one of seven media literacy skills.

The results of the study addressed eight research questions posed. Task-related and media literacy skills were distributed uniformly by day of the week; however, stories that featured popular and controversial topics contained greater quantities of media literacy skills. Stories that were less popular received greater proportions of skills. The majority of all comments and media literate comments occurred within the first twenty-four hours following the initial posting of the article. A greater number of comments correlated strongly with the presence of media literacy although the frequency of an individual's comment posting weakly correlated with the display of media literacy. Comments receiving direct replies are 1.05 times more likely to be media literate than

those that do not, but only a very weak association exists between the two factors.

Consistency of contributions throughout the length of a story indicates that more media literacy occurs in tandem with more overall comments, but the ratios of media literacy indicate that shorter conversations have more media literacy present.

Overall, a connection between media literacy in CNN.com article comment threads is weak. The exploratory questions, however, offer insight into specific situations in which the medium could be used to advance media literacy in teaching. Performing additional research on articles that have low numbers of overall comments has the potential to reveal a place in which newsworthy stories could provide a means to advance higher-level thinking in a public realm.

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Here’s to a new chapter!

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CHAPTER ONE

THE PROBLEM

Introduction

This study aims to investigate the connection between media literacy and public contribution to popular news comment threads. The goals of this research will be met through analyzing the content of comment contributions through the framework of media literacy theory with an eye towards discovering whether the act of participation has an impact on meeting literacy skill outcomes.

In the past decade consumption of news from online sources has grown steadily; whereas, television, radio, and newspapers have witnessed slowly decreasing numbers of consumers over the same period (Sasseen, Olmstead, & Mitchell, 2013). The ability for Internet content providers to offer outlets through which visitors can interact socially plays a role in an article being read, shared, and receiving comments (Mitchell, 2010). Furthermore, interaction with the news not only increases the opportunity for a reader to disseminate truthful news, but also it increases the risk for spreading falsehoods or falling prey to manipulative messages (W. J. Potter, 2013b). In this regard, media literacy exists to engage students of all ages in improving the quality of both media consumption and production.

Media literacy scholar Renee Hobbs frames the importance of the field in a context of a boundless educational framework: “Digital and media literacy education is a community education movement because educators across a wide spectrum of fields now recognize the disconnect between the traditional modes of teaching and the world in which we now live” (2011a, p. 602). Mihailidis (2012) further notes that the simplicity

of collaboration through electronic means has not only increased participation but also has necessitated a new application of media literacy to increase the likelihood that participants exercise critical thinking in both consumption and contribution, particularly in the area of producing and understanding news media.

Statement of the Problem

The rapid increase in use of online discursive tools such as Facebook, Twitter, blogging, and other comment systems has offered new outlets for media consumers to also become media creators and, consequently, to contribute to social discourse (Gillen & Merchant, 2012; Hobbs, 2011a). The ubiquity of online social networks and their use for personal, commercial, informational, and academic purposes (van Dijck, 2011) warrants a study investigating how Potter's (2004) cognitive theory of media literacy applies to the environment and how, in turn, media literacy education can develop from its use. Producing media literate students relies upon the understanding that knowledge stems from various sources and disciplines; thus, a social network in which anyone can contribute openly serves as a building ground for developing creators and consumers who have strong comprehension and critical abilities (Hobbs, 2011b). When the overall purpose of a system is to transport news, which is understood to be factual, the importance of the ability to engage analytically takes even higher precedence.

Need for the Study

To build upon understanding media literacy in a non-academic context, this study aims to discover the efficacy of existing external outlets as teaching tools rather than creating new means. Exposure to the abundance of information available through the media necessitates not only personal development of coping strategies but also effective

meaning construction from the messages consumed for each individual (W. J. Potter, 2004). Media literacy theory addresses this issue, and over one hundred studies have been conducted investigating both the effects of media literacy and attempts to gain in-depth understanding of student outcomes (S.-H. Jeong, Cho, & Hwang, 2012). To date, most research has focused on the teaching of media literacy through reductionist means of discovering flaws in existing media teaching methods and providing the basis for forming new ones (Hobbs, 2011a). Hobbs (2011a, p. 425) further notes that representative research techniques such as semiotics, cultural studies, journalism, and narrative offer means for discovering new threads for media literacy education.

Only two studies currently exist that directly relate media literacy to online discussion systems other than Facebook, Twitter, and blogging in which the original content is controlled by a central traditional media source rather than being generated in part by users (see Donnelly, 2008; Greer, 2008). Donnelly (2008) examines an entire website for elements that contribute to media literacy education whereas Greer (2008) specifically explores fantasy elements present in a discussion of a news anchor's death.

Research into knowledge construction through computer-mediated communication has focused heavily within academic forums and learning management systems (see A. Jeong, 2005; Kim & Bateman, 2010; Murphy, 2004; Schellens & Valcke, 2005, 2006). As media literacy focuses on both academic and non-academic forms of media consumption, a study on knowledge construction that recognizes the influence of discourse external to academia becomes necessary.

Comment fields have been examined in a scholarly context only within the last five years. Research has examined style (H. Chen & Moeller, 2011), decision analysis

(Henrich & Holmes, 2013), discourse (Diakopoulos & Naaman, 2011; Graham, 2013; Loke, 2012; Trice, 2011), bias (Lee, 2012), and the effects on journalism (Manosevitch & Walker, 2009; Santana, 2011; Weber, 2013). To date, no study found has investigated comment fields in connection with media literacy.

Purpose of the Study

The purpose of this study is to examine the connection between comments made on CNN.com political articles and media literacy reflected in skills established by Potter (2004) in his cognitive theoretical definition of media literacy. The study will focus on how information is relayed in the context of a discursive online social network and specifically how users actively participating in ongoing conversations demonstrate the seven core skills of media literacy (W. J. Potter, 2004).

Theoretical Framework

The study presented relies on a cognitive theory of media literacy proposed by Potter (2004). The theory presents a number of building blocks that are combined to explain the potential for a person to become media literate. Beginning with foundational structures developed from childhood through more complex skills and information processing tasks and impacted by external media systems and personal influences, the theory argues that media literacy evolves over time via practice and effort. For the purposes of this research, the skills defined in the theory will serve as the basis for discovering media literate discussion within the context of the comment fields.

Comment threads and discussion boards inherently rely on social interaction; thus, the social constructivist theory of education likewise applies (Schellens & Valcke, 2006). Based on cognitive theory, social constructivism focuses on interpersonal contact

as the primary means for language and knowledge building that occurs prior to the internalization of learning (Vygotsky, 1978). Verbalization of thought forms through cultural processes rather than an innate process, making words meaningless without a second person agreeing upon a definition in a particular context (Vygotsky, 1986). Within this study, a model of analyzing computer-mediated discussion developed by Veerman and Veldhuis-Diermanse (2001) using social constructivist principles will be utilized to pre-categorize comments prior to the application of Potter's media literacy skills.

Research Questions

The research question driving this study asks how knowledge is constructed through user participation via comments on CNN.com news stories through the lens of media literacy theory. Furthermore, from the literature reviewed herein, the following research questions were formed:

- RQ 1: What is the distribution of task-related and not task-related comments based on Veerman and Veldhuis-Diermanse (2001) throughout CNN.com comment threads on all political news stories?
- RQ 2: What is the distribution of Potter's (2004) skills of media literacy throughout CNN.com comment threads on all political news stories?
- RQ 3: At what point within a comment stream is the greatest concentration of media literacy skills demonstrated for all political news stories?
- RQ 4: Will political stories that elicit a higher number of comments evince a higher correlation with demonstrated media literacy skills than those with fewer comments?
- RQ 5: Does the frequency of comments by an individual user correlate directly with the demonstrated frequency of media literacy skills?
- RQ 6: Do comments that demonstrate media literacy receive more direct replies than those that do not?
- RQ 7: When participation of comment contributors is reasonably consistent within an individual story, does the quantity of media literacy skills demonstrated correlate with the length of time the conversation continues?

RQ 8: Does a connection exist between user participation through comments on CNN.com political news stories and knowledge construction using Potter's media literacy theory as a framework?

Definition of Terms

The following definitions aim to provide clarity for uncommon terms or for those with potential ambiguity.

Comment Fields/Threads

Comment fields appear as a "string of entries...in a linear chronology...tied to a specific focus" (Trice, 2011, p. 237). In the context of a news site such as CNN.com, entries are attached directly to articles (Graham, 2013). They also appear in threaded form, which describes the hierarchy of parent and child posts. In this paper, the terms *fields*, *threads*, *entries*, *replies*, and *posts* may be used interchangeably in the context of comments.

Computer-Mediated Communication

Computer-mediated communication is any interpersonal dialogue aided by computer hardware and software (Thurlow, Lengel, & Tomic, 2004).

Media Literacy

The term *media literacy* has generated a wide variety of definitions from scholars that depend primarily on the focus of the particular research. This study relies on the definition presented in the underlying theory in that media literacy is the ongoing process through which individuals consume and interpret mediated messages using developed skills (Table 1) and processing knowledge (W. J. Potter, 2004).

Participatory Journalism

Participatory journalism refers to the increasingly active role consumers play in providing content for news media (Graham, 2013).

Skills of Media Literacy

Table 1 describes seven core skills used to demonstrate a level of media literacy.

Table 1

The Seven Skills of Media Literacy (W. J. Potter, 2004, p. 124)

Skill	Task
Analysis	Breaking down a message into meaningful elements
Evaluation	Judging the value of an element; the judgment is made by comparing the element to some criterion
Grouping	Determining which elements are alike in some way; determining which elements are different in some way
Induction	Inferring a pattern across a small set of elements, then generalizing the pattern to all elements in the set
Deduction	Using general principles to explain particulars
Synthesis	Assembling elements into a new structure
Abstracting	Create a brief, clear, and accurate description capturing the essence of a message in a smaller number of words than the message itself

Task-Related/Not Task-Related Comments

Veerman and Veldhuis-Diermanse (2001) distinguish task-related and non task-related comments based on the post's demonstration of potential knowledge construction. In this context, task-related comments demonstrate knowledge construction by stating a new concept or advance the conversation by developing existing ideas, relating new ideas, explaining, or evaluating. Not task-related comments relate at most tangentially to the topic being discussed and fail to demonstrate knowledge construction by discussing unrelated ideas, setting rules of the conversation, or offering related statements that do not add any critical perspective (Veerman & Veldhuis-Diermanse, 2001). Veerman and Veldhuis-Diermanse (2001, p. 626) offer the following examples:

Not Task-Related

Planning	<i>“Shall we first discuss the concept of “interaction”?”</i>
Technical	<i>“Do you know how to change the diagram window?”</i>
Social	<i>“Smart thinking!”</i>
Nonsense	<i>“What about a swim this afternoon?”</i>

Task-Related

New Idea	<i>“Interaction means: responding to each other”</i>
Explanation	<i>“I mean that you integrate information of someone else in your own reply”</i>
Evaluation	<i>“I don’t think that’s a suitable description because interaction means also interaction with computers or materials, see Laurillard’s definition!”</i>

User-Generated Content

User-generated content encompasses media material that originates from an amateur source rather than from a professional producer or journalist, which is then published for a mass audience (Daugherty, Eastin, & Bright, 2008).

Significance of the Study

With little to no research examining the connection between media literacy and comment fields in existence, this study aims to contribute to the field by providing insight in this respect to the level at which active contributors to a media discussion demonstrate media literate abilities within their discourse. To date, much of the research into media literacy has focused on implementation using positivist techniques in traditional K-12 environments (Hobbs, 2011a). Emerging studies focus on constructivist principles outside of K-12 education, in representational contexts, and informal environments. Hobbs (2011b) calls for refocusing on understanding the underlying aspects of media literacy so that better media literacy education components can be produced.

Scope

The research presented will capture information from comment posts made on CNN.com over a seven-week period. CNN.com was chosen due to its international reputation and presence (Trice, 2011). The posts harvested will be attached to political stories originating from CNN. The reason for this delimitation was two-fold. First, it focuses the investigation on a subset of stories that encourage discussion. Hardy and Scheufele (2005) observed that participatory behavior is high for those seeking political news stories on the Internet. Second, it allows for future application of this study's research design toward other story types for the purpose of comparison. The quantitative method applied permits generalization of the findings to other political stories found on CNN.com.

Limitations

The scope of this study limits its generalizability in several ways. Because only a single website (CNN.com) will be investigated, the broader presence of media literacy in comment fields from other content providers cannot be assumed. Additionally, the study limits the ability to generalize to other article types. Posters of comments may be reasonably expected to represent a subset of the larger population who are connected to the Internet, read their news online, and driven to actively participate in discussion. As a result, this study is limited to describing media literacy demonstrated by those who choose to contribute in this paradigm. Due to its proximity to the national election day, the timeframe of the study (October-November) limits the number of articles under consideration to those falling into a period of greater focus on political topics. CNN's community guidelines page ("CNN.com - Comment Policy," n.d.) outlines the conditions

in which comments may be moderated or removed; therefore, this situation limits the complete “reality” of the conversation by removing offensive comments or those that include hyperlinks to other sites. Finally, having a single coder poses a threat to the reproducibility of the findings. In response to this issue, establishing stability will be considered as paramount to demonstrating reliable data, and a previously reliable coding scheme will be used for a portion of the study’s methods (Appendix B).

Organization of the Study

The subsequent four chapters will discuss this research study in detail. Chapter two presents the relevant literature for examining media literacy in the context of online participatory journalism. Media literacy as a concept is explored particularly how it relates to education of all levels of learners. Potter’s theory of media literacy provides a framework for the study as a whole. Online discussion forums are discussed and then explored as a function of online journalism. Literature related to social constructivism ties together the overall concepts of media literacy and news-related comment threads.

Chapter three presents the research design for the study. Beginning with a rationale for conducting a content analysis as a means for exploring this topic, the unit of analysis, the study’s limitations, and sampling procedures are then explained. A description of data analysis processes clarifies how the eight research questions presented in this chapter will be addressed. Reliability and validity measures of the methods are considered along with the ethics of the study as a whole. A pilot study tests the reliability of the coding.

Chapters four presents the findings of the study. The statistical measures defined in the data analysis portion of chapter three will be discussed. Chapter five offers a

discussion of the findings, examines the results, and answers the research questions asked. Further, the chapter addresses the study's limitations and directions it offers for future research.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

Introduction

Becoming literate in a media context and subsequently constructing knowledge requires not only consumption of media texts but also contributing knowledge to others through a mediated environment. Media literacy education encourages participation through the creation of text, video, audio, and illustration. Participation in the world necessitates human contact; therefore, discussion permits further creation through consuming both consenting and dissenting opinions. Online news sites provide one such outlet intended for this level of participation, thus providing a window into how people demonstrate media literacy. Social constructivism serves as a link between knowledge construction through the concept of literacy and the idea that participating in an interactive context facilitates and enhances the process.

Media Literacy

Overview

Media literacy captures the interaction between consumers and mediated content much in the same way traditional literacy looks at the reader and the writer. Today's students seem highly connected to media. However, a closer look reveals that they may consume it voraciously, but they do not necessarily understand the motivation behind the messages they absorb. To best prepare all levels of students for becoming future societal leaders, educational programs have the opportunity to embrace media education as a means to help students become more informed consumers.

The core concepts of media literacy have been debated; however ultimately, its study focuses on the consumer and how interaction occurs. Media literacy encompasses several aspects of analyzing and evaluating texts both in print and electronically as well as communicating in those formats (Considine, Horton, & Moorman, 2009; Mihailidis, 2008). Inquiry into how the media portrays a variety of issues lies at the core of media literacy (Mihailidis, 2009). According to Martens (2010, p. 5), "[A]udiences are not passive recipients." Each person has individualized values, backgrounds, and processing skills that influence an interpretation of a text (Martens, 2010). Varying perspectives feed the concept of media literacy. On one hand, the psychological knowledge structure perspective focuses on the individual (Martens, 2010). Conversely, the cultural studies perspective looks at the dialogue within communities, particularly between teacher and student (Martens, 2010).

Media Literacy and Youth

The vast majority of the arguments within the literature state that media literacy plays an important role in modern education despite the assumption that contemporary students are more attuned to media message and culture. Simply being surrounded by media does not necessarily mean that students understand the content or intent of the message (Considine et al., 2009). Children tend to learn more about media effects as they age; however, critical thinking skills may not evolve along with this knowledge (Hobbs, 2004). In regards to the generation of students born in the last two decades, Considine et al. (2009, p. 475) adds that they are "self-taught but not well-taught." With the average young adult spending 6.5 to 8.5 hours per day exposed to mediated messages (Mihailidis, 2009), mass media has supplanted traditional social institutions such as family, church,

and school in many of their traditional roles upon which children previously relied (Silverblatt, 2004). In an attempt to mitigate this problem, Mihailidis (2008, p. 10) looked at how educating students in media literacy can have a positive impact on culture: "Media literacy education stands to offer the unique opportunity to engage in teaching and learning techniques that place the emphasis on the cultivation of civic engagement through understanding media's role in civil society."

This bond between media and civic culture has formed the basis for much of the study of media literacy and its importance within education. Media is a source of information and motivation regarding various political and cultural issues in society (Considine et al., 2009; Mihailidis, 2009; Schwarz, 2007; Stein & Prewett, 2009; Thoman & Jolls, 2004). Beyond politics, identities within a community are formed by media choices (Alvermann, 2004). State-owned media outlets are the product of a government recognizing the power of the media over the culture and society (Silverblatt, 2004). Within democratic society, communication is of the utmost importance, and media provides a means to achieve effective communication. Consequently, the ability to analyze a message allows the citizenry to be adequately informed (Mihailidis, 2008; Schwarz, 2007; Stein & Prewett, 2009). As a result, attempting to understand society, consumers can use media to see holistically a number of cultures and subcultures both inside and outside of their own country (Silverblatt, 2004).

To prepare students to become better consumers, formal education must play a role. Elementary and secondary education in both the United States and abroad have led the way in integrating media literacy into curricula; however, higher education can further shape how students critically analyze media. Through deconstructive techniques,

students capture the intent of a message beyond the words or images provided. Constructive methods allow students to take the same techniques learned during deconstruction and create media in the same manner, thus permitting them to see the other side of the process. Assessment, however, remains tricky, but its importance should not be lost.

Media literacy education in the United States is a fairly young field in comparison to many other countries, particularly those throughout Europe (Flores-Koulish, 2010; Stein & Prewett, 2009). Throughout the world, however, pinning down a definition of "media literacy" has been difficult. Generally, media literacy education has centered on critical thinking, analysis of messages, and the search for a message's complete purpose (Arke & Primack, 2009; Deal, Flores-Koulish, & Sears, 2010; Martens, 2010; Mihailidis, 2008, 2009). Essentially, media literacy education focuses on process over content (Thoman & Jolls, 2004). Students have varying strengths in their abilities to learn; therefore, utilizing a number of different media types enriches the learning experience (Considine et al., 2009). As well, today's students are digital natives who, in most cases, do not simply consume media but actively create content in a multitude of forms (Considine et al., 2009). These technologically savvy students appreciate the integration of Internet technologies into lessons, which often proves more appealing than traditional teaching methods (Considine et al., 2009). In this respect, making media literacy education purposive allows students to broaden their critical thinking skills beyond media and gives a wider meaning behind the lesson (Mihailidis, 2009). Mihailidis (2009) adds a cautionary note that care must be taken to avoid students gaining a feeling of superiority over the media, which, in turn, poses a risk for greater vulnerability to propaganda.

Most scholarship regarding the creation of media literacy programs has focused on K-12 programs, which understandably have different goals; however, media literacy coursework in higher education can also play a significant role in shaping students' understanding of how media impacts their lives. The primary issue revolves around significant debate over which academic department should have responsibility for teaching media literacy and how it should be taught (Mihailidis, 2008). In most cases, media literacy education within higher education appears in the fields of communication, journalism, and education with occasional integration into English programs (Mihailidis, 2008). On a wider scale, the difficulty of finding a commonly accepted definition of media literacy has hampered its acceptance in general higher education curricula (Mihailidis, 2008). At this level, educators find conflict between preparing students in a liberal manner versus preparing them for the job market (Christ & Potter, 1998). Building from the notion of the ties between media and society, one potential path for post-secondary media literacy education to follow is helping students become more engaged citizens within their communities whether large or small (Mihailidis, 2008).

Existing programs at all levels of education include a form of deconstruction of media messages in an effort to gain greater understanding. Hobbs (2004) frames this deconstructive function as understanding the purpose and function of a message as being key to thinking about it critically. Media literacy education views messages as sources with potential biases that once understood could change the meaning of a message based on how the package is framed (Stein & Prewett, 2009). Furthermore, students can learn to resist messages that are potentially harmful to their social or personal well-being (Considine et al., 2009; Martens, 2010; Stein & Prewett, 2009).

Of somewhat more controversy, programs often include the creation of media as the balancing half of media literacy education. The positive view of including construction in the curriculum states that in the same way writing improves reading, constructing media strengthens critical viewing of mediated pieces (Alvermann, 2004; Flores-Koulish, 2010). The argument goes further adding that media provides an outlet for self-expression through which better understanding can be achieved (Schwarz, 2007; Stein & Prewett, 2009). Opponents believe that teaching production techniques leads to imitation rather than an increased ability to analyze (Christ & Potter, 1998). Despite the potential for this to occur, creating media has also been found to effectively teach teamwork, tolerance, and organization beyond just technical skills (Thoman & Jolls, 2004).

Although ultimately imperative, little formal assessment has been proposed or completed in the field. Because media literacy comprises numerous structures, it proves difficult to measure without a range of analyses (Christ & Potter, 1998). Additionally, no standards currently exist to measure media literacy knowledge (Christ, 2004). Two studies found that students receiving media literacy instruction better understood how media messages were constructed and subsequently were better prepared to critically analyze them (Arke & Primack, 2009; Hobbs, 2004). Generally, assessment of media literacy should focus on students not only reflecting on content but also on how media relates to their own values in order to understand it to the fullest (Mihailidis, 2009).

Media Literacy and Adults

Although traditionally applicable to children and teens, media literacy has a place for informing adults on the impact of messages communicated through the media.

Broadly, media literacy has both economic and social influences on a community. Within a formal educational context, adults can apply media literacy skills toward a deeper understanding of societal issues as well as specific ongoing problems faced throughout adult life. Finally, as parents and mentors, adults can leverage their knowledge of media literacy for improving that of younger people.

Within society at large, media literacy provides adults the capability to sift through media messages in order to make better decisions both professionally and personally. Economically, media literacy is a necessity for a workforce expected to frequently interact with information and communication technologies in order to find and evaluate information (Clarke, Milner, Killer, & Dixon, 2008). As an example of evaluating information about a particular profession, media paints the nature of teaching and teachers in a manner not necessarily consistent with reality; therefore, media literacy can help real and perceived concepts of teachers to converge not only for the public but also for current and aspiring teachers themselves (Townsend & Ryan, 2012). In personal spaces, greater levels of media literacy coincide with lower levels of trust in journalism (Peters, 2013). For instance, Del-Moral and Villalustre (2013) surveyed elderly women in Spain finding that through their age and experience they possessed lower susceptibility to persuasive tactics in the media. Studying younger adult consumers, Peters (2013) notes that *The Daily Show* covertly teaches viewers to be media literate by both questioning the nature of media and journalism and openly discussing underlying messages.

Narrowing its focus, media literacy applies to the education of adults as well as that of youth although the pedagogy for adults tends to target more specific topics rather

than taking a general approach. Developing media literacy is a life-long undertaking essential to social engagement through critical and creative processes (Hutchins & Bierema, 2013; Varis, 2010) although Jeong et al. (S.-H. Jeong et al., 2012) cite Piaget's stages of development as an argument for needing to hone skills of media literacy at an earlier age. In support of the former observation, social media and popular culture media play increasingly important roles in adult education as a means to distribute content digitally over a distance and to form a common ground for discussion and understanding (Hutchins & Bierema, 2013; LeNoue, 2011; Tisdell & Thompson, 2007). Tisdell and Thompson (2007) observed that adults used media to understand and explore social relationships and consider the impact of race, gender, and sexual orientation on social roles. Among a group of female participants in a food literacy study, social participation and increased critical analysis of food-based media improved the subjects' ability to make better choices for eating (Peterson, 2012). More broadly, the role of technology not only in media consumption but also for its creation opens access to a wider population; thus, examining media critically becomes necessary for all ages in order to detect messages within media pieces (Thompson, 2007).

Mentoring children provides a final example of how media literacy impacts adults. Having an understanding of media literacy helps adults to provide a strong role model for children's media consumption (Theodosiadou & Markos, 2013); thus, being aware of media effects encourages responsible media consumption at home (Del-Moral & Villalustre, 2013). In practice, consuming media at home jointly with children allows parents to mediate children's exposure to messages, promoting the critical thinking and discussion that lead to greater media literacy (Mendoza, 2009).

Media Literacy and Journalism

The ties between journalism and media literacy may be understood best as a subset of media literacy education. Beyond what is being taught to students in general about interpreting media messages, instructors in journalism programs with a media literacy focus teach the classic values of journalistic integrity crossed with an awareness of the global social impact of students' future reporting. At the core of teaching media literacy to both journalism and non-journalism majors is communicating the essence of Habermas's public sphere (1974), having, utilizing, and growing an accessible space for the public to converse and debate.

Since the middle of the twentieth century, society's trust in journalism has shifted from a belief that reporting was based in truth and honesty to skepticism about the importance of stories designed to fill twenty-four hours of cable news (Fleming, 2010; Peters, 2013). Online access to news has increased the perception of convergence between previously dissimilar media genres while simultaneously exposing consumers to content (Hu Dahl & Newkirk, 2010). As a result, younger generations tend to give greater priority either to news items forwarded to them by peers or to stories determined to be worth sharing with others (Fleming, 2010). The desire among educators is that media literacy will provide the ability and guidance for students to shift from simple distribution to intelligent discussion of the issues being shared (Wojcicki, 2010).

Among students of journalism, media literacy serves not only to restore awareness of the classic values of responsibility, accuracy, and fairness, but also it helps reporters to understand the issues being covered. No matter what situation is covered, news reports communicate value judgments from the author despite attempts at impartiality (Archakis

& Tsakona, 2009). Given this, awareness of media literacy empowers students to consider broader communities and thinking in their production of stories while maintaining the core ethics of the reporting process (Clark, 2013). In turn, taking a holistic approach to designing messages and predicting how the public will receive messages improves the quality of reporting (Mihailidis, 2006), reduces perceptions of bias (Vraga, Tully, Akin, & Rojas, 2012), and encourages participation in the public sphere of discussion (Ashley, Poepsel, & Willis, 2010; Vraga et al., 2012).

Media Literacy Theory

As a result of growing interest in literacy as applied to multimedia and a fragmentation of definitions, Potter synthesized a cognitive theory of media literacy in an attempt to unify the field and guide future research. Grounding his theory in those of information processing and media effects, Potter not only establishes a definition of media literacy but also it layers internal and external processes and influences to illustrate an individual's development toward becoming media literate.

Beginning with a series of six axioms (responsibility, effects, interpretation, shared meaning, power, purpose), Potter (2004) establishes the basis for the theory. Individuals have the responsibility for increasing their level of literacy in order to take control of their knowledge development. Effects must be viewed from both a negative and positive angle. For media literacy to be effective, each person must control his interpretation of a media text. For effective communication, interpretations should be shared among social groups. Individuals are empowered to build knowledge through informed decision-making. The overarching purpose of media literacy is to give people power over media producers in how messages are consumed and interpreted.

Understanding the external influences of media effects, media content, media industries, and non-media factors in the world as a whole in combination with self-awareness form the base knowledge structures an individual needs to increase media literacy. Lacking any or all of these foundational structures does not necessarily hinder higher level processing; however, establishing them first provides an advantage to future development (W. J. Potter, 2004). These structures feed a personal locus of consciousness and decision-making, which defines what drives an individual's motivations (W. J. Potter, 2004).

Further, three competencies and seven core skills provide assessable factors through which media literacy may be measured (W. J. Potter, 2004). The three competencies (referent recognition, pattern recognition, and definition association) form throughout childhood in the normal developmental process.

The seven skills require constant refinement and active application (W. J. Potter, 2004). Analysis deconstructs a message for better understanding of its parts and is often the most commonly exercised skill as it serves as a base for the others (W. J. Potter, 2004). Evaluation passes judgment on a message using evidence and emotion in support of the decision. Grouping compares elements of the message either to other elements or with external comparators. Induction builds a broad conclusion from specific patterns in the message and from external examples. Deduction draws a specific conclusion from general knowledge. Synthesis develops new ideas from knowledge extracted from existing ideas. Abstraction demonstrates the ability to summarize a message briefly yet comprehensively.

The final pieces of Potter's theory focus on cognitively processing the information being presented. Three tasks comprise this portion: filtering, meaning matching, and meaning construction. Filtering uses the skills of analysis and evaluation to decide which messages or portions of messages should be processed or ignored. Messages that are processed then require meaning matching, which relies on competencies to connect experience to the message's themes. Meaning construction again needs skills to move beyond simple processing toward greater comprehension. This final process of meaning construction ties directly to knowledge construction as the greater use of skills to process information demonstrates media literacy (W. J. Potter, 2004) and, in turn, allows more sophisticated meaning construction moving forward.

Potter (2004) clearly states that the theory is not prescriptive, particularly that there is no definitive path toward the ultimate achievement of full media literacy. Despite this, measuring the application of media literacy skills can help to develop literacy education (Bordac, 2009). Further, using a combination of acquired knowledge, skills, and processing, a person continually can hone his level of media literacy for application to a variety of social and personal situations (Martens, 2010).

Electronic Discussion Groups

Among forms of social media, electronic discussion groups represent one of the oldest forms of people engaging in online discourse. The format features a series of original posts and replies often written in an informal writing style contributed asynchronously so that anyone can read or add content at any time (Page, 2013). These tools have thrived in both education and non-educational contexts. Students of any age can reflect and discuss material in a forum in which the pressures of instant responses are

nonexistent. Outside of academia, online discussion offers personal support, professional development, and extends the Habermasian public sphere for civic debate.

Electronic Discussion Groups in Education

Within education, the use of electronic discussion tools allows students another means to collaborate, debate, and pose questions for the purpose of interactive learning. Although far from perfect, discussion boards build social skills and confidence among peers while simultaneously giving an educator a permanent method of tracking participation and understanding where students are succeeding and where they fall short in terms of comprehension.

Reflection on topics builds knowledge, and discussion boards permit reflection by encouraging feedback through a structure in which students feel that they can safely discuss ideas amongst their peers (Bye, Smith, & Rallis, 2009). Demonstrating reflection, eventual contributors often read previous posts several times prior to replying (Margerison, 2013; Saadé & Huang, 2009). Consequently, interaction and reflection permits students to teach each other reciprocally (K. L. Murphy, Mahoney, & Chen, 2005) with success directly tied to the amount of activity generated (Yukselturk, 2010).

Although discussions focused directly on an issue ultimately proved more effective (Moore & Marra, 2005), social talk in this medium has a beneficial educational role. Students who opened with personal discussions prior to addressing the topic became more comfortable with participating on the central issue while those already socially comfortable with contributing gained personal influence over other students when adding social talk (F. Chen & Wang, 2009). This building of student to student rapport results in increased discussion and more freedom to debate (Sautter, 2007).

Delahunty (2012) linked this phenomenon directly to the importance of forming an identity for communicating reputation and bond-building.

Despite some advantages, drawbacks exist for instructors. While encouraging discussion is vital to establishing collaboration, it does not guarantee that students can effectively work together (E. Murphy, 2004). Although the opportunity exists to respond and discuss, a study by Thomas (2002) found that a majority of messages go unanswered. Management of a large-scale discussion board can quickly overwhelm a moderator (Xin & Feenberg, 2006), and the larger a group is, the more likely the discussion will contain greater amounts of social, technical, and other off-topic comments (Schellens & Valcke, 2006).

Electronic Discussion Groups Beyond Academia

Politics and civic matters represent a large proportion of the conversation within electronic discussion groups outside of the educational realm. Participation in online discussion groups demonstrates aspects of uses and gratifications theory; thus, those who enjoy political debate tend to also engage in online political discourse, as well (Hardy & Scheufele, 2005). Even in forums intended for discussion of entertainment topics, Graham (2008, 2012) found in two studies that political discussion still occurs. In terms of those who contribute, a regular reader of political blogs has three times the likelihood of participating in discussion forums related to political topics (Lewis, 2011), and similarly, those who more often consume news online are more likely to participate in online political discussion (Brundidge, 2010). The popularity of forums can be linked to the perception they permit reasoned discourse, which encourages diversity of opinion and cultural input (Thakur, 2012). In this vein, Karlsson (2012) found that the level of

discussion increased as partisanship decreased thus concluding that successful deliberation requires open attitudes toward broader topics. Unfortunately, inclusion does not necessarily equate to interaction (Witschge, 2008). Himelboim (2011) observed that a small number of contributors received a large number of overall comments, and contributors received more replies than they offered in return, highlighting a lack of reciprocation in the process of civil deliberation. Within the comments and replies made, a study of online debate on health care reform indicated that political discussion boards contained more unsupported claims than honest, clear discourse (O'Connor & Rapchak, 2012). Arguments exist stating that removing anonymity from discussion forums would promote greater participation, civility, and supported contributions; however, a ban on anonymous posting by a Buffalo newspaper's website greatly reduced the participation in their forums (Reader, 2012).

Another use of online discussion, professionals can find ways to connect and share information particularly for fields in which interpersonal trust is paramount. Reciprocal response in online discussions encourages trust among professionals seeking to share information and build knowledge (Lin, Hung, & Chen, 2009). Teachers utilize discussion forums to build identity and share best practices from their classrooms (Duncan-Howell, 2010; Grion & Varisco, 2007). Similarly, participation in electronic discussion helped new psychologists develop a sense of professional identity and build social capital among peers (Perrotta, 2006). For others in behavioral health, facilitating online health support forums helped professionals to become better facilitators of face-to-face discussions (Owen, Bantum, & Golant, 2009). In niche areas of healthcare, professionals find online forums an effective means of sharing ideas and experiences that

otherwise would lack discussion due to having fewer practitioners in physical proximity (Dieleman & Duncan, 2013).

Individuals with physical or mental health concerns have turned to online discussion to find support, predominantly from peers facing similar situations. Although health care websites provide valuable information, the social bonding of sharing comparable experiences allows people facing health issues to form a strong support network for facing the unknown (Johnson & Ambrose, 2006). For example, discussion of cancer-related issues features prominently in health care forums among older adults, reflecting the continued need for information-sharing and support (Donelle & Hoffman-Goetz, 2009; Im et al., 2007). Within online health discussion communities, in particular those regarding mental health issues, the anonymity of a text-based environment supports sharing of sensitive information without judgment or stigma (Hwang et al., 2011). Despite their popularity and ubiquity, online support groups, as well as face-to-face groups, compliment but do not replace the need for professional counseling for those in need of behavioral therapy (Barak, Boniel-Nissim, & Suler, 2008). Accordingly, Kaplan et al. (2011) observed that online psychological forums benefit from some professional moderation in order to ensure that the information being shared meets accepted therapeutic guidelines.

Participatory Journalism

The Internet changed how consumers approach and interpret news reports from the mass media as it has opened the opportunity for participation and feedback that is not necessarily filtered through a media organization. This potential democratizing effect empowers individuals not only to view the news but also to provide commentary that

influences the shape of how a story is reported. Comment fields on the websites of new media organizations offer one such outlet with the caveat that anonymity and controversy may be viewed negatively even if the ideas provided are valid.

User-Generated Content

Consumer participation in journalism has a long history, notably in the United States as a form of dissent during the pre-Revolution era (Rosenberry, 2011). Newspapers have also long honored the opinions of their readers by printing letters to the editor inviting comment from the public for publication in print (Loke, 2012; Santana, 2011). This invitation for participation builds community structure and confidence allowing the readership to feel a sense of involvement (Domingo et al., 2008). With the growth of the Internet and a collection of Web 2.0 applications that encourage participation, consumers have become contributors at a rapidly increasing rate (Hermida & Thurman, 2008; Michael Karlsson, 2011; Santana, 2011).

User participation has changed the game for media companies and how they view content on their web pages. In a mixed methods study of editors of major newspapers in Great Britain, Hermida and Thurman (2008) found that leaders within the organizations believed if they did not enact some form of user participation in the competitive marketplace, their particular papers would be marginalized. A combination of other qualitative and quantitative studies found other economic advantages for adding outlets for user-generated content. Encouraging participation creates additional page views, which generates advertising revenue (Loke, 2012; Rosenberry, 2011). Increased user content allowed some companies to cut labor costs by shifting or eliminating reporters (Deuze, Bruns, & Neuberger, 2007). More positively, organizations believed that it

offered greater customer relationship opportunities (Deuze et al., 2007; Rosenberry, 2011; Santana, 2011).

Despite the economic benefit to the company, journalists tend to remain skeptical of user-generated content (Domingo et al., 2008; Loke, 2012; Nielsen, 2012; Santana, 2011). Some attribute their concern to ethical issues of contributions from those outside of the field who lack the professional skills and training of the paid journalist (Singer & Ashman, 2009). To alleviate concerns, some companies limited or revoked permission to comment on stories containing sensitive or controversial topics (Loke, 2012; Manosevitch & Walker, 2009; Rosenberry, 2011). Despite this apprehension, a discourse analysis by Loke (2012) and a content analysis by Manosevitch and Walker (2009) revealed a recognition that participatory discourse opened a conversation between the press and their audience. Providing more relief for the future of journalism, several studies found no impact on the business of professional reporting and noted that the gatekeeping role of the media remains intact (Deuze et al., 2007; Domingo et al., 2008; Hermida & Thurman, 2008; Jönsson & Örnebring, 2011; Michael Karlsson, 2011; Ruiz et al., 2011)

Paramount to the growth of participatory journalism has been the view from consumers of its democratizing potential. At its best, public deliberation generates a collective wisdom from contributed opinion and analysis (Kennedy, 2010; Manosevitch & Walker, 2009). Through an experiment, Connolly, Jessup, and Valacich (1990) found that group deliberation allows new ideas to develop.

Key to the democracy of consumer content is the formation of virtual communities. Such subgroups of participants are built around distinct perspectives

(Kennedy, 2010). Following the September 11 attacks, the Internet and participation in online groups allowed disparate people to maintain a level of human contact during a crisis (Pew Internet & American Life Project, 2001). More often, virtual communities allow rallying around a cause or a person. For example, YouTube users have attempted to help support a family trying to find a missing child (Kennedy, 2010). Others have used online forums for participation to grieve the loss of celebrities such as Princess Diana and news anchor Peter Jennings (Greer, 2008; Helmers, 2001).

Comment Fields

Comment fields provide a means for giving feedback and encourage discussion and are perhaps the most common means of user-generated content in journalism. This outlet offers easy ability for active participation to anyone who has access to the platform itself (Weber, 2013). User comments further promote reader understanding (Henrich & Holmes, 2013; Santana, 2011) while additionally influencing attitudes about particular topics being discussed (Henrich & Holmes, 2013; Lee, 2012). Although a prerequisite for an individual to contribute tends to be the relevance the topic has to the poster, controversial articles receive the greatest amount of overall attention (Weber, 2013).

Increasing use of comment systems has affected how news is reported. In some instances, comments have countered agenda-setting theory by guiding the news reporting process (Graham, 2013; McCluskey & Hmielowski, 2012; Santana, 2011). Journalist engagement in commenting additionally improves the quality not only of the discussion but also of original reporting (Diakopoulos & Naaman, 2011). Quality of the comments and the discourse as a whole also improves when those who post contribute frequently and repeatedly (Weber, 2013).

Anonymity is one factor prevalent among online comment systems that provides both advantages and consequences. As discussed above, historical anonymous publications encouraged revolution based on reasoned dissent (Rosenberry, 2011). The ability to remain unknown encourages participation by protecting those willing to state a counterargument or unpopular opinion (Rosenberry, 2011). Concealed identities, however, reduces accountability. Eliminating relevant information about an individual removes an important element of allowing a judgment of quality upon an argument (Santana, 2011; Scott & Bonito, 2006). In this respect, Scott and Bonito (2006) found that known contributors were held in much higher esteem than anonymous participants.

The literature tends to focus primarily on the negative aspects of language in comment fields. Without strict gatekeeping from the provider, the aforementioned anonymity of participants permits disruptive or hostile comments to pervade otherwise civil discussions (Donnelly, 2008; Kennedy, 2010; Loke, 2012; Nielsen, 2012; Rosenberry, 2011). These contributions tend to feature intolerant, offensive, or threatening comments toward other races, religions, or orientations (Loke, 2012; Nielsen, 2012). Other posts tend to stray from the original topic and result in a loss of focus on the primary topic of discussion (Hermida & Thurman, 2008; Ruiz et al., 2011). The lack of clear turn-taking contributes to deviation from the core topic (Donnelly, 2008). Beside anonymity damaging credibility, posts that make specific arguments rarely cite the source from which data or evidence was based (Nielsen, 2012; Ruiz et al., 2011; Singer & Ashman, 2009).

Social Constructivism

Overview

Based in the research and writings of Piaget and Vygotsky, constructivism refers to a philosophy most often tied to educational psychology that argues learning develops as a result of active processing rather than simple passive absorption (Hung, 2001; Noddings, 1995). Constructivism as a philosophy diverged into two threads along the lines of its proponents: cognitive and social. Cognitive constructivism primarily argues that people develop concepts internally through individual experience (Piaget, 1998). Conversely, social constructivism takes the position that knowledge cannot be constructed without accounting for an individual's social and cultural surroundings (Vygotsky, 1978). This latter form of constructivism creates a platform from which can be examined electronic participatory culture (Hung, 2001) and the creation of meaning out of referents to form literacy (Mahn & John-Steiner, 2012).

Language forms the basis of thought, which is not innate but formed through social interaction (Vygotsky, 1986). This shared interpretation allows humans to connect with other people and feel part of a larger whole (Garrison, 2009) with an underlying purpose for caring for one another (Mahn & John-Steiner, 2012). In this respect, writing and literacy as a whole become directly relevant to life itself (Mahn & John-Steiner, 2012), creating and sustaining people who think independently yet rely on others to build knowledge. For Vygotsky, "social" referred to anything that occurs among the greater culture of a person (Mahn & John-Steiner, 2012); thus, a social constructivist teaching environment is one that creates a situation that allows learning to occur with recognition of culture regardless of whether human interaction is required (Hubbard, 2012).

Social Constructivism and Participatory Environments

Social constructivism most clearly illustrates the learning process in an online participatory environment as contributors post, read, and respond to ideas generated by peers. Building knowledge occurs through this culture as each individual innately reflects his personal experiences in a post. Though conflict and immaterial conversation can detract from the overall effectiveness of the dialogue, a moderator can serve to aid construction by knowing when to interact and when to allow the discourse to flow.

Online discussion mirrors the values of social constructivism by providing an outlet for individuals to debate and form ideas by creating a unique internal culture. Participation on electronic discussion boards encourages social and cognitive development (Eryilmaz, Chiu, Thoms, Mary, & Kim, 2013; Graddy, 2003; Hawkey, 2003, 2004; E. Murphy, 2004; Schellens & Valcke, 2006) as reflected by the presence of scaffolding (Gaspar, Langevin, Boyer, & Armitage, 2009). Guidance in the process of education builds a scaffold for further learning through a “more knowledgeable other” (MKO) who has greater understanding of an issue than a person who is learning (Vygotsky, 1978). This building of knowledge is by nature reflective (Bye et al., 2009) as the dialogue allows each participant the time to reflect and respond at will (Putman, Ford, & Tancock, 2012) and ultimately to serve as an MKO in turn. The setting of a forum necessitates disagreements be aired publicly, and when successfully resolved, common goals may be reached (E. Murphy, 2004). Conflicts that do occur find easier resolution because the online environment mitigates barriers of embarrassment and apprehension over expressing controversial ideas (Gilmore & Warren, 2007) and the

facilitator allows students to take control over the process of managing the discourse (Hadjerrouit, 2011).

Without proper guidance and management of a forum, however, achieving the goals of social constructivism is put at risk. As the size of the group partaking in the discussion grows, the amount of irrelevant messages also increases (Schellens & Valcke, 2006). Further, discussions among large groups not only focus on less relevant topics, but also students devolve into viewing a discussion as homework rather than constructive debate (Graddy, 2003). Both Gulati (2008) and Hawkey (2003) found that the democratizing potential for a social constructivist discussion to be lacking as participation in both quantity and quality vary greatly. Eryilmaz et al. (2013) relates, however, that proper guidance keeps electronic discussions more efficient and focused and encourages participation.

Social Constructivism and Media Literacy

Although the literature challenges the empirical connection between social constructivism and media literacy (Domine, 2011), extant research demonstrates a theoretical basis for examining the two phenomena together. As media displays information about subjects other than simply the media itself, media literacy allows for knowledge construction beyond the surface (Hubbard, 2012). The pleasure or enjoyment role of media permits a deeper emotional connection with the subject matter, which prompts the sharing of experiences with others (Tisdell & Thompson, 2007). Redmond (2012) observed that students who participated in group activities better understood the underlying meanings behind magazine advertisements. More broadly, Fleming (2010) found students utilizing their existing knowledge of media and media habits to better

understand media messages and to advance discussion on these topics with their peers. Building knowledge around media technology exhibited similar results with peers becoming experts in a particular area and passing knowledge onto others in the group (Prassos, Sachtouris, & Karakiza, 2011).

Synopsis of the Reviewed Literature

Overall, the relevant literature provides insight into media literacy, online discussion, participatory journalism, and social constructivism through studies covering theory and both qualitative and quantitative methods. This combination forms the basis for the problem statement and proposed investigation in Chapter One and for the methods for conducting the research forthcoming.

Media literacy offers a means toward understanding how consumers interact with media and gives a process through which messages can be interpreted and analyzed beyond simple acceptance as presented. Media literacy education formally prepares both children and adults to examine media from both the sides of consumer and producer. One of the primary focuses of media literacy education, news reporting comes with the expectation of objectivity; however, stories often contain subjective material that is revealed through an individual becoming media literate. A cognitive theory of media literacy explains the actions a person needs to exercise in order to increase his awareness of media effects.

Online forums have provided a means by which students, educators, and adults in general can pose questions and debate issues. News media outlets have embraced what public discussion spaces offer by integrating participatory features into company websites. In some cases, user-generated content is featured prominently through the

media outlets; however, this level of participation has met with disdain from professional journalists. Comment spaces are much more commonly found and represent the majority of user-generated content in Internet news media. Contributors generate relatively censorship-free discussion of issues guided by articles posted on the site with occasional moderation of offensive material.

Social constructivism provides a platform on which to connect media literacy and participatory journalism. In sum, social constructivism describes the process of knowledge building as influenced by the experiences an individual through culture. Participatory environments by nature are social; thus, knowledge forms via the interactions taking place within a discussion. Social constructivism informs media literacy, as media is also inherently social with a production needing a consumer.

CHAPTER THREE

PROCEDURES

Introduction

As this study attempts to draw conclusions about media literacy from extant texts, a content analysis approach is warranted. In order to investigate the connection between media literacy and online discussion, comments made to CNN.com articles were collected and examined holistically. Through a constructed one-week period, ample comment posts drawn from stories relating to politics provide sufficient representation of a wider population (Riffe, Lacy, & Fico, 1998). Accordingly, statistical analysis of coded comments in the sample set address the research questions proposed. In order to test the reliability of the coding scheme developed for the study, a pilot analysis was conducted.

Rationale for Conducting a Content Analysis

Gunter (2012) draws from Berelson (1952) and Kerlinger (1986) to synthesize his description of content analysis as systematic, objective, and quantifiable with the caveat that impact and meaning requires some level of interpretive measure as a supplement. Krippendorff (2012, p. 24) further defines a content analysis as a method from which “replicable and valid inferences” can be made from a text. Although the interpretations and inferences must necessarily be limited to the texts being analyzed, content analysis can yield carefully developed qualitative discussion, as well (Buddenbaum & Novak, 2001; Krippendorff, 2012; Stempel & Westley, 1989).

Past research has utilized content analysis in a similar context to the study presented herein. Schellens and Valcke (2005, 2006) conducted multiple studies in which they used content analysis to determine the existence of knowledge construction in

a social constructivist context from asynchronous discussion groups. Hew and Cheung (2011) likewise examined online discussions through content analysis to determine how facilitation of discourse impacted knowledge building. Moore and Marra (2005) applied content analysis to the examination of participation models in electronic forums. Kim and Bateman (2010) conducted a content analysis to determine the degree to which initial questions influenced the quantity and type of university students' online postings.

In regards to content analysis as a method for investigating media literacy, Potter (2013a) highlights content analysis as aiding in the analysis of media content. In addition a number of studies exist that focus on utilizing the research method to discover useful techniques and messages for making more effective use of media in the classroom (examples: Hill, Thomsen, Page, & Parrott, 2005; Lauder, 2012; Pereira & Pinto, 2011; J. Potter, 2010).

Unit of Analysis

The units of analysis for this study are individual posts in threaded discussions on stories posted to CNN.com. In an initial examination, individual comment length varies widely from a brief sentence to multiple paragraphs. In an attempt to treat all comments equally, the comment as a whole unit, regardless of the number of phrases or sentences comprising it, were coded. This decision echoes the reasoning of several other research studies examining comment fields (see Graham, 2013; Manosevitch & Walker, 2009; Trice, 2011). A comment post may be coded in several categories reflecting the multiple ideas presented within the entire posting.

Delimitations

The study establishes a number of delimiting factors in order to define the boundaries of the analysis. Comment threads posted to stories published on CNN.com will serve as the source of data. CNN.com was selected due to its established international recognition and active user base. To further narrow the research and permit future comparability, only stories that focus on political events were chosen. Loke (2012) notes that stories that “evoke strong emotions” (p. 241) result in a greater number of comments, and these stories help to generally indicate how society is feeling on a particular issue. Additionally, limiting analysis to political stories allows future cross-genre comparative studies and helps to ensure consistency of participation.

Only original reported stories are considered for analysis; therefore, opinion and blog pieces are not included. As a result, to be considered, the URL of a story must match the pattern: “http://www.cnn.com/YYYY/MM/DD/politics/”. Further, stories posted in the seven-week period between October 13, 2013, and November 30, 2013, comprise the initial set of collected data. During this time, political stories were expected to be numerous due to the proximity to Election Day and that both the House and Senate were in session for much of the timeframe (“Congressional Schedules,” n.d.).

Sampling

Using a script written in the Python language, comments from URLs matching the pattern noted above were captured during the defined seven-week timeframe. From these dates, seven days were randomly chosen – one Monday, one Tuesday, etc. – to build one constructed week of data. Riffe, Lacy, and Fico (1998) note in their study of news media sampling techniques that constructed weeks built from stratified sampling provided a

more accurate inference to the wider population than purely random or consecutive-day sampling. Because the discussion within an article's comment board can continue indefinitely beyond the story's initial publication, only comments dated within seven days of the article's original posting date were considered for analysis. Comments were not captured live, but rather they were downloaded at a later date through CNN.com's archive of political stories.

Research Questions

- RQ 1: What is the distribution of task-related and not task-related comments based on Veerman and Veldhuis-Diermanse (2001) throughout CNN.com comment threads on all political news stories?
- RQ 2: What is the distribution of Potter's (2004) skills of media literacy throughout CNN.com comment threads on all political news stories?
- RQ 3: At what point within a comment stream is the greatest concentration of media literacy skills demonstrated for all political news stories?
- RQ 4: Will political stories that elicit a higher number of comments evince a higher correlation with demonstrated media literacy skills than those with fewer comments?
- RQ 5: Does the frequency of comments by an individual user correlate directly with the demonstrated frequency of media literacy skills?
- RQ 6: Do comments that demonstrate media literacy receive more direct replies than those that do not?
- RQ 7: When participation of comment contributors is reasonably consistent within an individual story, does the quantity of media literacy skills demonstrated correlate with the length of time the conversation continues?
- RQ 8: Does a connection exist between user participation through comments on CNN.com political news stories and knowledge construction using Potter's media literacy theory as a framework?

Data Analysis

For analysis, using a modified script written in the PHP programming language, the comments and comment metadata were extracted from the chosen stories into a format readable by Microsoft Excel. The Excel format was imported into the IBM SPSS Statistics 21 software package, which facilitated the process of content analysis. Gunter

(2012) draws from Berelson (1952) and Kerlinger (1986) to synthesize his description of content analysis as systematic, objective, and quantifiable with the caveat that impact and meaning requires some level of interpretive measure as a supplement. Krippendorff (2012, p. 24) further defines a content analysis as a method from which “replicable and valid inferences” can be made from a text. This process fits well with media literacy research as literacy relies upon recognizing message patterns in order to maximize perception of content (W. J. Potter, 2004).

Veerman and Veldhuis-Diermanse (2001) developed a coding scheme for messages posted to a discussion board in order to analyze computer-mediated communication. The messages were individually noted to be either “not task-related” or “task-related” based on whether a message directly demonstrated knowledge construction (Veerman & Veldhuis-Diermanse, 2001). Messages not directly related to the article highlights were coded as not task-related. Schellens and Valcke (2005) confirmed the reliability of the instrument in an examination of discussion boards used over a semester-long course, and they further validated the instrument against a similar model’s theoretical construct. Because Potter (2004) relates his skills of media literacy directly to knowledge construction, messages deemed to be “task-related” under the Veerman and Veldhuis-Diermanse (2001) were furthered coded using Potter’s skills. Appendix B contains the coding manual used for the analysis.

In order to automate the process of eliminating unrelated comments, highlights predefined within the article by CNN were used as a basis to determine if a comment relates directly to the article or if it begins a tangential discussion. Keywords from these highlights were entered into QSR NVivo 10 and then used to search for synonymous

words within the body of comment threads. Individual comments containing no matching terms or comments that contain matching terms out of context were automatically coded as not task-related. The pilot study described below found 96% agreement between items manually coded and automatically coded as not task-related.

Descriptive statistics aid in addressing RQ1, RQ2, and RQ3. Pearson's correlation coefficient informs RQ4, RQ5, RQ6, and RQ7. A combination of the previous statistics in combination with interpretive analysis address RQ8.

Reliability and Validity

For a content analysis, Krippendorff (2012, p. 211) describes reliability as data meeting the criteria of being free of “pollutants, distortions, and biases” while simultaneously holding the same meaning for all potential users of the data. Further, three levels can describe an increasing level of reliability expected from a dataset: stability, reproducibility, and accuracy (Krippendorff, 2012). Stability refers to the ability of the coder to produce consistent results himself. Reproducibility expects similar results among multiple coders. Accuracy combines both previous levels to produce the most reliable product.

As stated in chapter one, the fact that this study has only one coder presents a notable limitation to the reproducibility of this research. In order to provide the most reliable data possible, the focus was on maximizing the stability of coding, and a coding manual, developed through pilot testing, is provided, which clearly communicates definitions and the decisions being made and follows Krippendorff's (2012) recommendations for its content. The coding manual can be found in Appendix B.

Validity for content analysis relies on multiple measures. Initially, face validity provides common sense evidence for an analysis, which in this method of research plays a significant role due to the interpretive nature of categorizing meanings of texts (Krippendorff, 2012). Methods of empirical validity provide more scientifically acceptable results for the purpose of generalizability. For this study, sampling validity was met through an accepted method of stratification to create a constructed week of data that is representative of a larger timeframe (Krippendorff, 2012; Riffe et al., 1998). This research also establishes construct validity by staying faithful to the Veerman and Veldhuis-Diermanse (2001) model and Potter's (2004) theory.

Ethics

According to the terms of service on CNN's website ("CNN.com - Terms," n.d.), user comments fall under the category of "user content". Section 2F outlines the public nature of the comments provided: "User Content submitted by you will be considered non-confidential and CNN is under no obligation to treat such User Content as proprietary information except pursuant to the CNN Privacy Policy" ("CNN.com - Terms," n.d.). In weighing the need for informed consent regarding such contributions, a 2002 report from the Association of Internet Researchers (Ess, 2002) provides guidance with a set of questions to be considered, and the report draws the conclusions that publicly accessible archives and postings to forums widely known to be publicly accessible reduce the obligation to protect privacy of the contributor. Herring (2004) notes that content analysis of new media has relaxed requirements for informed consent when identities are protected throughout the research process and harm is mitigated. A

follow-up AoIR report (Markham & Buchanan, 2012) echoes the need to take care in avoiding direct quotation and direct identification of the subjects.

To address these concerns for the proposed study herein, participants' usernames were protected by relying on unique numerical IDs to link the origin of comments together. Although this does not guarantee anonymity, it adds a layer of obfuscation. Furthermore, general statistics and coding were used to analyze the data.

Pilot Study

In order to test the coding rules for efficacy and reliability, on September 19, 2013, comments were captured from the story entitled "Colorado recall election prompts gun debate" originally published one week prior on September 11, 2013, from the URL <http://www.cnn.com/2013/09/11/politics/guns-debate/index.html>. This story was chosen because its posting timeframe fit the outline of being one week old, and the number of comments (1,157) was manageable for a pilot study. The highlights for the story were:

- "Two Colorado state senators lost jobs for a vote in favor of gun control"
- "National Rifle Association spent \$400,000 on the recall"
- "New York City Mayor Michael Bloomberg invested \$350,000"
- "Has implications for politicians supporting gun control"

Following the extraction, the comments were imported into IBM SPSS Statistics 21 for coding and into QSR NVivo 10 for term matching. every comment was coded one-by-one into the Veerman and Potter schemes using SPSS. Subsequently, key terms from the story highlights were entered into NVivo in order to perform a query on the comment list that would highlight comments containing matching terms and synonyms for those words. For the pilot study, the words entered were: *election*, *vote*, *money*, *PAC*, *politics*, *congress*, *senate*, *representative*, *congressman*, and *congresswoman*. The setting for

“Including synonyms” was selected. Comparing the NVivo matching results with those comments individually coded resulted in 96% accuracy of discovering comments originally coded as task-related. As a result, using NVivo to eliminate not task-related comments from the coding process proves reasonably effective.

Table 2

Reliability Statistics for Pilot Study

	% Agreement	Krippendorff's α
Not Task-Related	99.34	0.939
Task-Related	99.34	0.939
Analysis	98.61	0.907
Evaluation	99.26	0.921
Grouping	99.51	0.821
Induction	99.51	0.831
Deduction	99.59	0.798
Synthesis	100.00	1.000
Abstraction	99.84	0.833

Two weeks later on October 2, 2013, the comments were coded a second time. Subsequently, intracoder reliability statistics were calculated on this sample dataset. The standards for Krippendorff's alpha demand an alpha level of .800 for a variable to be accepted as reliable with those falling between an alpha of .667 and .800 as acceptable for tentative conclusions (Krippendorff, 2012). To achieve statistical significance at $p < .05$ and $\alpha \geq .800$, Krippendorff (2012) suggests a sample size of between 52 and 147 units. Table 2 lists the α values and percent agreement for each variable with $N = 1219$. Only the α for *deduction* did not reach the fully acceptable level; however, it falls just below the acceptable threshold and does fit within the range for tentative conclusions.

Summary of the Procedures

Using a content analysis approach, comment threads from CNN.com articles on politics were used to investigate the presence of media literacy development. Drawing from seven weeks of stories during October and November 2013, a constructed week of seven randomly selected days forms the body of comments for this study's sample.

Subsequently, a pilot study offered confirmation of the reliability of the proposed coding methods. With the research design established, the upcoming chapter will report on the findings and statistical analysis of the sample. Chapter five will follow with discussion, interpretation, and conclusions based on the findings.

CHAPTER FOUR

RESULTS

Introduction

The purpose of this study aims at exploring connections between CNN.com comments and media literacy skills defined by Potter (2004). The current chapter reports the results of a content analysis used to address eight research questions posed. To begin, a brief summary of the selected stories and corresponding comments will be presented. Examples of comments meeting the coding criteria will follow. Subsequently, the first seven research questions will be addressed through statistics appropriate to the nature of the question. The eighth and final research question will be addressed through a synthesis based on the results of the previous seven questions. The discussion of the final research question will occur in the final chapter discussing the impact of the results.

Summary of the Selected Stories and Comments

During the seven-week period between October 13, 2013, and November 30, 2013, CNN.com posted 210 articles under the heading of “politics”. Using a random number generator (“Random.org - Integer Generator,” n.d.), seven random integers with each integer ranging from one to seven, inclusive were selected. The order of numbers from left to right corresponded to a day of the week with the first number in the series being Sunday, and last number representing Saturday. Each individual integer corresponded to the week number of collected articles. The string generated was “1 1 2 6 2 7 3”. Table 3 indicates the days randomly selected for article sampling. Appendix A contains the full list of the twenty-seven articles included in the sample for coding.

Table 3

Randomly Selected Days for Article Sampling

Day of Week	Week # of Selected Stories	Date of Selected Stories
Sunday	1	10/13/2013
Monday	1	10/14/2013
Tuesday	2	10/22/2013
Wednesday	6	11/20/2013
Thursday	2	10/24/2013
Friday	7	11/29/2013
Saturday	3	11/02/2013

The twenty-seven articles coded yielded a total of 86,847 comments from external participants. Appendix A indicates the number of comments per article. Table 4 summarizes the number of comments per day of the week.

Table 4

Number of Comments per Day of the Week

Day of the Week	Number of Comments
Sunday	17,230
Monday	27,020
Tuesday	17,405
Wednesday	10,707
Thursday	8,827
Friday	2,463
Saturday	3,195

A total of 8,396 unique individuals participated in commenting on the selected articles. On 5,845 of the 86,847 comments (6.73%), a user ID of “NULL” was recorded preventing the ability to determine how many of those were distinct commenters. Of these 5,845, only twenty-five (0.43%) received additional coding under Potter’s media literacy skills.

Samples of Items Coded

The quantity of comments (n = 86847) and extended length of many of them makes including all of the data within this text impractical. Below are samples of comments in the categories in which they were coded. Comments that are not task related present ideas that are either do not exhibit knowledge construction or are completely off-topic based on the definition established by Veerman and Veldhuis-Diermanse (2001). All other comments were considered task related under Veerman and Veldhuis-Diermanse (2001) and received additional coding under the skills of media literacy as defined by Potter (2004). In the case of media literate comments, contributions may exhibit multiple skills; therefore, those listed are not intended to be exemplary solely of the skill under which each is listed. Each sample comment will be immediately preceded by the short title of the article from which it was drawn. In each task related example, italics will be used to indicate passages that demonstrate the given skill.

Not Task-Related

Comments deemed to be not task related either failed to exhibit higher-level knowledge construction, did not directly address the topic of the article in which it was posted, or are too simple to gauge the context in which they exist.

- *obamacare-sebelius-interview* — “Oh, he didn't know. Well then, that changes everything. Hey everyone, he didn't know. That's the excuse she's going with this time. He didnt [sic] know, he was asleep, he found out when he read the paper, he became aware when he watched the morning news, etc etc etc. PATHETIC!!!!!!! And if this is true, that's even more PATHETIC!!!! Me. [sic] President, your whole staff is making a FOOL out of you!!!!!! I don't give a damn what excuse Sebelius comes up with. As my president, IT IS YOUR JOB TO KNOW!!!!!! When I have a question a/b important issues happening In this country, I look to you for the answers, not Sebelius. It makes you look incompetent. It looks like

you surround yourself w/people who obviously aren't qualified to do the job you gave them to do. Maybe it's time to clean house.”

- *albuquerque-late-term-abortion-referendum* — "Pardon me if I don't believe you"
- *shutdown-showdown* — “We as a nation elect an incompetent President and a bunch of greedy Left and Right loons to Congress and then get upset when it all goes to H.”
- *shutdown-showdown* — “MR PRESIDENT SHOW THE TEA PARTY THE REAL MEANING OF STAND YOUR GROUND!”
- *obamacare-sebelius-interview* — “Low expectations??”

Task-Related - Analysis

Comments demonstrating analysis show an understanding of the elements that comprise a particular issue.

- *albuquerque-late-term-abortion-referendum* — “*New Mexico is now a solidly blue state with its high minority population (47% Hispanic and only 40% white), and Albuquerque is its largest urban population center, so not sure why the 55-45 vote against came as a surprise to anyone.* Put this ban up to a vote in a red city/red state it will pass. Put it up for a vote in a blue city/state it won't. Nothing really new to the dynamic or issue really.”
- *virginia-politician-attack* — “I don't need to revise it. *In both cases there was insufficient diagnosis, treatment or hospitalization. Of course, there is no way to prevent every single episode of violence due to mental health issues.* But in this article, it actually says the kid was released due to lack of beds. It cannot possibly be made any clearer.”
- *furloughed-workers-food-pantries* — “People just don't get it. It is way more than the half million federal employees. *What about coffee shops, banks, drug stores, food establishments, etc, in and around federal facilities? These businesses have lost some or all of their business. The shutdown really has impacted the income of several million Americans.*”
- *obamacare-website-four-reasons* — “Lets not forget, *Obamacare is totally separate from the website.* The insurance is still there, people will save money, and people will be able to get insurance when they had none before. The sky is not falling and the program itself is not in peril. *The web site hasn't worked properly. It demonstrates what is wrong with contracting and contractors within government work*”
- *shutdown-showdown* — “The people didn't vote for you to volunteer serving food, even though that's noble. We want you to manage the government, so you should go back to the negotiating table instead of serving food. *We can volunteer to do that ourselves, but none of us can negotiate our federal budget.*”

Task-Related - Evaluation

Evaluation requires logic to be exhibited as the basis for judging the validity of a statement.

- *poll-economy-optimism-shutdown* — “Misleading data spewed by the media makes me angry. They say the economy is up, but 90% of the ‘new’ jobs created since the 2008 meltdown are PART time. No one speaks about that. Companies don't have to give part-timers benefits, and pay them less than their full-time counterparts made in the past. *So many people are juggling part time jobs and ends aren't meeting. This is a benefit to corporations - they are saving money. The ‘new’ jobs offer a fraction of what ""lost"" jobs offered. This is shameful.*”
- *jobs-numbers-politics* — “Our economy would have been doing significantly better if our Congress stopped making things worse. Some of us keep electing politicians that make us worse off. *Brinkmanship costs us jobs. Ideology over pragmatism costs us jobs. Manufacturing crisis after crisis costs us jobs. When we start electing more politicians who believe that improving our infrastructure, investing in research and development, and increasing the access and quality to higher education are the ways to make us more economically competitive, then we will finally see a revival in the US. Right now we continue to elect politicians who don't even understand how the macroeconomy works, don't understand or reject science, and think that doing nothing promotes job growth.*”
- *george-w-bush-on-leno* — “I have to agree. The real blame must be cast upon those who support and follow poor leadership. It also comes because we hold those who will run our country to a lesser standard than an entry level anybody who lies on their resume. *When we accept being lied to and being mislead or misusing our system of governing to push through an agenda without proper vetting or participation, there needs to be a unified cry of the people to show the will of the people no matter which party the offender belongs. That is why we have to get away from class, race, religious, economic bickering between us or we are easily manipulated.*”
- *jobs-numbers-politics* — “Obama's plan for creating more jobs is to have the government spend more money that it doesn't have and let future generations pay for it. A better way would be to create an environment through legislation and regulation reform that would encourage job growth in the private sector. *Throwing more money into inefficient government jobs programs is not a long term solution for job growth, but it is a long term burden placed on taxpayers.*”
- *seven-keys-to-midterms* — “So are you saying they STOPPED doing it in 2008 and then STARTING doing it again in 2010..Is that what you are saying...Or are you saying that the dems did it in 2008 to get the house and then the gop did it again to get it back. either way it is pretty ridiculous. I do watch Mass do it every 2 yrs but that is to keep them dem and it doesnt [sic] flip. *The other way to think*

about it is, the urban community which supports the president and receives a tremendous amount of entitlement is very democratic, but they are compacted in small areas. The working and taxpaying American's are much more spread through out the country and therefore are better represented in the house."

Task-Related - Grouping

Comments coded as grouping focus on similarities and differences used to advance an argument.

- *shutdown-showdown* — “Unfortunately that is how government has been run almost 40 years. Take it back to Nixon's resignation as the catalyst for what has happened since. Yes, both houses threatened impeachment but the case would have never been brought had it not been for a left biased media. There were much worse cases of Presidential improprieties before and since without nearly the same impact. That was, in my opinion, the impetuous for all you see since. *The first retributions were the withholding of approval for federal judges that began with Clinton administration appointments and has invaded other aspects of almost daily governance.* Personally I see no turning back by either side which is not a good short or long term solution.”
- *obamacare-site-maintenance* — “It is normal and there are always bugs. Anytime something goes into the production environment it does not always work. You can do all the testing in the world but you really do not know until it goes live. *If it was that easy why did it take Medicare Part D under Bush 4 months to fix the bugs. Romney care took over a year to work properly.*”
- *jobs-numbers-politics* — “I was unemployed for a while also. I accepted a job at 40% of my previous salary to get back into the market. Accepting a 60% pay cut from my previous role was the best thing I could do. It let me support my family and get new experience. After a year I was able to get into a new job where my pay exceeded my pre-layoff pay. Also, if you refuse to get a lower paying job, then long term unemployment is your fault. You can call it discrimination, or accept that HR people see your long term unemployment as a reflection of you not accepting reduced income. Accepting a low paying job shows that you will do anything to get work- that reflects well on you to HR people. Sorry about your situation though.”

Task-Related - Induction

Induction uses inference to draw conclusions from patterns.

- *obamacare-site-maintenance* — “People hoping that the website will be the death of Obamacare are in dreamland. *The website was made by IT contractors used to making enterprise apps that take a few CEOs or executives at a time. It*

wasn't made by Silicon Valley kids. So the website bombing because of volume is not a big surprise. It would have happened if it was a Republican website. But it will eventually be fixed, so better look for another reason to hate Obamacare. In fact the website bombing months and months in advance of the real deadline (tax season) is beneficial to Obama because it lets his people iron out the bugs and build capacity. Everyone waits until the last second."

- *immigration-reform* — "Here is the thing, *We are a nation founded on immigrants [sic] that were forced out of their countries either from political or religious [sic] or famine turmoil. those immigrants [sic] became Americans [sic] and fought in the revolution. Today in our nation we have processes set up to deter overwhelming population growth and immigration. [sic] Today in our nation we have illegals enter our nation and do not wish to speak English [sic] and expect others to learn their language.* My fiancée's family is from Spain. When her parents traveled [sic] here to seek citizenship it took them 6 months to learn English [sic] and properly it is now their main language they assimilated to our great nation. Today in our nation we have immigrants who do not want to assimilate this troubling. If you seek citizenship you assimilate to the nation you seek residency. You change yourself not the whole country around you you [sic] seek to become American not Spanish [sic] not African [sic] not any other ethnicity or nation you seek to follow the constitution and be American and learn and assimilate to our nation or else go back to where you are from."

Task-Related - Deduction

Comments with deduction employ general principles to draw logical connections.

- *national-security-official-fired* — "Since White House officials are probably a pretty close bunch, it wouldn't take much work to discover who was behind the account. From there, they would have contacted Twitter once it was confirmed by both parties (WH and the official) and Twitter would have complied in deleting it. Yes, they have a right to pseudonyms, however they don't have the right to slander and insult their co-worker and other elected and public officials. From the information he gave and the names he used, it would have become clear someone on the inside was responsible. From there, it's a process of elimination. His job held him to higher standards, he chose to ignore them, and he paid the consequences for it."
- *poll-economy-optimism-shutdown* — "The real poll will be the holiday shopping numbers. People who are unemployed, unemployed, no longer part of the labor market or worried about joined any of the other three groups already mentioned will curtail their shopping. If the retail sales are down, THAT will be indicative of a poor economy. If the numbers are up, we might be on the upswing."
- *obama-read-my-lips-moment* — "First off, the most important thing to point out is that we don't live in the mythical 'free' market. There is nothing free in our capitalist system. The whole concept of a corporation is a legal creation to

facilitate business - i.e. government intervention in the supposedly natural world of the 'free' market. *The truth of the matter is that the government is massively involved in the economy. The question is one of balance - government intervention that balances between greasing the wheels of profit or protecting citizens from the destructive forces of profit-making. For example, child labor is profitable and it was once used heavily in Europe and here in America. However, this is one case where the government sided with the people rather than profit and made it illegal. These are all simple examples: the point is, capitalism isn't a law of nature - it's humans agreeing to play by certain rules. So is government. We can make choices about the rules. In this case, I think we should make the choice that our collective health shouldn't be a source of profit, but is a public good that should be protected and provided for by the government.*"

Task-Related - Synthesis

Synthesis requires the contributor to connect separate ideas to form a new perspective.

- *obamacare-website-four-reasons* — "Check your definitions. Most social scientists and politicians -- including Obama -- define the middle class as everyone making less than somewhere between \$100K and \$250K depending on the context and which way the wind is blowing. Most voters consider the middle class to be white-collar professionals with income levels somewhere between the upper class and blue-collar workers. *What you've missed is an entire class of people between FPL and middle class -- usually referred to as the working class or lower class. The subsidies are targeted to help the poverty class and working class. FYI: 300% of FPL for a family of 4 is ~75K. In my state, that family's subsidy would be approximately \$4K (silver plan) which stands a reasonable chance of being entirely consumed by their \$12K deductible. You should be able to substantiate most of this by digging through the statistics compiled by the IRS, the GSS and other sources if you're inclined to spend a few hours to track it down and make sense of it.*"
- *obamacare-site-maintenance* — "Please god people keep this in Perspective: *There was a bad launch of the web site that the Federal government created as the state exchanges for states that refused to participate, the site is getting better and will continue to get better, people lost the individual health insurance plans they had that did not meet the laws standards, and many people now have health insurance for the first time in their lives.*-All facts. Right now they are installing their final updates to the web sites servers to meet their self-imposed deadline. ...we are 2 months in to a 6 month enrollment period in the first year of a massive new law that is a huge shift in health insurance in this country, which is designed to end the abuses of the health insurance industry before, (insurance companies dropping, denying and capping coverage, people with pre-existing conditions being denied the ability to buy health insurance at a reasonable price,

and millions un-insured people who strain the health care system). *Is it time to panic? Can we declare this law dead because a web site did not work well for a couple months? Is this the end of liberalism? God no, that is absurd. Calm down people, the law is never going away because for it to go away would mean that congress would be able to over ride Obamas Veto by 2/3 of the house and Senate- that is not going to happen this year, next year, or the next 2 years, take a deep breath and chill.”*

Task-Related - Abstracting

Comments displaying abstracting summarize the issue into a brief form.

- *obama-read-my-lips-moment* — “I can not imagine a President making comments about a civil cases, making remarks about the name of a football team, or dividing this country into a thousand factions and then wallowing in the disruption. That is behavior unbecoming to any leader.”
- *poll-economy-optimism-shutdown* — “People can always look negative or the half-empty side of the glass. And my comment was indictive [sic] of (only what) is occurring in my small college-town. I know two years ago our (county) unemployment levels were some of the highest in the State. Now we are back to pre-recession levels and instead of layoffs the local companies and factories are hiring. The buildings on the town square have also received a facelift. Two new apartment projects have started building (and also used local hires and companies for their projects) and we have had several new small buisness [sic] owners (butcher-shop...coffee shop...and a restaurant/grill) open in the past year. All, also creating local jobs. Several major badly needed street repairs have also been completed and a drainage tile replaced to prevent a flooding problem we experience each year on the low end of town. All requiring manpower. The wages of the additional workers for the most part get pumped back into our local community. These are all signs of economic growth.”

Research Questions

Research Question 1

RQ 1: What is the distribution of task-related and not task-related comments based on Veerman and Veldhuis-Diermanse (2001) throughout CNN.com comment threads on all political news stories?

From the total of 86,847 comments, 686 comments (0.79%) were deemed to be task-related by the definition established by Veerman and Veldhuis-Diermanse (2001).

Table 5 illustrates the distribution of task-related comments by the day of the week, and Table 6 shows the distribution of task-related comments by individual article.

Table 5

Distribution of Task-Related Comments by Day of the Week

Day	Total Comments	# of Task-related Comments	% Task-related
Sunday	17,230	42	0.24%
Monday	27,020	173	0.64%
Tuesday	17,405	260	1.49%
Wednesday	10,707	109	1.02%
Thursday	8,827	37	0.42%
Friday	2,463	36	1.46%
Saturday	3,195	29	0.91%

To test for uniformity of distribution, the Kolmogorov-Smirnov (K-S) one-sample test was utilized due to its power when samples are small (Reinard, 2006). The K-S test for the percentage of task-related comments per day indicates that task-related comments are uniformly distributed across the seven days during the study ($Z = 0.692$). Conversely, a K-S test on the percentage of task-related comments per individual article results in a non-uniform distribution ($Z = 3.714$, $p < .01$).

The frequency distribution by day demonstrates an overall active interest in commenting on political stories in the early to midweek timeframe. As the weekend approaches, interest in commenting appears to wane as the number of stories likewise decreases. Despite the decrease in overall comments, the ratio of task-related comments remains consistent. As a result, task-related participation is not influenced by the day of an article's posting.

When examining individual articles, the uniformity of the ratio of task-related comments no longer exists. This variability can be witnessed in Table 6 through highly

commented upon pieces (e.g., “shutdown-showdown” for Sunday and Monday) that produce very few task-related comments in contrast with articles that generate few comments (e.g., “supreme-court-affirmative”, “obamacare-website-problems”) that have a higher percentage of total comments that stay on task.

Table 6

Distribution of Task-Related Comments by Article

Day	Title	Total Comments	Task-related Comments	% Task-related
Sunday	shutdown-showdown	17,230	42	0.24%
Monday	furloughed-workers-food-pantries	1,377	22	1.60%
Monday	reid-mcconnell-shutdown-history	399	0	0.00%
Monday	shutdown-showdown	25,188	141	0.56%
Monday	supreme-court-affirmative	56	10	17.86%
Tuesday	jobs-numbers-politics	196	26	13.27%
Tuesday	menendez-donor-melgen-search	10	1	10.00%
Tuesday	national-security-official-fired	1,543	26	1.69%
Tuesday	obamacare-sebelius-interview	8,718	57	0.65%
Tuesday	obamacare-website-four-reasons	3,157	89	2.82%
Tuesday	obamacare-website-problems	100	5	5.00%
Tuesday	poll-economy-optimism-shutdown	3,681	56	1.52%
Wednesday	albuquerque-late-term-abortion-referendum	878	27	3.08%
Wednesday	congress-shutdown-speculation	341	7	2.05%
Wednesday	congressman-cocaine-possession	2,834	6	0.21%
Wednesday	george-w-bush-on-leno	2,810	14	0.50%
Wednesday	medal-of-freedom-unsung-heroes	2	1	50.00%
Wednesday	midterms-obamacare-vs-shutdown	2,583	30	1.16%
Wednesday	seven-keys-to-midterms	743	6	0.81%
Wednesday	trey-radel-profile	43	6	13.95%
Wednesday	virginia-politician-attack	473	12	2.54%
Thursday	american-drug-cartels-explosives	24	1	4.17%
Thursday	congress-obamacare-website	7,947	10	0.13%
Thursday	immigration-reform	667	17	2.55%
Thursday	u-s-drones-pakistan-report	189	9	4.76%
Friday	obamacare-site-maintenance	2,463	36	1.46%
Saturday	obama-read-my-lips-moment	3,195	29	0.91%

The article posting cycle follows a curve through the week with the weekend having few stories (one each on Friday, Saturday, and Sunday), more articles at the beginning and end of the work week (four each on Monday and Thursday), and the greatest number posted midweek (seven on Tuesday and nine on Wednesday). Despite this, the decision to comment more clearly relates to the topic of the given article with those covering broadly controversial topics such as the government shutdown and national health care receiving a greater number of comments than those articles that focus on either a narrower topic or address less provocative issues.

Research Question 2

RQ 2: What is the distribution of Potter's (2004) skills of media literacy throughout CNN.com comment threads on all political news stories?

Beyond the initial coding, the 686 comments determined to be task-related received additional coding under Potter's skills of media literacy. A single task-related comment could receive multiple designations of media literacy skills although each comment was coded only once under a particular skill. Table 7 shows the distribution of media literacy skills by day of the week.

K-S tests on the percentage of media literacy skills demonstrated by day indicate that all but two of the skills, induction and abstracting, were uniformly distributed across all seven days. Table 8 contains the full set of these results.

Table 9 illustrates how media literacy skills were distributed across each of the twenty-seven coded articles.

Table 7

Distribution of Media Literacy Skills by Day

Day	Total Comments	Analysis	Evaluation	Grouping	Induction	Deduction	Synthesis	Abstracting
Sunday	17,230	40 (0.23%)	13 (0.08%)	4 (0.02%)	3 (0.02%)	9 (0.05%)	3 (0.02%)	0 (0.00%)
Monday	27,020	168 (0.62%)	137 (0.51%)	53 (0.2%)	37 (0.14%)	54 (0.2%)	9 (0.03%)	2 (0.01%)
Tuesday	17,405	256 (1.47%)	113 (0.65%)	28 (0.16%)	9 (0.05%)	38 (0.22%)	12 (0.07%)	4 (0.02%)
Wednesday	10,707	108 (1.01%)	74 (0.69%)	10 (0.09%)	10 (0.09%)	9 (0.08%)	1 (0.01%)	1 (0.01%)
Thursday	8,827	36 (0.41%)	16 (0.18%)	3 (0.03%)	5 (0.06%)	7 (0.08%)	2 (0.02%)	0 (0.00%)
Friday	2,463	23 (0.93%)	24 (0.97%)	5 (0.2%)	9 (0.37%)	6 (0.24%)	2 (0.08%)	4 (0.16%)
Saturday	3,195	29 (0.91%)	7 (0.22%)	5 (0.16%)	3 (0.09%)	11 (0.34%)	6 (0.19%)	1 (0.03%)

Table 8

K-S Test Results on Media Literacy Skills by Day

	Percent Analysis	Percent Evaluation	Percent Grouping	Percent Induction	Percent Deduction	Percent Synthesis	Percent Abstracting
Kolmogorov-Smirnov Z	.609	.711	.827	1.359	.846	1.202	1.758
Asymp. Sig. (2-tailed)	.852	.693	.500	.050**	.472	.111	.004**

Table 9

Distribution of Media Literacy Skills by Article

Day	Title	Total Comments	Analysis	Evaluation	Grouping	Induction	Deduction	Synthesis	Abstracting
Sunday	shutdown-showdown	17,230	40 (0.23%)	13 (0.08%)	4 (0.02%)	3 (0.02%)	9 (0.05%)	3 (0.02%)	0 (0.00%)
Monday	furloughed-workers-food-pantries	1,377	23 (1.67%)	15 (1.09%)	2 (0.15%)	3 (0.22%)	2 (0.15%)	0 (0.00%)	0 (0.00%)
Monday	reid-mcconnell-shutdown-history	399	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Monday	shutdown-showdown	25,188	137 (0.54%)	114 (0.45%)	46 (0.18%)	34 (0.13%)	51 (0.20%)	9 (0.04%)	2 (0.01%)
Monday	supreme-court-affirmative	56	8 (14.29%)	8 (14.29%)	5 (8.93%)	0 (0.00%)	1 (1.79%)	0 (0.00%)	0 (0.00%)
Tuesday	jobs-numbers-politics	196	26 (13.27%)	11 (5.61%)	5 (2.55%)	2 (1.02%)	1 (0.51%)	1 (0.51%)	0 (0.00%)
Tuesday	menendez-donor-melgen-search	10	1 (10.00%)	1 (10.00%)	0 (0.00%)	0 (0.00%)	1 (10.00%)	0 (0.00%)	0 (0.00%)
Tuesday	national-security-official-fired	1,543	25 (1.62%)	12 (0.78%)	4 (0.26%)	1 (0.06%)	5 (0.32%)	1 (0.06%)	0 (0.00%)
Tuesday	obamacare-sebelius-interview	8,718	55 (0.63%)	21 (0.24%)	7 (0.08%)	1 (0.01%)	7 (0.08%)	5 (0.06%)	3 (0.03%)
Tuesday	obamacare-website-four-	3,157	88 (2.79%)	31 (0.98%)	7 (0.22%)	1 (0.03%)	14 (0.44%)	3 (0.10%)	0 (0.00%)

	reasons								
Tuesday	obamacare- website- problems	100	5 (5.00%)	2 (2.00%)	1 (1.00%)	0 (0.00%)	1 (1.00%)	0 (0.00%)	0 (0.00%)
Tuesday	poll-economy- optimism- shutdown	3,681	56 (1.52%)	35 (0.95%)	4 (0.11%)	4 (0.11%)	9 (0.24%)	2 (0.05%)	1 (0.03%)
Wednesday	albuquerque- late-term- abortion- referendum	878	27 (3.08%)	15 (1.71%)	5 (0.57%)	4 (0.46%)	3 (0.34%)	0 (0.00%)	1 (0.11%)
Wednesday	congress- shutdown- speculation	341	7 (2.05%)	3 (0.88%)	0 (0.00%)	0 (0.00%)	1 (0.29%)	0 (0.00%)	0 (0.00%)
Wednesday	congressman- cocaine- possession	2,834	6 (0.21%)	6 (0.21%)	0 (0.00%)	0 (0.00%)	1 (0.04%)	1 (0.04%)	0 (0.00%)
Wednesday	george-w- bush-on-leno	2,810	14 (0.50%)	10 (0.36%)	2 (0.07%)	1 (0.04%)	2 (0.07%)	0 (0.00%)	0 (0.00%)
Wednesday	medal-of- freedom- unsung-heroes	2	1 (50.00%)	1 (50.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Wednesday	midterms- obamacare-vs- shutdown	2,583	30 (1.16%)	22 (0.85%)	0 (0.00%)	3 (0.12%)	1 (0.04%)	0 (0.00%)	0 (0.00%)
Wednesday	seven-keys-to- midterms	743	6 (0.81%)	4 (0.54%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Wednesday	trey-radel- profile	43	5 (11.63%)	6 (13.95%)	2 (4.65%)	1 (2.33%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Wednesday	virginia- politician- attack	473	12 (2.54%)	7 (1.48%)	1 (0.21%)	1 (0.21%)	1 (0.21%)	0 (0.00%)	0 (0.00%)

Thursday	american-drug-cartels-explosives	24	1 (4.17%)	1 (4.17%)	1 (4.17%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Thursday	congress-obamacare-website	7,947	9 (0.11%)	2 (0.03%)	2 (0.03%)	1 (0.01%)	1 (0.01%)	1 (0.01%)	0 (0.00%)
Thursday	immigration-reform	667	17 (2.55%)	12 (1.80%)	0 (0.00%)	3 (0.45%)	3 (0.45%)	0 (0.00%)	0 (0.00%)
Thursday	u-s-drones-pakistan-report	189	9 (4.76%)	1 (0.53%)	0 (0.00%)	1 (0.53%)	3 (1.59%)	1 (0.53%)	0 (0.00%)
Friday	obamacare-site-maintenance	2,463	23 (0.93%)	24 (0.97%)	5 (0.20%)	9 (0.37%)	6 (0.24%)	2 (0.08%)	4 (0.16%)
Saturday	obama-read-my-lips-moment	3,195	29 (0.91%)	7 (0.22%)	5 (0.16%)	3 (0.09%)	11 (0.34%)	6 (0.19%)	1 (0.03%)

K-S tests on media literacy skills by individual article yielded no evidence of uniform distributions among any of the skills (Table 10).

Table 10

K-S Test Results on Media Literacy Skills by Article

	Percent Analysis	Percent Evaluation	Percent Grouping	Percent Induction	Percent Deduction	Percent Synthesis	Percent Abstracting
Kolmogorov-Smirnov Z	3.714	3.843	3.902	3.629	4.161	3.686	4.041
Asymp. Sig. (2-tailed)	.000**	.000**	.000**	.000**	.000**	.000**	.000**

Among the seven media literacy skills, analysis appeared most often with 660 occurrences followed by evaluation with 384, deduction with 134, grouping with 108, induction with 76, synthesis with 35, and abstracting with 12. Daily patterns did not deviate from this order other than a few instances differing by a small number. Given the gap in overall coding, the only difference of note is that evaluation outranked analysis on Friday; however, the issue in Friday's lone article could explain the difference and additional coding would be required in order to understand whether a true difference exists.

Regarding the distribution of skills across days, the uniformity of most skills indicates that the day of the week has no influence on when those particular skills are demonstrated. For induction, the K-S test reached significance precisely at $p < .05$, and while this was enough in the current sample to reject the null hypothesis, it is arguably close enough to be unable to draw a meaningful conclusion. By contrast, abstracting demonstrated a clearer lack of uniformity as indicated primarily by the comparatively larger percentage of abstracting comments on the day with the fewest overall comments.

Given the wide range of total comments across all stories, the corresponding K-S test results that find no uniform distributions of any media literacy skills do not surprise. Interesting to note is that in cases when a story has three thousand or more comments, the distribution of skills closely follows the overall dispersal. The only exception to this particular situation is Thursday's article "congress-obamacare-website". When a story has fewer than three thousand comments, the distribution throughout a story appears to randomize although analysis regularly occurs most frequently.

Research Question 3

RQ 3: At what point within a comment stream is the greatest concentration of media literacy skills demonstrated for all political news stories?

To determine the concentration of media literacy skills, comments were combined into seven twenty-four hour periods to form seven days of coding. The posting date and time of the first comment for each article was used to define the start of each twenty-four hour period described as a "day" below. Table 11 and Figure 1 depict the distribution of media literacy skills across the seven days of coded comments.

Table 11

Distribution of Media Literacy Skills by Twenty-Four Hour Period

Day	Analysis	Evaluation	Grouping	Induction	Deduction	Synthesis	Abstracting	Total ML Comments	Total Comments	Percent ML of Total Comments
Day 1	595	346	102	72	128	32	12	1271	80682	1.58%
Day 2	49	26	5	2	4	2	0	103	4780	2.15%
Day 3	5	7	1	2	2	1	0	11	500	2.20%
Day 4	5	0	0	0	0	0	0	10	204	4.90%
Day 5	2	1	0	0	0	0	0	3	123	2.44%
Day 6	1	1	0	0	0	0	0	2	284	0.70%
Day 7	3	3	0	0	0	0	0	6	262	2.29%

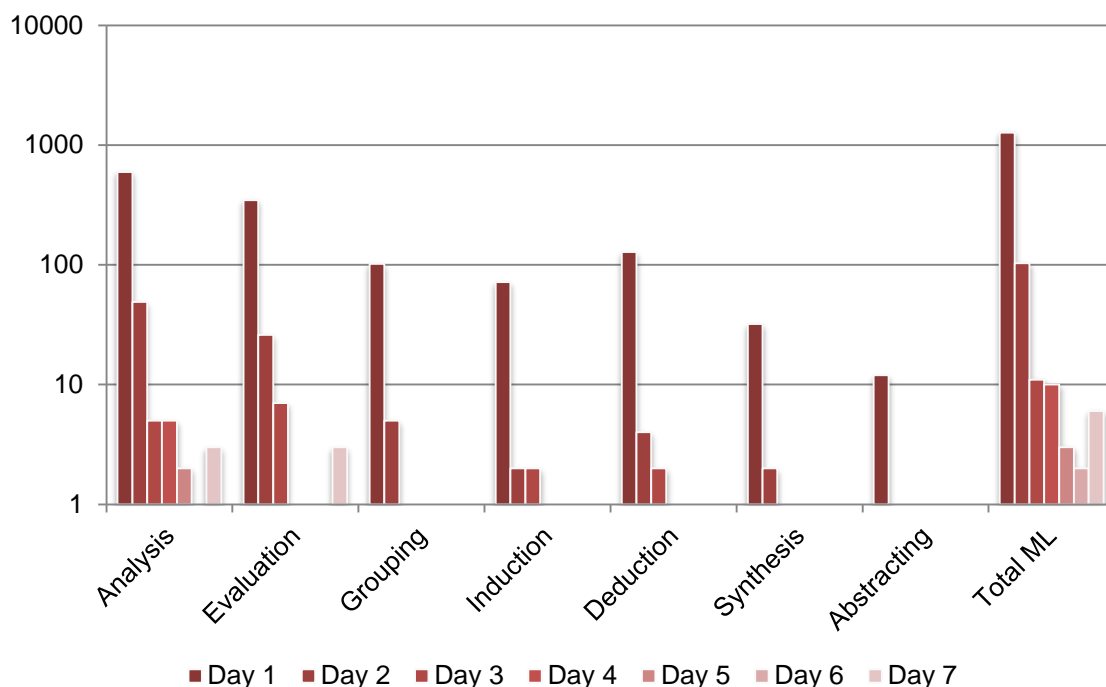


Figure 1. Daily comments demonstrating media literacy. This figure depicts the trend for each skill of media literacy per day from which comment data was captured. The vertical axis is scaled at \log_{10} to illustrate trends for each skill over pure values.

The frequency distribution and corresponding chart indicate that the overwhelming majority of contributors comment on an article within the first twenty-four hours of the original posting of a story. The total of media literate comments posted follows the same trend, and accordingly, the ratio of media literacy comments to total comments is distributed uniformly across the seven days of coding ($K-S Z = 1.172$).

For every media literacy skill demonstrated, the number of coded comments drops off or stays even across the first four days. In the case of analysis and evaluation, the final twenty-four hour period featured a slightly larger number of coded comments than the previous three days; however, the small number of comments does not permit a reliable conclusion.

Research Question 4

RQ 4: Will political stories that elicit a higher number of comments evince a higher correlation with demonstrated media literacy skills than those with fewer comments?

To test the existence of a connection between the number of total comments for an article and the number of media literacy skills demonstrated within the same story, a correlation between individual and total media literacy skills against total comments was measured using Pearson's *r*. Table 12 indicates the correlations with significance.

Table 12

Correlations of Total Comments to Media Literacy Skills (n=26)

		Analysis	Evaluation	Grouping	Induction	Deduction	Synthesis	Abstracting	Total Media Literacy Skills
Total Comments	Pearson's <i>r</i>	.762**	.771**	.801**	.770**	.829**	.794**	.367	.810**
**, Correlation is significant at the 0.01 level (2-tailed).									

Losh (2004, cited by Reinard, 2006, p. 94) offers simple descriptions to translate Pearson's *r* values: 1.0 is "perfect", 0.76-0.99 is "very strong", 0.51-0.75 is "strong", 0.26-0.50 is "moderate", 0.11-0.25 is "weak", 0.01-0.10 is "very weak", and 0 is "no relationship". These translations will be used to describe all correlations herein.

For total media literacy and all individual skills except for abstracting, "very strong" direct correlations, all significant at $p < .01$, were found between those measures and the overall number of comments posted. The strength demonstrated in these cases indicates that more media literate comments occur in concert with a greater number of overall comments. Abstracting fell short of a significant association and had ranked in the "moderate" range of correlation. The concentration of comments exhibiting the skill

of abstracting being found within only a few articles (Table 9) likely plays a role in the lack of association. Synthesis (n = 35) has nearly as few overall comments as abstracting (n = 12); however, comments coded as synthesis occur across a wider range of articles than do those labeled as abstracting.

Research Question 5

RQ 5: Does the frequency of comments by an individual user correlate directly with the demonstrated frequency of media literacy skills?

Individual users were identified by a numeric ID attached to each user's registration through CNN.com. Testing for a connection between the comments by individual users and the total number of media literate comments made was accomplished through a correlation measured using Pearson's r. Due to a limitation in the commenting software, twenty-five task-related comments had a user ID of "NULL", which prevented accurate identification of whether all of the comments originated from the same participant or from a variety of participants; thus all twenty-five comments were grouped together. Within this set of comments, fifty-nine media literacy skills were documented. To account for this, two sets of correlations were run, one with the NULL user and one without. Table 13 contains both sets of results.

Table 13

Correlations of Participant Comment Frequency to Media Literacy Skills

	n	Analysis	Evaluation	Grouping	Induction	Deduction	Synthesis	Abstracting	Total Media Literacy Skills
Total Comments w/ NULL user id	8396	.626**	.624**	.560**	.332**	.409**	.406**	.270**	.676**
Total Comments w/o NULL user id	8395	.289**	.269**	.146**	.109**	.151**	.071**	.008	.289**

***.* Correlation is significant at the 0.01 level (2-tailed).

With the NULL user id included, all correlations were direct and significant at $p < .01$. Those for analysis, evaluation, grouping, and total media literacy skills had a “strong” relationship with the total comments made by individual users. Induction, deduction, synthesis, and abstracting revealed a “moderate” relationship with total individual comments. Removing the NULL user id presents no change in direction or significance at $p < .01$, except for abstracting, which did not achieve significance even at $p < .05$. The removal did, however, reduce the impact of the correlations. Analysis, evaluation, and total media literacy skills now showed a “moderate” relationship with total comments by an individual. Grouping and deduction had a “weak” connection with individual comments, whereas induction and synthesis had a “very weak” relationship.

Having fifty-nine out of a total of 1,406 total media literacy occurrences (4.20%) concentrated on a single user id of “NULL” skewed the correlation results to give the appearance of a greater connection between the two variables than likely existed. Although not inconceivable, the chance that “NULL” represents a single user is low given the abundance of other data indicating that media literate comments occur in a much more widespread pattern across the collection of contributors.

Research Question 6

RQ 6: Do comments that demonstrate media literacy receive more direct replies than those that do not?

Of the 86,847 comments captured, 367 out of 686 media literate comments (53.50%) received a total of 645 direct replies. Of those that did not demonstrate media literacy, 40,537 out of 86,161 comments (47.05%) received a total of 58,497 direct replies. Running a point-biserial correlation between the dichotomous variable of “task-

related” and the ratio variable of “number of direct replies” results in $r = .020$ ($p < .01$, $n=86847$). Pearson’s r served as an approximation of the point-biserial calculation.

In both cases of media literate and not media literate comments nearly half of the comments received direct replies. Media literate comments received an average of 0.94 replies per comment while those not displaying media literacy received 0.68 replies per comment. Considering only comments that received direct replies, media literate comments had 1.76 replies per comment, and not media literate postings had 1.44 replies per comment. An independent samples t-test for all comments with the two groups defined as task-related versus not task-related results in a significant difference between the two ($t = -5.874$, $n_{ntr} = 86161$, $n_{tr} = 686$, $p < .01$). Running the same test only on comments that received direct replies also finds a significant difference between the two groups ($t = -4.528$, $n_{ntr} = 40537$, $n_{tr} = 367$, $p < .01$). Looking solely at frequency, media literate comments gather a greater number of replies.

When looking at comments individually, the correlation between the two variables bears out a “very weak” direct association. As previously, the vastly larger number of comments failing to demonstrate media literacy over those that do likely explains the lack of a meaningful connection. A logistic regression served as an additional test for the ability for the number of direct replies to predict whether a comment is media literate or not. The test showed that for every one additional direct reply a comment receives, it is 1.05 times more likely that the comment is media literate (Wald chi-square = 14.184, $p < .01$).

Research Question 7

RQ 7: When participation of comment contributors is reasonably consistent within an individual story, does the quantity of media literacy skills demonstrated correlate with the length of time the conversation continues?

Scatterplots of user IDs versus posting date/time clarified the existence of consistent contributions over the timespan of an article. If contributors regularly posted, the plots should indicate masses both along the horizontal and vertical axes. In no instance did an article demonstrate consistent postings from beginning to end; however, five of the twenty-seven articles contained continuous contribution for a notable length of time. Figure 2 offers a sample scatterplot of one of five articles in which consistent posting by consistent users was found.

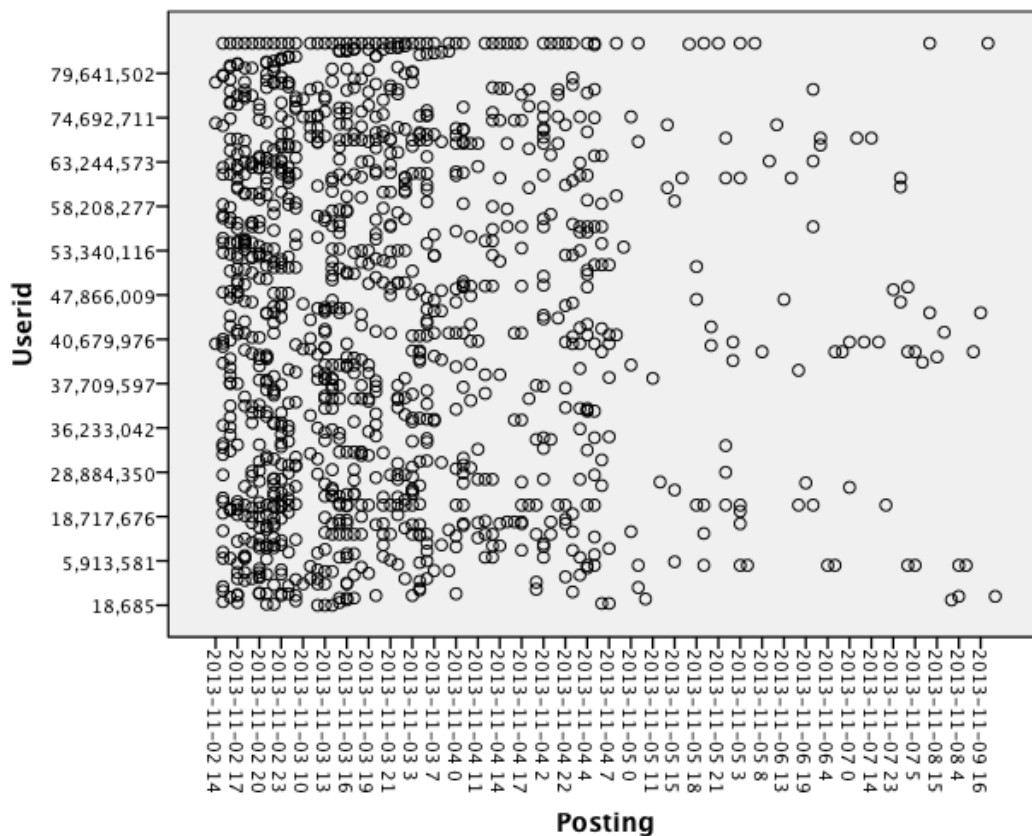


Figure 2. Scatterplot of users' comment posting on "Obama-read-my-lips-moment". This figure uses a scatterplot to demonstrate regular contributions from users over the course of data collected from the article's comment stream.

For each of the five articles determined to contain consistent posts, the total length of conversation in minutes was calculated determining the difference between the times of first and last postings. Table 14 lists the articles and conversation lengths.

Table 14

Articles With Consistent User Comment Posting

Day	Title	Conversation Length (Minutes)
Sunday	shutdown-showdown	9090
Monday	shutdown-showdown	11094
Tuesday	jobs-numbers-politics	4293
Tuesday	poll-economy-optimism-shutdown	8730
Saturday	obama-read-my-lips-moment	10362

With the length of conversations determined, correlations were calculated between minutes and the quantity of each media literacy skill as well as the total media literacy skills demonstrated for each article. Table 15 indicates the Pearson's *r* values for those correlations.

Table 15

Correlations of Total Conversation Length to Media Literacy Skills (n=5)

		Analysis	Evaluation	Grouping	Induction	Deduction	Synthesis	Abstracting	Total Media Literacy Skills
Conversation Length (minutes)	Pearson's <i>r</i>	.565	.503	.494	.532	.660	.809	.725	.561

None of the eight correlations of either total or individual media literacy skills against conversation length achieved statistical significance. Although the results cannot be considered conclusive, all correlations indicate a direct relationship with the overall potential for "strong" to "very strong" associations between length and each skill.

As an additional test, conversation length was tested for correlation against the percentage of media literacy skills exhibited. Table 16 contains those values.

Table 16

Correlations of Total Conversation Length to Percentage of Media Literacy Skills (n=5)

		% Analysis	% Evaluation	% Grouping	% Induction	% Deduction	% Synthesis	% Abstracting	% Total Media Literacy
Conversation Length (minutes)	Pearson's r	-.940*	-.939*	-.916*	-.907*	-.656	-.848	.447	-.934*
*. Correlation is significant at the 0.05 level (2-tailed).									

Viewing the results in this manner indicates that the ratios of four individual skills (analysis, evaluation, grouping, and induction) and total media literacy skills to total comments inversely, very strongly, and significantly ($p < .05$) correlate with the length of the conversation. In other words, the shortest conversations have the greatest proportion of these particular media literacy skills when participation is regular. Three skills had at least moderate correlations with length although they were not statistically significant.

Summary

RQ1 demonstrated a pattern of commenting that peaks during the early part of the week and wanes as the weekend approaches. In spite of this, task-related comments appear uniformly throughout the week showing no preference for when contributors demonstrate knowledge construction. Viewing articles individually, however, reveals a lack of uniformity.

Delving deeper, RQ2 views the same distributions of days and articles against the specific skills of media literacy. Demonstration of each skill largely follows the same

pattern of task-related comments with a greater number occurring during days with larger total numbers of comments. By day, five of the seven skills uniformly occur throughout the week. None of the media literacy skills on individual articles appear uniformly.

RQ3 finds that most commenting occurs within the first twenty-four hours of an article being posted. Accordingly, participants post the most media literate comments in that same timeframe. Although the quantity of comments is greater, the percentage of media literate comments spreads uniformly among the seven twenty-four hour periods.

RQ4 indicates that articles with larger numbers of comments tend to have larger numbers of media literate comments. In all but one case of individual and total media literacy skills, a statistically significant “very strong” direct relationship was found.

For RQ5, correlations between total individual user comments and the number of media literacy skills demonstrated showed significant but generally weak direct relationships. These associations were found after eliminating a single user id that served as a catchall for otherwise unidentifiable participants.

RQ6 demonstrated that media literate comments collectively receive on average more direct replies than those that do not exhibit media literacy. Calculating a correlation between media literate comments and the number of direct replies indicates a very weak direct relationship, however.

Lastly, RQ7 shows promise that a longer conversation correlates with media literacy skills when participants consistently contribute. None of the Pearson’s r values for quantity reached statistical significance. Ratios for several skills and overall media literacy indicated an significant, inverse correlation to conversation length.

The final chapter will revisit the research questions posed above, examining each in detail and forming conclusions based on the findings. Additionally, chapter five will address the last research question regarding the existence of a connection between comments on CNN.com political stories and media literate knowledge construction. To conclude, limitations of this study will be addressed, and future research will be proposed.

CHAPTER FIVE

DISCUSSION

Introduction

This study derived from a problem created by the presentation of news in which readers' engagement with the information requires a degree of higher-level mental processing in order to better understand what is being communicated. Possessing the skills of media literacy allows knowledge construction to occur beyond simply consuming the story as offered. Consequently, this study was needed to explore the relationship between the consumption of news and the contemporary ability for consumers to participate in the dialogue through online comments. The purpose of the study, hence, aimed at discovering the existence of media literacy by examining comments in the context of one type of story posted by a world-recognized news organization.

The following sections offer interpretations of the results of this study. In the next section, the results of the first seven research questions will receive detailed analysis and discussion, and the eighth research question will be addressed. The limitations to these interpretations and those of the study in general will follow. Subsequently, future research in this field will be suggested. Finally, conclusions drawn from the study as a whole will be offered.

Interpretation of the Results

Research Question 1

RQ 1: What is the distribution of task-related and not task-related comments based on Veerman and Veldhuis-Diermanse (2001) throughout CNN.com comment threads on all political news stories?

When considering the distribution of comments by day of the week, it becomes evident that much of the activity for both article posting and comment posting occurs from Sunday through Thursday with a sharp drop-off in both for Friday and Saturday. Accordingly, the number of task-related comments follows the same trend, peaking on Tuesday and bottoming out on Saturday. With political news, the likelihood of activity is arguably far more likely during the workweek for multiple reasons. Since legislators do not regularly sit in session during the weekend, the amount of political news being generated is reduced. In addition, attention to posting comments on the weekend may be diminished because users in general may spend less time in front of a computer on the weekend. An analysis of the times that comments were posted reveals that 62.22% of comments were posted during the conventional work hours in the United States (8:00AM–5:00PM regardless of time zone). However, demographics and other pertinent information about those contributing would be necessary to support this conclusion.

A different pattern emerges after changing the view of the data from simply quantity of comments to the ratio of task-related comments against total comments for the particular day. Rather than following a curve, a test of uniformity reveals that participants, regardless of the day of the week, offered a consistent percentage of task-related comments. Given the vast difference between the total number of comments on Monday (27,020) and Friday (2,463), the uniformity of task-related comment ratios somewhat surprises. At first consideration, it might be expected that the sheer number of comments among the Monday articles would open the possibility for greater amounts of media literate discussion. As the numbers show, it would begin to indicate, however, that

the potential for media literacy skills being present is based more on content of the stories as opposed to when an article appears online or the number overall comments available.

Viewing articles individually presents a different picture. No discernible pattern emerges when considering the stories chronologically. The same test of uniformity as above indicates that uniformity does not exist among the task-related comment ratios. Sorting by total comments reveals that the ten articles most commented upon focus on the government shutdown, the national healthcare debate, the drug arrest of a congressman, or the appearance of former President George W. Bush on *The Tonight Show with Jay Leno*. Sorting by total task-related comments eliminates the drug arrest and talk show from the top ten and replaces them with articles on an abortion referendum in New Mexico and the firing of a national security official.

Supporting a previous notion, the patterns of comment posting suggest that the topic and content of an article have greater influence not only on how much response a story receives but also on the quantity of task-related comments offered. In particular, both healthcare legislation in the United States and the shutdown of the government in 2013 presented controversial topics to which readers flocked with thoughts and opinion, validating Weber's (2013) claim that such themes draw greater interest. What cannot be concluded from these numbers is whether particular topics encourage greater exhibition of media literate skills or rather that the contributions simply follow the fact that a greater number of comments allows for more media literacy to be present.

Interestingly, sorting by the ratio of task-related comments to total comments highlights that stories with far fewer comments than those listed above receive larger proportions of task-related comments. Of greater note, only four articles of the top ten in

this ranking regarded topics found in the previous lists: two regarding healthcare, the abortion article, and a different article about the congressman arrested for drug possession. The others although arguably controversial in their own way focus to a greater extent on topics receiving less coverage such as job statistics, affirmative action, and the American military's use of drones in Pakistan. A question for further exploration would ask whether the ratios of task-related comments are reduced in topics of greater popularity due to the sheer quantity of comments or whether the popularity itself discourages thoughtful examination.

Research Question 2

RQ 2: What is the distribution of Potter's (2004) skills of media literacy throughout CNN.com comment threads on all political news stories?

The findings for RQ2 as distributed by day of the week exhibit many of the same features as those for RQ1. The quantity of each media literacy skill tends to reach its maximum on Monday or Tuesday and flattens out by the subsequent weekend. It is likely that this pattern merely follows the same curve established by the total of overall comments and the previously discussed focus on political stories during the workweek.

Comparing individual media literacy skill ratios to total comments revealed uniformity throughout the week for analysis, evaluation, grouping, deduction, and synthesis. The skills of induction and abstracting failed to show uniformity from day to day. Much as above, the consistency of posting five of the skills points toward other factors influencing the exhibition of those traits. The uniformity test for induction was borderline in rejecting the null hypothesis; therefore, with only a small change in the dataset, uniformity could have been found. Abstracting had more evident reason to reject

the null hypothesis, but the very small number of comments coded as this skill gives pause to accepting this conclusion.

By article, any chronological pattern disappears as occurred in RQ1. Similarly, no uniformity exists for any skill ratio. This continues to suggest that the topic of an article draws the most participation from all of those who contribute. Sorting on each of the media literacy skills shows that the popular controversial topics at the time of the study received the most media literate comments. Again, a reliable conclusion cannot be drawn as to whether the topic itself encourages media literacy or if quality coincides with quantity.

Following the pattern established in RQ1, sorting by the ratio of each skill to total comments indicates that the less popular article topics receive a greater proportion of media literate comments than those with large numbers of total posts. This is particularly evident in the first five skills listed from analysis through deduction. Synthesis and abstracting are found as frequently in popular and less popular stories likely due to the low number of comments coded as either skill.

Research Question 3

RQ 3: At what point within a comment stream is the greatest concentration of media literacy skills demonstrated for all political news stories?

Over the course of the seven days following the posting of an article, an overwhelming majority of the all comments offered occur within the first twenty-four hours (92.91%). Accordingly, 90.40% of all media literate comments occur in the same timeframe. In this realm of social media, a post draws intense interest for commenting in the time immediately following its appearance before waning exponentially (Asur, Huberman, Szabo, & Wang, 2011; Wu & Huberman, 2007). Looking at basic quantities,

it stands to reason that most media literate comments are found during the first day because it offers the greatest likelihood that anyone will comment during that time.

The percentage of media literate comments to total comments per twenty-four hour period indicates a contrary situation. A test of uniformity across the seven days shows that no one period has a significantly different ratio of media literate comments than any other. Despite the skew of comments toward the hours immediately after posting, the probability that media literate comments will appear is consistent throughout a full week of a story existing online. This finding has implications for upcoming questions.

Research Question 4

RQ 4: Will political stories that elicit a higher number of comments evince a higher correlation with demonstrated media literacy skills than those with fewer comments?

Using Pearson's r as a measurement, articles that demonstrate more media literate skills in their comments correlate very strongly with those that have a large number of total comments. The lone exception is for the specific skill of abstracting, which did not achieve significance. The associations are not surprising given that logically a greater amount of total participation offers a greater chance of a particular outcome occurring.

What remains interesting to note in light of this finding is how stories with few total comments contain a relatively larger proportion of media literacy skills than those with more overall comments. This may suggest that multiple factors impact the expression of media literacy. First, as noted above, more overall posts increases the chances that media literate posts will exist. Second, more overall posts decreases the ratio of media literate skills through the existence of large numbers of not task-related

contributions. Third, fewer not task-related comments allows task-related comments to appear more prominently to those wishing to participate with media literate ideas.

Research Question 5

RQ 5: Does the frequency of comments by an individual user correlate directly with the demonstrated frequency of media literacy skills?

An unforeseen problem with data collection occurred when nearly seven percent of all comments collected were missing a valid user identification number. At this time it is unknown whether the data was missing in the original CNN.com comments or was accidentally eliminated during data collection. Despite this setback, only twenty-five of these 5,845 comments were coded as task-related, which generated only fifty-nine media literacy skills (4.20% of all media literacy skills demonstrated); thus, the impact on the study's findings was mitigated. To ensure that all data was accounted for, two sets of correlations were run with one including the blank user ("NULL") and one without.

With the NULL user included, 8,396 distinct users offered comments. The number of comments made by an individual user correlated significantly with the frequency of all seven media literacy skills as well as with total skills demonstrated, and all were either strong or moderate connections. Eliminating the NULL user reduced the total users by one to 8,395. This change impacted the correlations by not only leaving abstracting as not statistically significant, but also the impact of the statistically significant skills reduced to levels of very weak (2), weak (2), or moderate (3).

The NULL user has a very low likelihood of truly representing one single contributor, and more likely NULL was a set of many different people whose identifying data was lost, missing, or never captured. As a result, the latter of the correlations logically has a greater chance of being representative of the findings. Consequently,

although a significant correlation exists in seven of the eight cases, the relationships indicate that users who post more often do not necessarily exhibit a greater quantity of media literacy skills. In concert with the propositions from the previous question, further questions arise from this finding. Do users who demonstrate media literacy do so consistently when posting? Do users increase in media literacy skills shown as they comment more and more frequently? Do users who post infrequently combine more media literate skills into single posts versus spread over multiple posts?

Research Question 6

RQ 6: Do comments that demonstrate media literacy receive more direct replies than those that do not?

Direct replies are those that immediately succeed a comment versus those that appear further down a tree of posts. Further, direct replies should address the content of its parent comment although they do not necessarily in practice. By consequence, a direct reply arguably indicates that the content of a comment has enough substance to deserve a response. As a result, this question aimed to explore whether media literacy leads to additional media literacy.

Using a point-biserial correlation to test for an association between a comment being task-related and the number of direct replies it received, a very weak statistically significant connection was found. The fact that an association exists was expected; however, its weakness comes somewhat unexpectedly when considering the significant difference found between the mean number of direct replies received by media literate comments over not media literate comments. However, despite the low correlation coefficient, the logistical regression test supports the significance of direct replies as a predictor of whether a comment contains at least one media literate skill.

Research Question 7

RQ 7: When participation of comment contributors is reasonably consistent within an individual story, does the quantity of media literacy skills demonstrated correlate with the length of time the conversation continues?

Having only five of the twenty-seven articles offering data to indicate consistent contributions limited the ability to generalize the findings for this question to other articles on CNN.com. What was found is that longer conversations show the potential for producing additional quantities media literacy although the correlations were not statistically significant. In opposition, the ratios for four skills plus total media literacy demonstrated significant inverse correlations with conversation length indicating that shorter conversations generate a greater percentage of media literacy.

For pure quantity, it can logically be accepted that the more comments that exist that the greater the chance is that more media literacy skills will be present. The very strong inverse correlations for length and proportions of skills present a more interesting avenue to explore further. Although the sample size was very small for addressing this question ($n = 5$), its results coincide with the discovery in earlier questions that across the entire sample set stories with fewer comments received a higher percentage of media literate comments. Total comments do not necessarily correspond to the length of conversation; however, the reasons for the connection between conversations that are either short in length or short in comment quantity and the number of skills present require additional research to understand fully.

Research Question 8

RQ 8: Does a connection exist between user participation through comments on CNN.com political news stories and knowledge construction using Potter's media literacy theory as a framework?

Based on the results of the prior seven research questions, the initial answer to RQ8 points to the lack of a clear connection between media literacy and user participation in this venue. This reaction begins with the fact that less than one percent of all comments submitted during the one constructed week timeframe exhibited any form of media literacy, and although media literacy was found in all but one of the stories analyzed, it occurred in no apparent pattern among the articles. Among the media literacy skills that were expressed, the two lowest level skills of knowledge construction—analysis and evaluation—were the most commonly found. Highly commented upon stories contained a greater amount of media literacy skills, but distinct users who frequently make comments do not necessarily contribute media literate content at an increased rate. Additionally, media literate comments receive significantly more direct replies than those that are not; however, the association between these two variables lacks strength.

Despite these misgivings, some findings provide enough evidence to warrant additional exploration into whether knowledge construction can occur in some form. Following not only direct replies but also the entire chain of replies to individual comments offers a path to track how the content of a post leads to other ideas. The t-test in RQ6 demonstrating a significantly larger number of direct replies to media literate comments legitimizes this additional exploration. Taking consistent user involvement to the next level of connecting an individual's posting frequency to the system of replies discussed above offers another opportunity to observe whether media literacy is building within a particular set of participants. Finally, the higher ratio of media literacy found in stories with lower numbers of comments is worth exploring as a place to determine

whether an excess of not task-related comments discourages either contribution of or the discovery of those that contain media literacy.

Limitations

Although the best efforts have been made to minimize threats to the applicability of this study, all research has limitations to its effectiveness. Primarily, a content analysis approach relies upon researchers' judgments to code and evaluate the preexisting research subjects. Having more than one observer increases the opportunity for producing reliable results because this scenario creates additional outlets for measuring the repeatability of findings and matching those findings to standards (Krippendorff, 2012). With only a single researcher in this study, reliability was limited to finding only stable, intracoder measurements during the pilot phase of the project.

The choice of subject for the analysis presents a second limitation. With CNN.com as the only site being analyzed, the generalizability of the results to other similar news organizations is threatened. No guarantee exists that the audience who participates in commenting on stories at CNN.com is representative of those who post comments on other sites. Additionally, restricting the study to political stories further limits the generalizability. Creating this limitation to the scope of the research allowed greater focus determining the results herein; however, the findings cannot be assumed to apply to other general topics such as "health", "technology", or "justice".

Those users who choose to participate in commenting pose another limitation. To be part of the process, a person must have Internet access, consume online news, and have the desire to be part of the conversation. Twenty-five percent of Internet users

posted comments to an online news story (Purcell, Rainie, Mitchell, Rosenstiel, & Olmstead, 2010); thus, a participant may be considered representative of a typical person.

The timeframe of the selected stories additionally limits the generalizability of the results. Having a seven-week period around Election Day increased the likelihood that a surplus of political stories would be available. Conversely, the increased awareness of political issues surrounding elections could artificially increase the number of comments and, thus, the overall content of those comments. For example, media literate comments either may have been more prevalent or may have been overshadowed by an increased number of comments void of media literacy.

Finally, the comment policy imposed by CNN.com has an impact on this study. The posted community guidelines state the following conditions in which a comment may be removed:

“For the most part, comments and iReports on CNN.com post immediately and may be removed following community flagging or for other reasons. We call this approach ‘post-moderation.’ We believe in post-moderation because it allows for near real-time discussion and fosters real conversation. From time to time, though, moderators may choose to limit some conversations to pre-moderation (meaning a human reads each comment before it posts) or to cut off comments altogether on particularly sensitive or controversial topics where the discussion devolves into ugliness.

Comments that include links do not appear on the site unless a moderator has reviewed them. We can't always get to everything, so if your comment doesn't make it to the site, that might be why.” (“CNN.com - Comment Policy,” n.d.)

The rules stated above, while intended to foster a civil community, risk censoring comments that express media literacy even though the content of such a post is controversial enough to warrant moderation.

Future Research

This study presents the only known research in existence that attempts to test a portion of Potter’s theory of media literacy against comments on a news website. The

limitations of the scope of this research indicate the first major area in which additional investigation can occur. Expanding articles to other topics beyond politics would allow exploration of whether the arguably heated nature of political topics impacts the ability to rationally construct knowledge through conversation. In addition, expanding the research to other news sites both domestic and foreign would help control for the origin of the stories, innate biases, and internal comment policies of the organizations being studied. Using content analysis as the primary method of discovery also necessitates the employment of multiple coders to ensure that analysis has greater reproducibility and accuracy (Krippendorff, 2012).

The seven skills of media literacy present only a subset of Potter's full theory of media literacy. In conjunction with the skills is an individual's personal locus as well as a set of competencies that people grow early in life development. Potter also describes a series of tasks that rely on competencies and skills for proper processing of information (W. J. Potter, 2004). Future research should examine each of these aspects that an individual uses to develop media literacy through discussion-based electronic communication. The combination of these additional elements completes a system of media literacy development in which not only are the building blocks for skills accounted for, but also the higher level tasks in which information is processed more fully based on the quality of a person's skills (W. J. Potter, 2004).

Competencies could be measured through content analysis much in the way that skills were in the present study. Conversely, exploring personal locus and information processing tasks requires a more personal connection with individuals that textual artifacts cannot provide. To this end, utilizing an experimental design method would

provide better quantification of the degree to which knowledge is constructed. To explore in depth, a phenomenological approach would capture the experiences of those attempting to navigate the process of developing media literacy and offers the ability to examine the stages each person takes either to establish knowledge or at which they fail to build upon previous structures.

Many of the research questions had varying results. RQ3 found that most comments—media literate or not—occur early, but that media literacy occurs at a consistent ratio across a seven-day period. RQ4 notes that an article having more overall comments correlates strongly and directly with the number of media literate skills on display. RQ5 found that frequent posting by a user has a low correlation with the expression of media literacy. RQ6 resulted in a significant difference in mean direct replies to media literate comments over not media literate posts.

From the differences in the results above, some apparent contradictions are present. For example, long conversations with a large number of comments have more media literate comments; however, the likelihood of a media literate comment appearing is uniform across a story's lifespan. As a result, additional questions arise with potential for future examination. Do replies to media literate comments also tend to be media literate? When in the lifespan of an article being posted do users who regularly exhibit media literacy typically tend to post? Are particular media literacy skills more prevalent at specific times?

Conclusion

This study attempted to explore the existence of a connection between the content of comments on political stories posted to a popular news site and whether those

comments contained evidence of media literate skills defined by Potter (2004) in his cognitive theory of media literacy. Using these skills and a preliminary test that determined whether each comment was directly related to the article posted, the research questions aimed at understanding if knowledge construction occurs within this context and, if so, in what capacity.

The data collected and the subsequent analysis shows minimal evidence of knowledge construction happening in a large quantity over the entirety of the articles posted. Further, no pattern emerged indicating that contributors show more or less media literacy in their comments based on the frequency of posting. On the contrary, media literate skills in small amounts were found spread throughout the articles' comment threads, uniformly by day of the week but with no apparent pattern based on topic. Highly popular stories had notable *quantities* of media literate comments, but less popular stories and those with shorter conversations had notable *ratios* of media literate comments to overall comments.

This research has implications on educating both young and old about media literacy. Broadly, using CNN.com as a means to illustrate the concepts of being media literate or as a forum to actively facilitate media literate conversation fails on a wide scale to meet the needs of communicating the skills necessary for achievement. The failure occurs because the comments that do meet the criteria are too often buried amongst posts that have nothing to offer in terms of knowledge construction. The fact that comments exhibiting higher level thinking do exist and can be found in stories that may otherwise be overlooked offers the potential in future research for the efficacy of using CNN.com as a means of teaching media literacy to be discovered.

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APPENDIX A: ARTICLES WITH CODED COMMENTS

Week	Day of Week	Date	Short Title	Full Title	# of Comments
1	Sunday	10/13/2013	shutdown-showdown	No deal in sight as shutdown approaches third week	17,230
URL: http://www.cnn.com/2013/10/13/politics/shutdown-showdown/index.html					
Highlights: <ul style="list-style-type: none"> • The partial government shutdown is set to enter its 14th day Monday • Reid says on the Senate floor he feels "optimistic" about prospects for a resolution • The Senate adjourns, showing no signs of significant progress • The Treasury says the United States bumps up against its borrowing limit Thursday 					
1	Monday	10/14/2013	furloughed-workers-food-pantries	'It's not your fault': Some furloughed by shutdown turn to charities for food	1,377
URL: http://www.cnn.com/2013/10/14/politics/furloughed-workers-food-pantries/index.html					
Highlights: <ul style="list-style-type: none"> • Some furloughed workers say they can't feed their families without help • "These folks (furloughed employees) don't know how to be poor," said head of one food pantry • "It's a damn shame," Maryland Gov. Martin O'Malley, told CNN. 					
1	Monday	10/14/2013	reid-mcconnell-shutdown-history	For Senate leaders, bitter history morphs into working relationship on deal	399
URL: http://www.cnn.com/2013/10/14/politics/reid-mcconnell-shutdown-history/index.html					
Highlights: <ul style="list-style-type: none"> • Senate leaders Harry Reid and Mitch McConnell have had a rocky past • Democrat and Republican are at center deal to end shutdown, avert debt default • Both have been in the Senate for decades and say reports of tensions are overblown 					
1	Monday	10/14/2013	shutdown-showdown	Reid urges patience, remains optimistic over deal prospects	25,188
URL: http://www.cnn.com/2013/10/14/politics/shutdown-showdown/index.html					
Highlights: <ul style="list-style-type: none"> • Under deal being negotiated, the debt ceiling would be increased until February 7, sources say • Senate majority leader hopes that Tuesday will be "bright" in Washington • Democratic sources say changes to Obamacare under consideration • President Obama chides House Republicans for partisan brinksmanship 					
1	Monday	10/14/2013	supreme-court-affirmative	Supreme Court tackles new affirmative action case	56
URL: http://www.cnn.com/2013/10/14/politics/supreme-court-affirmative/index.html					
Highlights: <ul style="list-style-type: none"> • Court will hear oral arguments on Tuesday in Michigan case • Challenge again raises thorny, unresolved questions over race • Michigan referendum banned race and sex discrimination in admission decisions 					

2	Tuesday	10/22/2013	jobs-numbers-politics	Jobs numbers bring politics as usual	196
URL: http://www.cnn.com/2013/10/22/politics/jobs-numbers-politics/index.html					
Highlights: <ul style="list-style-type: none"> • Lawmakers released a fresh game of blame over the jobs numbers • Republicans blame Obamacare for the mixed unemployment report • blame Republicans and the government shutdown 					
2	Tuesday	10/22/2013	menendez-donor-melgen-search	FBI agents search office of Florida doctor known as Sen. Menendez's donor	10
URL: http://www.cnn.com/2013/10/22/politics/menendez-donor-melgen-search/index.html					
Highlights: <ul style="list-style-type: none"> • Federal agents raid Florida clinic of Dr. Salomon Melgen for the second time • don't say why ,but Melgen is being probed for Medicare and Medicaid billing practices • He's also been a donor to Sen. Robert Menendez, who questioned an audit into Melgen • Menendez flew on Melgen's plane, paid him back after the fact 					
2	Tuesday	10/22/2013	national-security-official-fired	White House national security official fired for tweeting insults	1,543
URL: http://www.cnn.com/2013/10/22/politics/national-security-official-fired/index.html					
Highlights: <ul style="list-style-type: none"> • The official fired was Jofi Joseph, an official confirms • Joseph was the director for nonproliferation at the National Security Council • He is accused of sending insults under the name @natsecwonk • His insults included Valerie Jarrett, John Kerry and Sarah Palin, according to a report 					
2	Tuesday	10/22/2013	obamacare-sebelius-interview	HHS chief: President didn't know of Obamacare website woes beforehand	8,718
URL: http://www.cnn.com/2013/10/22/politics/obamacare-sebelius-interview/index.html					
Highlights: <ul style="list-style-type: none"> • Democratic senator urges Obama to extend enrollment, delay "mandate" penalty • Sebelius: Obama didn't know of issues, despite companies' complaints, crash during test run • Delaying the website's launch was "not really an option," Sebelius says • She tells CNN an "A-Team" of experts coming in, 3 weeks after launch 					
2	Tuesday	10/22/2013	obamacare-website-four-reasons	Rough Obamacare rollout: 4 reasons why	3,157
URL: http://www.cnn.com/2013/10/22/politics/obamacare-website-four-reasons/index.html					
Highlights: <ul style="list-style-type: none"> • Rollout setbacks embolden critics on the right and raise public doubts • How did administration botch the introduction of its signature policy achievement? • Some reasons political, others technical but presidential oversell appears to be one 					
2	Tuesday	10/22/2013	obamacare-website-problems	Report: Healthcare website failed test ahead of rollout	100

			URL: http://www.cnn.com/2013/10/22/politics/obamacare-website-problems/index.html	
		Highlights:	<ul style="list-style-type: none"> • Top White House official part of "tech surge" on Obamacare • Obamacare "is not failing" despite website woes, White House spokesman says • Obama says HealthCare.gov problems are "going to get fixed" • Secretary Sebelius expected to testify at a congressional hearing next week 	
2	Tuesday	10/22/2013	poll-economy-optimism-shutdown	CNN Poll: After shutdown, America is less optimistic about economy 3,681
			URL: http://www.cnn.com/2013/10/22/politics/poll-economy-optimism-shutdown/index.html	
		Highlights:	<ul style="list-style-type: none"> • Optimism about the economy hits a low for the year, according to a new CNN/ORC poll • The partial government shutdown contributed to the national pessimism • Nearly three out of four say that economic conditions are poor right now 	
6	Wednesday	11/20/2013	albuquerque-late-term-abortion-referendum	Voters reject ban on late-term abortions in Albuquerque 878
			URL: http://www.cnn.com/2013/11/20/politics/albuquerque-late-term-abortion-referendum/index.html	
		Highlights:	<ul style="list-style-type: none"> • Anti-abortion activists say the battle is far from over • Referenda putting abortion on the ballot have been tried on the state level • But what Albuquerque did Tuesday makes it unique among cities • 45% of voters were for it and 55% against it 	
6	Wednesday	11/20/2013	congress-shutdown-speculation	Again, the specter of a shutdown haunts the halls of Congress 341
			URL: http://www.cnn.com/2013/11/20/politics/congress-shutdown-speculation/index.html	
		Highlights:	<ul style="list-style-type: none"> • Rep. Steny Hoyer: "There does not seem to be a serious effort to reach agreement" • A 29-person House and Senate conference committee is tasked with hashing out budget • A lack of confidence in the process has moved into higher gear • Republicans in D.C. are mindful they took the brunt of the blame in last shutdown 	
6	Wednesday	11/20/2013	congressman-cocaine-possession	Rep. Trey Radel to take leave of absence, enter drug treatment 2,834
			URL: http://www.cnn.com/2013/11/20/politics/congressman-cocaine-possession/index.html	
		Highlights:	<ul style="list-style-type: none"> • "I have no excuse for what I have done," Radel says • He says he grew up with a mom who struggled with alcoholism • He pleads guilty to misdemeanor cocaine possession, gets a year of probation • Authorities say he bought 3.5 grams of cocaine from an undercover officer last month 	
6	Wednesday	11/20/2013	george-w-bush-on-leno	George W. Bush tells Jay Leno: Not worried how history will judge 2,810
			URL: http://www.cnn.com/2013/11/20/politics/george-w-bush-on-leno/index.html	

				Highlights: <ul style="list-style-type: none"> • Bush is glad to no longer be President • The former President has stayed quiet, because he does not want to criticize Obama, he said • He joked with Leno about the comedian's TV show coming to an end this spring • Bush made a gift to Leno of a portrait of the comedian that he painted himself 	
6	Wednesday	11/20/2013	medal-of-freedom-unsung-heroes	Seven things you didn't know about two Medal of Freedom winners	2
				URL: http://www.cnn.com/2013/11/20/politics/medal-of-freedom-unsung-heroes/index.html	
				Highlights: <ul style="list-style-type: none"> • Cordy Tindell "C.T." Vivian participated in the Freedom Rides • Bayard Rustin was one of the masterminds behind the March on Washington • Both were among 16 honored Wednesday with the Medal of Freedom 	
6	Wednesday	11/20/2013	midterms-obamacare-vs-shutdown	Battle for the House in 2014: Obamacare vs. shutdown	2,583
				URL: http://www.cnn.com/2013/11/20/politics/midterms-obamacare-vs-shutdown/index.html	
				Highlights: <ul style="list-style-type: none"> • Democratic gains brought on by shutdown wiped away by Obamacare fiasco • Republicans believe shutdown fallout will fade, but Obamacare problems will persist • Democrats believe sentiment will swing back to them in fiscal fights ahead with GOP 	
6	Wednesday	11/20/2013	seven-keys-to-midterms	7 keys to the 2014 midterms	743
				URL: http://www.cnn.com/2013/11/20/politics/seven-keys-to-midterms/index.html	
				Highlights: <ul style="list-style-type: none"> • Obamacare fiasco has shaken voter confidence in Democrats' government solutions • Will voters' memories of October shutdown be eclipsed by Obamacare a year from now? • Worst losses have occurred to president's party during or shortly after economic slowdown • Could GOP overreach on Obamacare or other issues break cycle of six-year itch? 	
6	Wednesday	11/20/2013	trey-radel-profile	Inside the #treystate	43
				URL: http://www.cnn.com/2013/11/20/politics/trey-radel-profile/index.html	
				Highlights: <ul style="list-style-type: none"> • Florida congressman is in the spotlight because of a cocaine possession charge • He loves hip-hop and interacting with constituents via Twitter • After October 29, when he was charged, his Twitter feed took a more serious tone 	
6	Wednesday	11/20/2013	virginia-politician-attack	Deputies called to Creigh Deeds' home day before fatal fight, Virginia police say	473
				URL: http://www.cnn.com/2013/11/20/politics/virginia-politician-attack/index.html	
				Highlights: <ul style="list-style-type: none"> • Sheriff's deputies were called to Creigh Deeds' home on Monday, state police say • A police source said Deeds' son was taken to a hospital for evaluation • Three hospitals tell CNN they had psychiatric beds available Monday • The Virginia state senator was stabbed more than 10 times, sources say 	

2	Thursday	10/24/2013	american-drug- cartels-explosives	ATF probes possible ties between grenade In Mexico and American	24
URL: http://www.cnn.com/2013/10/24/politics/american-drug-cartels-explosives/index.html					
Highlights: <ul style="list-style-type: none"> • ATF is looking at ties between American and hand grenades used in shootout in Mexico • Agents say explosives bear signature of operation run by Jean Baptiste Kingrey • Kingrey is on trial in Mexico for allegedly importing grenade parts, selling devices to cartels 					
2	Thursday	10/24/2013	congress- obamacare-website	Contractors blame government for Obamacare website woes	7,947
URL: http://www.cnn.com/2013/10/24/politics/congress-obamacare-website/index.html					
Highlights: <ul style="list-style-type: none"> • Issa calls for Sebelius to provide documents related to website problems • Federal official says time frame didn't allow for enough testing of HealthCare.gov • Contractors cite insufficient testing, last-minute changes by government • A problem with the entry portal clogged up the system when it opened on October 1 					
2	Thursday	10/24/2013	immigration-reform	Obama puts immigration back in spotlight	667
URL: http://www.cnn.com/2013/10/24/politics/immigration-reform/index.html					
Highlights: <ul style="list-style-type: none"> • Don't expect Congress to pass an immigration bill this year, House GOP leadership aide says • President Obama says it is time to pass immigration reform • House Republican Darrell Issa working on his own bill • The last attempt at reform sputtered in the House 					
2	Thursday	10/24/2013	u-s-drones- pakistan-report	Report: U.S., Pakistan had secret agreement on dozens of drone strikes	189
URL: http://www.cnn.com/2013/10/24/politics/u-s-drones-pakistan-report/index.html					
Highlights: <ul style="list-style-type: none"> • Washington Post: Pakistan approved drone program, helped pick at least one target • White House says two nations routinely have intelligence conversations • Pakistan reiterates position that drone strikes must stop 					
7	Friday	11/29/2013	obamacare-site- maintenance	Obamacare site going down for maintenance ahead of deadline	2,463
URL: http://www.cnn.com/2013/11/29/politics/obamacare-site-maintenance/index.html					
Highlights: <ul style="list-style-type: none"> • Obama administration taking down HealthCare.gov from Friday night through overnight • Saturday is deadline to have site working for most Americans following fixes • Botched launch of website in October was an embarrassment for President Barack Obama • Friday's action is considered extended maintenance, the administration said 					
3	Saturday	11/2/2013	obama-read-my- lips-moment	6 things presidents wish they hadn't said	3,195

URL: <http://www.cnn.com/2013/11/02/politics/obama-read-my-lips-moment/index.html>

Highlights:

- Many presidents have uttered phrases they later regretted
- Obama takes heat for saying that 'If you like your health insurance, you can keep it'
- George W. Bush came under fire for comments during Hurricane Katrina and the run-up to the Iraq War

APPENDIX B: CODING MANUAL

General Coding Rules

1. An entire comment is considered one unit to be coded.
2. Replies to comments will be considered as comments.
3. Comments must have been posted no more than one week after the original article posting date to be coded.
4. Coding sheets will guide the process and should be filled out for each article with each comment identified and coded.

Veerman and Veldhuis-Diermanse (2001)

Definitions

Task-Related A comment that demonstrates knowledge construction by stating a new concept or advances the conversation by developing existing ideas.

Examples:

New Idea

Offering an idea that has not been previously stated

Explanation

Clarifying or building upon a previously stated idea

Evaluation

Reasoning used to critically discuss a previous statement

Not Task-Related A comment that fails to demonstrate knowledge construction through unrelated ideas, setting rules of the conversation, or offering related statements that do not add critical perspective.

Examples:

Planning

Setting up rules or guidelines for future posts

Technical

Discussing the functionality or rules of posting on the system

Social

Offering interpersonal agreement or disagreement without critical support or analysis

Nonsense

Making statements wholly unrelated to the original topic

Coding Rules

1. Comments will be considered task-related if:
 - The comment meets the above definition of **task-related** AND
 - One of the following:
 - The comment addresses at least one of the defined article highlights presented in the parent article.
 - A reply to a comment critically builds upon a parent comment that addressed at least one key idea presented in the parent article.
2. Comments will be considered not task-related if:
 - The comment meets the above definition of **not task-related** AND
 - The comment does not address any of the defined article highlights
3. If a comment contains both task-related and not task-related statements, the entire comment will be coded singularly as **task-related**.

Potter (2004)

Definitions

Analysis Exhibiting recognition of the complex elements that comprise an issue.

Greater context used demonstrates deeper analysis (W. J. Potter, 2004)

Evaluation Exhibiting logic and reason to compare elements of an issue with elements of a similar issue in order to make a judgment of validity. Emotion can

play a role in evaluation, but a judgment should not be based purely based in emotion (W. J. Potter, 2004). A lower level of media literacy is evident when quick, superficial judgments are made (W. J. Potter, 2004).

<i>Grouping</i>	Communicating clearly the similarities and differences between elements within an issue or among other issues. Three models will help to identify grouping behavior: exemplar, prototype, and classical (W. J. Potter, 2004). Exemplar uses familiar models as representations. Prototypes rely on abstractions to draw conclusions. The classical model uses clearly defined groups to define an object.
<i>Induction</i>	Drawing conclusions by finding and carefully considering specific patterns that occur. Citing reliable, external sources for patterns strengthens an argument.
<i>Deduction</i>	Drawing conclusions by applying general principles through logical connections.
<i>Synthesis</i>	Connecting disparate elements together to develop a new idea or perspective.
<i>Abstracting</i>	Clearly, accurately, and comprehensively summarizing a larger issue into a brief message.

Coding Rules

1. Only comments coded as **task-related** under Veerman and Veldhuis-Diermanse (2001) will be further coded under the categories listed above.
2. Comments exhibiting more than one instance of a single category will be coded once for that particular category.
3. Comments exhibiting more than one of the above categories will be coded once for each category represented.

Coding Sheets

Coding sheets will be used to document the details of each article coded. The article title, its URL, the date it was published, and the article highlights will be recorded.

Subsequently, each comment will have the following information noted:

- Sequential comment number
- Unique comment ID number
- Unique contributor ID number
- The comment ID number of the parent comment, if applicable
- Date the comment was posted
- Time the comment was posted
- Is the comment task-related or not task-related?
- If the comment is task-related, which skills of media literacy are evident?

The following is a template for the coding sheets being utilized:

Coding Sheet Template

Article:

URL:

Date of Article:

Highlights:

Article Comment Number	Comment ID	Contributor ID	Parent Comment ID	Date Posted	Time Posted	Task-related	Analysis	Evaluation	Grouping	Induction	Deduction	Synthesis	Abstracting