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The pedagogical use of Twitter in the university classroom

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by

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ABSTRACT

Social media is revolutionizing how we think and communicate. For educators, the pressing question is centered not so much around *if* technology should be used in the classroom or *when* it should be used, but *what type* should be used in the classroom. My purpose for this study was to discover how Twitter might be used pedagogically to assist students in communication, collaboration, and participation within an ecology of practice which views New Media through the lens of the classical canons of rhetoric. Using a qualitative approach, data was gathered from personal interviews, academic Twitter feeds, course websites, instructors' blogs, and published scholarly research. Because it is an easily accessible, free service that provides an alternative to Facebook and host to a number of free applications and tools, Twitter has been suitably used for pedagogical and rhetorical purposes within the university classroom.

CHAPTER 1: INTRODUCTION

Web 2.0 technology and the explosion of social media have revolutionized how we think about communication and how we use it in our everyday lives. As part of the growing technology industry that uses the Web 2.0 platform, Twitter is popular for the immediacy it provides. I was first introduced to Twitter via some family members who had moved from Facebook to Twitter as their primary microblogging tool. Microblogging, a much shorter version of blogging, is typically limited to a certain number of characters, sentences or file size. In the case of Twitter, each post is limited to 140 characters and may be conveniently sent via mobile device, thus eliminating the need for computer access.

Until recently my family had used microblogging strictly for personal reasons, but now at least two family members have included Twitter as part of the way they do business. Our son, who sends status reports to his employer, works for a high-profile laboratory which requires him to juggle multiple projects of varying levels of urgency. Thus, Twitter provides a quick, yet effective, method to communicate on which project he is currently working and in what phase of the project cycle he is. For our niece, who is an artist and graphic designer, Twitter is a means to communicate and advertise to clientele about new products and to increase her exposure in today's global marketplace. Even though both use Twitter in conjunction with other social media tools, they view Twitter as an efficient and immediate means to connect and network with colleagues and customers.

This mode of communication between employer and employees and between companies and their clientele is a relatively recent phenomenon. Created four years ago by Jack Dorsey, Noah Glass, Biz Stone, and Evan Stone as a way to stay in touch with

friends and colleagues, Twitter has since its incorporation in 2007 "become viral" (Jue, Marr and Kassotakis 57). At last count Twitter claims "55 million tweets per day and serves 600 million searches daily" (Swartz 2). This is the result of the public interconnectedness that social media provides and a growing population who frequently uses social media to facilitate their work and leisure. At the time of this writing, it is safe to say that Twitter is a dominant microblogging tool among business people between the ages of 18-49 (Lenhart and Fox 3).

Understanding Twitter in Context

Twitter like instant messaging and text messaging has its own shorthand in order to maximize the amount of information that may be tweeted in up to 140 characters.

Table 1. Twitter Terms

Term	Definition
Tweet	A single microblog post
@Messages	Used conversationally to direct a message intended for a specific user
Retweet (RT)	Used to repost someone else's Twitter post on your account
Direct Messaging (DM)	To send a private Twitter message to another user
Tweetup	Face to face meeting (spontaneous or planned) with other Twitter users
Hashtags (#)	Categorizes tweets for easy searching and retrievability
Following	Choosing to opt-in to see another Twitter's messages

The chart on the previous page is a quick glance at the basic terminology with certain terms given further explication in the section to follow. Twitter's 140 character limit allows the user to create approximately a sentence or two. Because of Twitter's "opt-in model" of design, a user must cleverly craft his or her microblog posts (O'Reilly and Milstein 25).

Demystifying the Jargon

Since all messages on Twitter are public (with the exception of accounts that have been protected), the way to *see* other people's messages is to choose the opt-in model called *following*. Following someone means that the Twitter user will receive a message every time that person updates. In *The Twitter Book*, Tim O'Reilly and Sarah Milstein explain two key implications in this model. First, users do not have to verify with each other (which is a significant difference from Facebook). Therefore, Twitter users are more likely to network with people that they do not already know on Twitter than other social networks. Secondly, Twitter users must be clever. If a user is not interesting, no one will follow that user. Thus, the opt-in arrangement means that Twitter rewards interestingness (O'Reilly and Milstein 25). If a user is interesting or witty, oftentimes the user's posts will be retweeted.

A retweet (RT) is a mechanism by which the user may repost a tweet that was originated by someone else. Retweeting is important for a few reasons. First, this is a great way to increase exposure to a particular message. Secondly, it suggests "esteem" because when a user retweets somebody else, implicitly he or she says, "I respect you and your message" (47). Thus, being retweeted is a way to increase social presence and to increase status on Twitter and is seen as a "sign of influence" (47). Along with

retweeting , another key function important to Twitterers is the ability to direct message (DM) another user.

Although Twitter is primarily designed as a public space for communication exchange, it is possible to send a private message using the Direct Messages tab on the Twitter site or from a phone (49). Direct messages can only be seen by the other user to whom they were sent and are not archived like a public tweet. Direct messages are useful for small-sided conversations between two individuals who wish to maintain privacy without having to place privacy exceptions on their accounts.

Along with the ability to hold private conversations with another Twitter user, an additional feature of Twitter is the ability to group or categorize a series of tweets around a topic or an event. This is accomplished through the use of the hashtag—indicated by the # (pound sign). Since Twitter does not intrinsically have a method to categorize a message, users created an ad hoc solution called hashtags, which enables tweets on a specific subject to be categorized (by users) and found (by other users) by simply searching for the common hashtag (41). The hashtag has many purposes such as denoting events, or signifying messages from a group of people. This feature is especially useful in business or academia because tweets can be grouped and retrieved from a common location. One reason employers choose Twitter over Facebook for this mode of communication is that employers desire employees to maintain a level of separation between professional and private lives. Facebook is often perceived as a personal social media space; therefore, employers often ban the use of Facebook during work hours. Employers instead turn to Twitter as an alternative social media venue for building community and collaboration in the workplace (Tomita 186).

As I explored both the personal and professional use of it, I realized that Twitter's open interface presented users with unique opportunities to network and communicate. Also, the viral nature of Twitter and the huge volume of information that passes daily across its services caused me to speculate whether Twitter may transcend the boundaries of a mere social or professional networking interface to perhaps something more culturally significant. These musings led me to contemplate whether there might be any efficacious use of Twitter in the classroom and more importantly would there be sufficient rhetorical reasons for doing so. Twitter, then, seemed an engaging focus of research because it would allow for an interaction among the theorists from three distinct yet interconnected fields of study—rhetoric, composition pedagogy and professional communication. Examining the rhetorical nature of Twitter, exploring current theories of professional communication, and considering its pedagogical use in the university classroom should lead to a more informed understanding of the role of New Media in 21st century communication practices.

Remediating the Rhetoric of New Media

The rhetoric of New Media (in this research the term *New Media* is referring to web 2.0 technologies in general and to Twitter in particular) situates itself in the understanding that New Media is part of a remediation process which occurs frequently as newer forms of technology refashion older forms. Remediation encompasses both the logic of immediacy which attempts to make the user interface look "natural" and the logic of hypermediacy, which allows for the "random access of multiple media" (Bolter and Grusin). So, the more *natural* an interface appears the more likely the user will "look through" rather than "at" the interface. By contrast, the ability of a user to have an interaction with an acknowledgment of multiple interfaces of representation makes those

interfaces more visible. The tension, therefore, between hypermediacy and immediacy causes the user to vacillate between looking *at* and *through,* in this instance, web 2.0 technologies (Bolter and Grusin). The movement back and forth between *at* and *through* becomes less as the technology is more widely used and integrated into everyday communication practices until users reach a point where they hardly consider looking *at* the original technology at all.

For example, few really consider the printed page as a technology to look *at.* Users look *through* the medium of the printed page to the message contained on it, but the remediation of the printed page by the computer interface presents users with that of a new challenge. Users understand the rhetoric of the printed page, but what about the rhetoric of the interface? Theorist Colin Brooke posits a rhetoric of New Media which requires us to "rethink our disciplinary habit of attending to textual objects" by returning to Aristotle's five rhetorical canons "to construct a rhetoric that will allow us to both understand and produce interfaces" (Brooke 27).

Current literature indicates that some educators are experimenting pedagogically with Twitter along with other forms of New Media (Dunlap and Lowenthal; Farwell and Waters; Fernheimer; Jaworowski; Lane and Lewis; Pignetti; Rankin; Silver; Wolff). What is not clear is whether those educators are providing opportunities for themselves and their students to examine Twitter as New Media through the lens of the five canons of rhetoric (Brooke; Bolter and Grusin) as well as develop a critical stance on it. The problem, then, becomes one of clarity and distinction. By evaluating Twitter as New Media through the lens of the five canons of rhetoric, the next logical question to contemplate is whether Twitter would then be considered a genre (Miller 1984) like the memo, business proposal, or letter? If Twitter can be classified as a genre, then by

extension, should using Twitter be deemed a necessary part of developing student literacy together with the meta-discussions necessary to take a critical stance on it?

Paying Attention to Twitter

Educators' concern with technology, its use in the classroom, and its link to literacy is articulated in Cynthia Selfe's article "Technology and Literacy: A Story about the Perils of Not Paying Attention," in which she argues that we must "*pay attention to…technology*" rather than ignoring it or refusing to acknowledge that it does not impact student literacy. Selfe posits that students must be given opportunities to view technology from a critical stance (414). Since 1999 when Selfe's important work first appeared in *College Composition and Communication*, our acceptance of critical inquiry about the use of computers in the classroom has now extended beyond mere computer use in the classroom to the realm of web 2.0 technologies and their ubiquitous presence among students. Scholars over the past fifteen years agree that the pressing question appears to be centered not so much around *if* technology should be used in the classroom or *when* it should be used, but *what type* of technology should be used in the classroom (e.g., Duffelmeyer; Selfe & Hawisher; Selfe; Vie).

Stephanie Vie is one scholar who expands upon Selfe's claim by addressing what type of technology should be used in the classroom. In her article "Digital Divide 2.0: 'Generation M' and Online Social Networking Sites in the Composition Classroom," Vie posits that educators should "pay attention" to the relationship between students and their use of social media technology and to consider whether it should be a part of classroom pedagogy. Her work is particularly focused on students known as "Generation M … [who] were born between the early 1980s and late 1990s… [and] are fascinated by and often highly comfortable with technology" (12). Millennials experience

technology differently than those of previous generations because they do not "view computers as disconnected from their day-to-day activities but rather as an assumed part of their everyday lives [and] live in a world where the lines of consumption and creation are blurring" (12). This is a result of what Henry Jenkins defines as a *convergence culture* "where media producer and consumer morph, fuse or splinter as they interact via increasingly collaborative practices" (Jenkins 2). Therefore, Millennials are more likely to "multi-task, using multiple technologies at once," and view technology as merely a "means to an end" (12). Yet, many instructors, despite using traditional methods of technology in their pedagogy (such as laptops with projectors, and course management sites), may be less than fully engaged in the convergence culture because they have been reluctant to be part of the early adopter crowd, and now may feel at a loss because many students are more adept at social media technologies than they are. If this is true, what changes should educators make in classroom pedagogy not only to address the blurring of consumption and creation in the use of New Media but also to help students achieve literacies of technology? Perhaps educators may find answers from exploring the Millennial community's ecological and societal practices.

Vie's theoretical underpinnings, which seek to understand the ecological and societal practices within the Millennial community's use of technology, are derived from Cynthia Selfe's and Gail Hawisher's distinctions between "literacies of technology" and 'literacy practices" (2). Selfe and Hawisher delineate *literacies of technology* as "connect[ing] social practices, people, technology, values and literate activity, which, in turn, are embedded in a larger cultural ecology" while their definition of *literacy practices* is understood as "the complex sets of cultural beliefs and values that influence our understandings of what it means to read, write, and communicate with computers" (Selfe

and Hawisher 2). Thus, Vie posits that in order for 21st-century students to be literate, they must achieve (in addition to a more traditionally understood definition of literacy) a level of literacy that incorporates the technology currently used socially and professionally. Vie reminds educators that they also must maintain a level of technological literacy that is in keeping with Selfe and Hawisher's "larger cultural ecology" as well as asking students to think critically about "what it means to read, write and communicate" (2). For educators, the primary concern, then, becomes an integration of technological literacy instruction into their pedagogy, which uses technologies that "students are familiar with but do not think critically about" (Vie 10). Vie understands like Selfe and Hawisher that "today, the ability to write well—and to write well with computers and within digital environments—plays an enormous role in determining whether students can participate and succeed in the life of school, work, and community" (Selfe and Hawisher 2).

Recently, some educators have been asking similar questions about what types of technology should be incorporated into classroom pedagogy and more specifically what types of web 2.0 technologies might be particularly useful in the classroom. For example Dr. Monica Rankin, professor of Mexican and Latin American history at the University of Texas, Dallas (UT, Dallas), posed this question: How could Twitter be used to facilitate discussion in her large lecture classes of ninety plus students? In her blog on the UT, Dallas website, Rankin describes the Twitter experiment and her assessment of its outcome and comments that she decided to use Twitter instead of other web 2.0 technologies because of the prevalence of cell phone usage among college students and the easy use and accessibility of the Twitter application. She states, "Twitter's texting and Internet options seemed to offer more students the opportunity to participate"

(Rankin). In order to help students with the technology, Rankin provided a tutorial on her website for students to follow that showed them how to set up an account as well as included some basic instructions on how to begin tweeting. Rankin also employed a teaching assistant to monitor tweets for appropriate content and to aggregate tweets by topic using the hashtag symbol.

Rankin is just one example among many who have experimented with Twitter in the classroom and in turn have openly shared with colleagues the advantages and disadvantages the technology affords them and their students. Despite this shared knowledge, room for contemplation still exists as to whether Twitter should be used pedagogically in the classroom. Previous studies have discussed the nature of Twitter and its role among other social media applications. My purpose for this study is to discover how Twitter might be used pedagogically to assist students in communication, collaboration, and participation within an ecology of practice which views New Media through the lens of the classical canons of rhetoric. In particular, I am seeking answers to the following questions:

- How does Twitter function as a genre within the five canons of rhetoric?
- In what ways can Twitter be used to enhance learning within the classroom?
- Is Twitter an important literacy for students to acquire?

Building upon theorists from four distinct yet interconnected disciplines (professional communication, classical rhetoric, New Media, and composition pedagogy), I construct a theoretical lens that allows Twitter to exist within an ecological environment that is both harmonious and rhetorical.

CHAPTER 2: LITERATURE REVIEW

The purpose of this literature review is to situate Twitter within a rhetorical construct that builds upon both Carolyn Miller's concept of genre as existing within an open system and Marilyn M. Cooper's concept of writing as existing within an ecological environment. Using these as my foundation, I extend the theoretical base to place Twitter within a harmonious environment shaped by feedback, interdependence, and diversity (Fleckenstein, Spinuzzi, Rickly, and Papper). Next, I attempt to demonstrate how Twitter functions rhetorically by reconceptualizing the five canons of rhetoric to embody the interface rather than the printed page (Bolter and Grusin; Brooke). Finally, I consider the pedagogical implications of why it is important for New Media to operate under this theoretical construct (Duffelmeyer; Jenkins; Selfe; Vie; Yancey).

To establish a theoretical lens for a rhetorical examination of the connections among the New Media technology of Twitter, professional communication and classroom pedagogy, one must begin with a discussion of Carolyn Miller's "Genre as Social Action" (Miller, 1984). In this important article Miller synthesizes into a workable definition both ideas from Aristotelian rhetoric and modern ideas of genre, describing rhetoric as "a situation-based fusion of form and substance" (153). From this theoretical stance, she conceives of genre as an "open system," and consequently defines genre to be more than a "formal entity" (152). For Miller, genre is defined as "a point of connection between intention and effect, an aspect of social action" (152).   Under her definition, genre is not labeled as a taxonomic system; instead, genre is a method to depict "certain aspects of the way social reality evolves" resulting in an "open class, with new members evolving, old ones decaying" (153). Because Miller's definition of genre as social action places her argument within the larger framework of Aristotle's classifications—invention,

arrangement, style, memory and delivery, she says that not only traditionally held genres such as the eulogy and the sermon, but also new genres such as the technical manual and the memorandum are rhetorical (155).

Interestingly, Miller does not consider email as a new genre within her open classification system (merely a remediation of the memorandum). However, the tweet has at least one significant distinguishing characteristic that separates it from being just a remediated form of email, text message or chat room conversation. By comparison, emails, text messages and chat room communication all have a point to point path from sender to receiver. Even if there are multiple receivers, for a particular message those receivers must be selected or included on the list. A tweet, on the other hand, is sent across the Twitter network. The opt-in model of following allows anyone to pick up that message. A tweet does not have to be sent from someone to someone (although it can be made to do a point to point communication stream with the DM syntax) merely broadcast across the service. Because of these differences, I posit that the tweet (within Miller's rhetorical construct) could also be conceived as a rhetorical genre which would fit within her open classification system.

Further support of this idea is derived from Miller's statement, "Situations are social constructs….Exigence is a form of social knowledge--a mutual construing of objects, events, interests, and purposes...an objectified social need" (156-157). On closer examination, Twitter's open platform provides a form of social knowledge, comprised of various objects, events, interests and purposes. Likewise, Twitter responds to exigence in a manner that provides the rhetor with a socially recognizable way "to make his or her intentions known" (158). Even though face-to-face communication, instant messaging, and email are readily available to rhetors, the advantage of Twitter is

a more immediate, more mobile mode of virtual "water-cooler" conversation. These informal exchanges provide a means to network, collaborate, and share information among interested parties. For instance, in figure 1 below, the initial user, *betajames*, tweets and responds to other colleagues' posts as well as tweets about his activities.

Figure 1. Water cooler conversation among colleagues

This sort of casual conversation is also an example of the construction of social knowledge, described by Lev Vygotsky's *Sociocultural Theory of Learning*. This theory posits that "social interaction plays a fundamental role in the process of cognitive development" by using the cultural tools available which exist within a person's environment (Social Development Theory). In the Tweets presented in figure 1 above, betajames participates in social knowledge via Twitter to provide "an occasion, and thus a form, for making public our private versions of things" (Miller 158). To comprehend the

social learning role of Twitter in 21st century communication practices within the composition classroom, one must place it within an ecological environment that is both harmonious and rhetorical.

Ecological Environments

Building upon Miller's idea of genre, Marilyn M. Cooper expands the "genre as social action" theory to include a broader approach to communication in which she posits that a "system of knowledge and power which spans institutional relationships" is achieved when "writing is a form of social action… [a] part of the way in which some people live in the world" (xii). For Cooper, writing exists within what she terms an *ecological environment*. Cooper's ecological metaphor is based upon an application of Kenneth Burke's theory that *language use equals action.* According to Catherine Fox's summary of Burke's theory, "language has purposes and motives embedded in it because language is always *addressed* to an audience…to move that audience to identify with us" (Fox 368). Because these ecological systems are perceived as "inherently dynamic…interlocking systems that structure the social activity of writing," Cooper argues that a distinction must be drawn between contextual writing in response to exigence, as suggested by Lloyd Bitzer and ecological writing as a social activity, as suggested by Burke (Cooper 7).

According to Cooper, contextual models remove writing from the social context and perceive each piece of writing as "unique…unconnected with other situations" while ecological models of writing are considered to be iterative and dynamic. In the ecological model, structures are not imposed upon writers but rather "they are made and remade by writers in the act of writing" (7). In addition Cooper claims that "the ideal image of the ecological model is of an infinitely extended group of people who interact through writing,

who are connected by various systems that constitute the activity of writing" (12). In the

ecological model ideas are not trapped within the minds of the writers, but instead,

"ideas are out there in the world, a landscape that is always being modified by ongoing

human discourse" (12). It is plausible to suggest, then, that Twitter affords the writer a

medium of communication that fits within the ecological model. Twitter is a type of New

Media which allows writers to "interact through writing" with ideas that are "always being

modified by ongoing human discourse" and provides an iterative and ecological stream

of communication for those who choose to participate (Cooper 12).

A Harmonious Environment

Consideration of how an ecological environment interacts with New Media

extends Cooper's metaphor to one of ecological harmony. Kristie S. Fleckenstein, Clay

Spinuzzi, Rebecca J. Rickly, and Carole Clark Papper in their article, "The Importance of

Harmony: An Ecological Metaphor for Writing Research," incorporate three important

characteristics of ecological writing and research—interdependence, diversity, and

feedback. Fleckenstein et al. state that "writing as an ecology…is less about individual

elements—author, invention, error—and more a narrative of interactions intrinsic to a

system" (392). Theirs is a holistic approach to writing in which "material artifacts and

activities [are] integral to the constitution of the ambient environment, and the writers and

texts within it are all germane to a writing ecosystem" (393). Within the parameters of a

harmonious metaphor, writing is conceived as a "web of social, material, and semiotic

relationships" (394). Rather than understanding each act of writing as "static and isolated

from one another," Fleckenstein et al. envision acts of writing as "*symbiotic clusters:*

knots of nonhierarchical, locally enacted semiotic-material practices that inform each

other in multiple ways" (394). In this harmonious metaphor, writing occurs in a

"multileveled, multifaceted environment" (395).

New Media and specifically Twitter demonstrate a "multileveled, multifaceted

environment." As Twitterers post status updates, their interactions coalesce around a

topic which in turn influences or directs the conversation on that topic. "To frame circular

causality in the lingua franca of writing studies, language activities and texts shape the

environments that impinge on those language activities and texts" (393). Trending

Figure 2. List of Trending Topics for January 31, 2011

topics are one example of this circular phenomenon in Twitter. See figure 2 above for an

example of how hashtags (#) aggregate content, so that trending topics can be created

and displayed on a tag cloud or in a top 20 list. Trending topics occur as each Tweet

accumulates enough responses until a small-sided conversation erupts among three or four individuals which may become an entire conversational trend sometimes involving hundreds of followers. Because Twitter, unlike Facebook, has an opt-in model, the user can choose to follow another Twitterer without receiving permission to do so and can build and extend a diverse network. Twitter also provides a forum for feedback through three methods: a simple status update which is a Tweet sent to the public space of Twitter, a direct message (DM) which is a Tweet sent to a private space of just one user, and retweeting which allows one user to pass along someone else's Tweet. Through these types of interactive feedback, a user builds a web of connections and networks that are diverse and interdependent. Twitter, then, situates itself inside the harmonious ecology of writing by concerning itself less with "author, invention, [and] error" and more with a narrative set of interactions intrinsic to the ecological environment (Fleckenstein et al. 392).

In addition, two of Twitter's relative ecological strengths are that it contributes to the writer's ambient environment (the environment that surrounds a writing ecosystem) and to the writer's ambient awareness (the type of social awareness which is acquired through constant contact with friends and colleagues via web 2.0 applications such as Twitter and Facebook.) A good analogy of this concept is that ambient awareness is to virtual communication as body language is to face to face communication. Ambient awareness allows for friends and colleagues to discern the nuances of mood without actually being physically present to have a conversation. As a result, the creation of an ambient environment and ambient awareness through Twitter and other social media platforms constitutes "a holistic approach to writing" that allows users to be socially cognizant of their friends and colleagues in accordance with the frequency of feedback

and the interdependence among the social network's diverse members (Fleckenstein et al. 393). Thus, a harmonious ecological metaphor as well as a rhetorical understanding of New Media is necessary for producing effective communication via Twitter.

A Rhetorical Environment

Like Fleckenstein et al. Collin Brooke's work *Lingua Fracta: Towards a Rhetoric of New Media* begins with an acknowledgement of a multileveled, multifaceted ecological environment. Brooke explains the rhetorical underpinnings for that stance and extends our understanding by describing how the five canons of rhetorical thinking— invention, arrangement, style, memory and delivery—apply to New Media. In doing so, he redefines the Classical Trivium so that *Grammar* becomes *Ecologies of Code*, *Rhetoric* becomes *Ecologies of Practice*, and *Logic* becomes *Ecologies of Culture* (Brooke 27). Brooke explains, "Different media enable certain practices, constrain others, and leave yet others untouched" (Brooke 27). Brooke posits that the rhetoric of New Media should be understood through the *Ecology of Practice*, and advocates treating interfaces rather than texts as sites for and units of analysis. For Brooke, who believes that our newest form of media is the interface and that print is quickly becoming obsolete, viewing New Media through the lens of the rhetorical canons causes us to "construct a rhetoric that will allow us to both understand and produce interfaces" (Brooke 28-29). Thus, under Brooke's application of the rhetorical canons of New Media, the use of Twitter seems to represent one method of moving away from the printed page and toward the interface as a main mode of communication.

Canon of Invention

Applying the five canons of rhetoric to New Media allows the rhetor to establish a systematic, organized methodology for creating and sustaining persuasive discourse in

the Twitter universe. For example, the first canon—invention—concerns itself with the ideas, content, common places or *topoi* of rhetoric and is connected to the Aristotelian appeal of logos where rational thought and persuasion are more concerned with *what* is said instead of *how* it is said ("Silva Rhetoricae"). Invention is particularly important to Twitter users because of its opt-in model, which "rewards interestingness" (O'Reilly and Milstein 25). Because users do not need to obtain verification first, Twitter encourages users to create and sustain social networks consisting of people they do not already know. If Twitterers aren't interesting, users will "unfollow them, or they will never follow them in the first place" (25).

Canon of Arrangement

If invention is the ideas or content of rhetoric, then arrangement is the organizational structure of the rhetorical content. In arrangement the focus is on using an order of persuasion that will be most effective for the intended audience. In Twitter, arrangement is more closely aligned to a harmonious ecological environment because the strength of the argument of a topic is determined by the number of Twitterers talking about that topic within the communication environment. This practice of arrangement is commonly referred to as trending topics in which the hierarchical arrangement is based primarily upon *frequency*—the number of times a topic is mentioned or retweeted, *relevancy*—the germane importance ascribed to a topic, and *immediacy*—the virtual invisibility of the interface itself.

Canon of Style

Style for classical and modern rhetoricians who communicate primarily through public speaking or written print includes correctness: adhering to the grammatical and mechanical standards for a given language also known as the "virtues of style" ("Silva

Rhetoricae"). For New Media, "virtues of style" are the use of a coded language and cleverly worded status updates of 140 characters. While the printed page and Twitter differ somewhat on their definitions of "virtues of style," one attribute that they share is *clarity*—adhering to a style of language which is intelligible—in other words, how well language is understood ("Silva Rhetoricae"). For the conventional, academic printed page, style is determined by organizations such as *Modern Language Association* but for Twitter, style is determined by a more democratized process where users (as in the invention of the hashtag) form and reform the syntax of the language to meet ongoing needs of users in the communication process. Twitter achieves this through an open application programming interface (API) which is a set of rules a software program can follow to access and make use of services and resources provided by other software programs. APIs interact between software programs similarly to the way; for example, user interfaces interact between humans and computers. Two additional examples of APIs for Twitter are the y*frog* application which is an image hosting service designed to let users share photos and video on Twitter and *bit.ly* which is a URL shortening service that allows users to post updates (in a succinct format) that were originally longer than 140 characters. These are a just a few examples among many which demonstrate the functionality of Twitter's open source API. This functionality helps determine the application's style and advance its clarity among users.

Canon of Memory

Only recently, with the advent of New Media, have the last two canons of memory and delivery—largely ignored by modern rhetoricians—been reexamined. For the classical rhetor, memory originally had to do with mnemonic devices and aids for the orator. Later memory was expanded to include not only remembering a prepared speech

but also remembering ancillary information that could be recalled extemporaneously and as needed to meet the requirements of the audience ("Silva Rhetoricae"). In New Media applications such as Twitter, memory involves databases that store and catalog tweets which may be searched and recalled when desired. Not only can users access Twitter's databases, but they can now access prior tweets through the Library of Congress, which has decided to archive on its databases every *public* tweet since Twitter's inception in 2006. For the Library of Congress, this acquisition is a way of making sense of the more than "50 million tweets" that occur daily and offers the public an opportunity to explore those Tweets which contain scholarly and research implications, such as "President Obama's tweet about winning the 2008 election" (Swartz). For Twitter, the canon of memory centers on the database rather than the human memory, but like its classical counterpart, the canon of memory as applied to New Media involves the ability to retrieve information when it is needed.

Canon of Delivery

Like memory, delivery has only recently garnered more attention from 21st-century rhetors. Just as style concerns itself with *how* something is said, delivery is an all-encompassing concern with the whole performative nature of the communication act. For classical rhetors, delivery was a vital element of rhetoric because of its powerful appeal to pathos. In Brooke's application of the canon of delivery to New Media, the powerful aspect of Twitter is an appeal to pathos that is accomplished by its aggressive *immediacy* of delivery. As an example of Twitter's rhetorical immediacy, the first reports of the January 2010 earthquake in Haiti were disseminated to the world from citizen journalists who used Twitter to relay the news (Sangani 34). At that time, the preliminary analysis of data showed that Twitter posts were one of the leading sources of discussion

about the quake and provided a means "to share information, react to the situation and rally support" ("Social Media and Mobile Texting"). By moving from a text-based rhetoric "exemplified by our attachment to the printed page, to a rhetoric that can account for the dynamics of the interface" Twitter provides an alternative venue of communication and becomes a contributory force in the 21st-century renaissance of the canons of memory and delivery (Brooke 26).

Pedagogical Implications of New Media

If interfaces will replace texts, and if students write within ecological environments, then educators must be aware of the ways in which they already naturally do so (Vie). In addition, educators must consider how to bring new technologies and related practices into the classroom by helping students acquire "*textured literacy*—the ability to comfortably use and combine print, spoken, visual, and digital processes in composing a piece of writing" (Yancey 38). Equally important is Cynthia Selfe's warning about ignoring technology which reminds educators that when we forget to look at technology and only see through it, we rob ourselves and our students of the opportunities to continue the conversation (of how technology affects us implicitly and explicitly) and to develop the critical stance necessary for technological literacy. According to Selfe, acquiring technological literacy is a method of empowerment, and "as it now functions in our culture…might allow [us] to act with more strategic effectiveness and force, both individually and collectively" (430).

Expanding on this idea is Barbara Blakely Duffelmeyer's work with first-year composition students, which gave students an opportunity to think critically about computers in the classroom. In her article "Critical Work in First-Year Composition: Computers, Pedagogy and Research," Duffelmeyer explains how educators can create

opportunities for students to achieve a critical stance and also provides helpful

definitions for ideas such as *critical pedagogy* and *critical work.* To educate using critical

pedagogy is to educate by "espousing a way of thinking, reading, and writing—an

attitude, rather than a viewpoint or an opinion—characterized by the willingness to look

deeply and questioningly at an idea and not close down thinking with biases or

premature judgments" (Duffelmeyer 362). Furthermore, she explains that *critical work*

"requires both being knowledgeable and continually seeking more information, having an

inquiring attitude (a particular habit of mind by which ideas are continually reevaluated),

and developing habits of mind that permit the individual to construct, interpret, and

analyze assertions" (362). In other words, for students to be able to engage in critical

work is for them to embrace opportunities to use technology and to "construct, interpret

and analyze assertions" about the larger ecological environment of how and why they

use technology (362). In addition, educators ought to examine their own critical stance

on technology to consider what affordances may be made for students who still do not

have easy access to technology or who do not wish to participate because of privacy

issues or other reasons.

     As educators become aware of the ways in which students already naturally

communicate within ecological environments, they can provide opportunities for students

to acquire a critical stance on the technology used within their convergence culture—a

culture where "old and New Media collide…where the power of the media producer and

the power of the media consumer interact in unpredictable ways" (Jenkins 2). Vie

suggests that incorporating online social networking into the writing classroom might

help students in the acquisition of technological literacies. According to Vie, sites such

as Twitter provide an opportunity to create "a participatory democracy in each

classroom" as well as a depository of "new lenses through which to examine current complexities" (Vie 21).

The research presented here views Twitter through the lens of the remediated rhetorical canons to determine how it might function as a genre, when it may be used pedagogically and how it allows us to communicate within an ecological environment. To understand how the theorists from rhetoric, New Media, professional communication and composition pedagogy interact with each other. See figure 3 below for a visualization of the literature map used in this thesis.
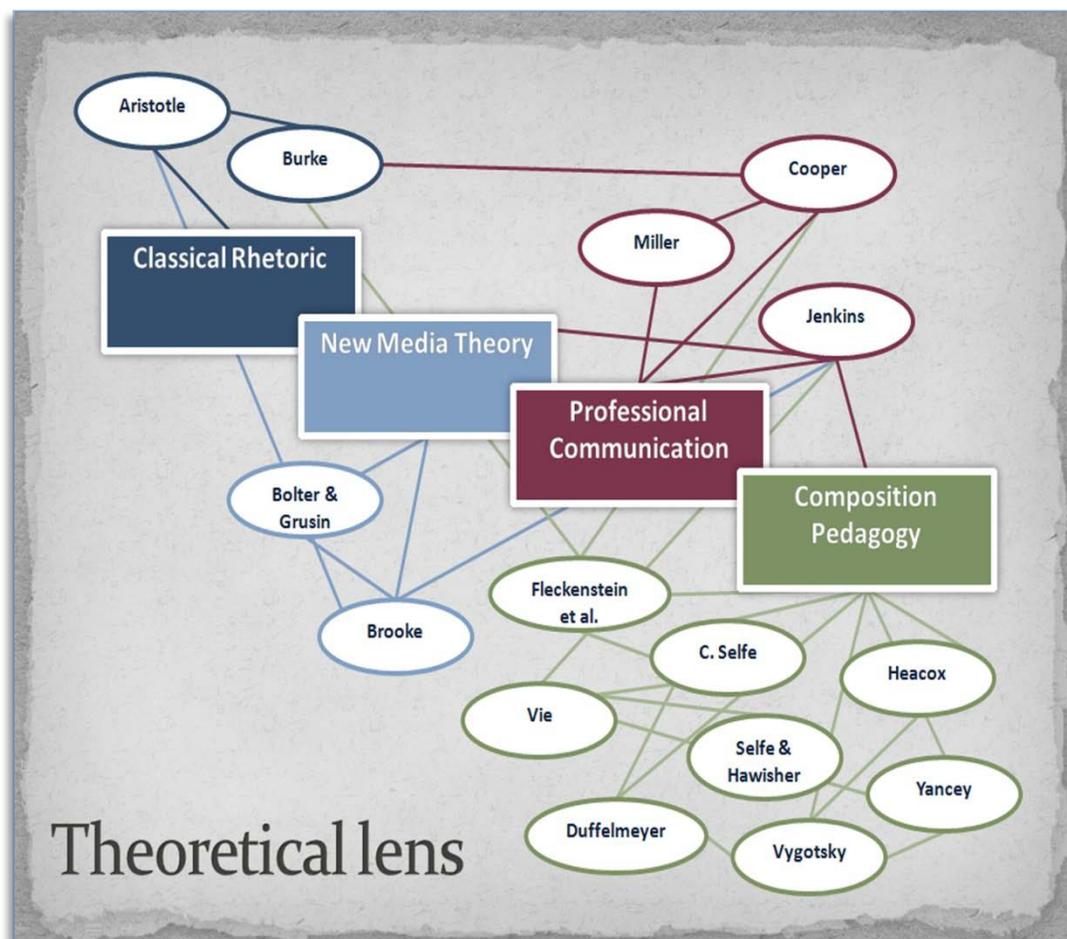

Figure 3. Literature map displays the interaction among theorists

CHAPTER 3: METHODOLOGY

For this study, I chose to limit my view of social media exclusively to Twitter even though I realize that there are other modes of social media communication which vary in popularity depending upon demographics and location. As mentioned earlier, my theoretical basis for exploring Twitter usage in the classroom rests heavily on Selfe's and Vie's admonishments that educators must pay attention to technology and specifically the technology that students are using in their everyday lives. With that in mind, I used the following questions to guide my research:

- How does Twitter function as a genre within the five canons of rhetoric?

- In what ways can Twitter be used to enhance learning within the classroom?

- Is Twitter an important literacy for students to acquire?

I engaged a qualitative methodology to collect and analyze data in which I initially gathered data from an Iowa State University educator who used Twitter as part of his classroom pedagogy. Before my initial contact with him, I applied for and received IRB approval to email him and conduct a semi-structured interview. After introducing myself via email, I contacted him for an interview and supplied him with the list of questions that I would ask during the interview. To minimize distractions and for his convenience, we met in his office on campus for about 45 minutes. With his permission, the session was recorded for the purpose of transcription as part of my data collection. Also, we agreed that his name would remain anonymous and that I would use a pseudonym when referring to him in my research.

At the recommendation of my first interviewee, I also began following on Twitter several other instructors throughout the United States who used it both professionally and academically. Following their status updates led me to their blogs and official

university websites where I was able to read their syllabi and posted course assignments detailing the use of Twitter in their classrooms.

Later, I was introduced to another instructor who was using Twitter in his speech communications class. After attaining the required IRB approval, I introduced myself via email and requested an interview. I also supplied him with the same list of questions (as before) that I would ask during the interview. To minimize distractions and for his convenience, we met in his office on campus for about 30 minutes. With his permission, the session was recorded for the purpose of transcription as part of my data collection. We also agreed that his name would remain anonymous and that I would use a pseudonym when referring to him in my research.[1]

Along with answering the same set of semi-structured questions, this instructor was willing to show me his live Twitter feed for his class and invited me to follow it along with the students in class. This provided me with real-time data throughout the course of the project. We ended our first interview (which occurred just a few weeks into the fall 2010 semester) with the agreement to stay in contact throughout the semester. At week 15 of the semester, this instructor emailed me with further information about how the students perceived the Twitter project and what his perceptions were of it as well. With both interviewees, I agreed to keep them anonymous and have constructed pseudonyms when referring to them in this research.

As I pored over recorded interview sessions, Twitter feeds, blog entries and assignment pages, I realized that instructors were using Twitter with varied levels of commitment and success. So I expanded my research beyond its original scope to include articles within peer-reviewed journals. After I transcribed the interview sessions, and printed email exchanges, articles, and blog posts, I began reading and marking the

copy for recurring themes and looking for patterns in the data. Next, I looked at the pieces of data I had extracted and began considering how each piece could be part of the New Media conception of the five rhetorical canons as well as paying attention to how this information tied to my theoretical construct. My data came from three main sources: interviews with instructors, artifacts gathered from blog posts or web articles of respected rhetoric and technical communication professors, and peer-reviewed articles from journals and conference proceedings concerning Twitter in the classroom. By collecting information from a variety of sources, I worked to validate and triangulate my data as well as provide stability within and among my data.

CHAPTER 4: RESULTS

The research results presented here, which were culled from personal interviews, Twitter feeds, blog posts and course websites, demonstrates a growing trend among academicians to incorporate social media technology into classroom pedagogy. Goals for doing so are varied, but one constant remains clear: educators are using social media in the classroom in order to reach Millennial students where they are already "composing digital writing" and "practicing textured literacy" through online social networking sites (Yancey qtd. in Vie). These activities are part of a convergence culture which represents a cultural shift from older notions of "passive media spectatorship" for educators and students who are now (as media consumers) "encouraged to seek out new information and make connections among dispersed media content" (Jenkins 3). This blending of both roles of consumer and creator has placed educators and students inside an environment where participants within the convergence culture interact with each other "according to a new set of rules that none of us fully understands" (3).

Using Twitter Pedagogically

As educators find themselves in the unchartered territory of a convergence culture, it becomes increasingly important for them to pay attention to how technology is used to shape communication practices and to consider what type of involvement should be required of students in the classroom. Currently, there are an increasing number of educators who are using social media in the classroom, as well as some who are also asking students to think critically about it. While purposes and goals for Twitter in the classroom varied among instructors, some of the frequently employed pedagogical applications of Twitter were to…

- encourage class participation and provide feedback in both traditional and distance learning (Dunlap & Lowenthal; Eller; Jaworowski; Lane and Lewis; Mann; Pignetti; Rankin; Wolff)

- conduct rhetorical research by aggregating news sources (Farwell and Waters; Fernheimer; Jaworowski)

- collaborate with peers and encourage classroom community (Dunlap & Lowenthal; Farwell and Waters; Fernheimer; Jaworowski; Mann; Pignetti)

- increase social presence through ambient awareness especially in distance learning (Dunlap & Lowenthal; Farwell & Waters; Jaworowski; Pignetti)

- enhance literacy by providing opportunities to acquire technological skills (Farwell & Waters; Jaworowski; Silver; Wolff).

- develop a critical stance on New Media technologies (Silver; Wolff).

Frequently, Twitter was paired with other synchronous learning resources (e.g. lectures, webinars, video conferencing), and asynchronous learning resources (e.g. email, online discussion boards, wikis, blogs, course management systems, in addition to other types of social media). Instructors who were new to Twitter frequently allowed its use in the classroom on an informal, organic basis. Other instructors who were more familiar with the technology had clearer goals in mind. Twitter use was typically on a voluntary level for students; however, in some instances it was required as part of classroom coursework.

Organic and Structured Uses of Twitter

"It was very of the moment. It wasn't planned….It just kind of emerged."

–Mark Mann

The organic, unstructured use of Twitter occurred in a classroom where the students (who were part of the Millennial demographic) were already using the technology in their personal lives. Since Mark Mann (an Iowa State University educator of a Technology, Rhetoric and Professional Communications course) had also begun experimenting personally with Twitter, he availed himself of the opportunity to utilize Twitter pedagogically. One positive benefit of Twitter was that it afforded students the ability "to ask questions before class" and for the instructor to deliver "quick feedback" (Mann). Because participation was voluntary and the experiment informal, Mann describes the outcome as *"a way for students to chat about the class. And to make connections with other things that are out there."* His experimental Twitter use in the classroom reflects Cooper's understanding of a writing ecology because Twitter provided for an extended group of people to interact through their writing and to publish their ideas "out there in the world" (Cooper 7). Mann considered this serendipitous use of Twitter to be successful in meeting the needs of a particularly technologically savvy group of students who desired to continue their discussions outside of class. In a sense he provided a differentiation of instruction—a type of instruction that changes the "pace, level, or kind of instruction…in response to individual learners needs, styles, or interests" (Heacox 5). By allowing the incorporation of Twitter into his pedagogy, Mann appealed to a group of students who were ready to move past the core content. Mann, however, was not the only educator to consider using Twitter to differentiate instruction.

> *"It was very difficult to differentiate learning …It was intended…for people who already used it… I wanted a way to reach out to those who wanted extra ideas or things outside of the regular classroom" –Edwin Eller.*

Edwin Eller, an Iowa State University speech communications educator, decided

at the beginning of the 2010 fall semester to incorporate Twitter into his pedagogy.

Participation remained voluntary even though Twitter use in the classroom was

instructor-initiated not student-initiated. However, Eller's primary reason for choosing

Twitter over other forms of social media was situated in the idea that Twitter might be

something that students were already using. See figure 4 below for sample Tweets

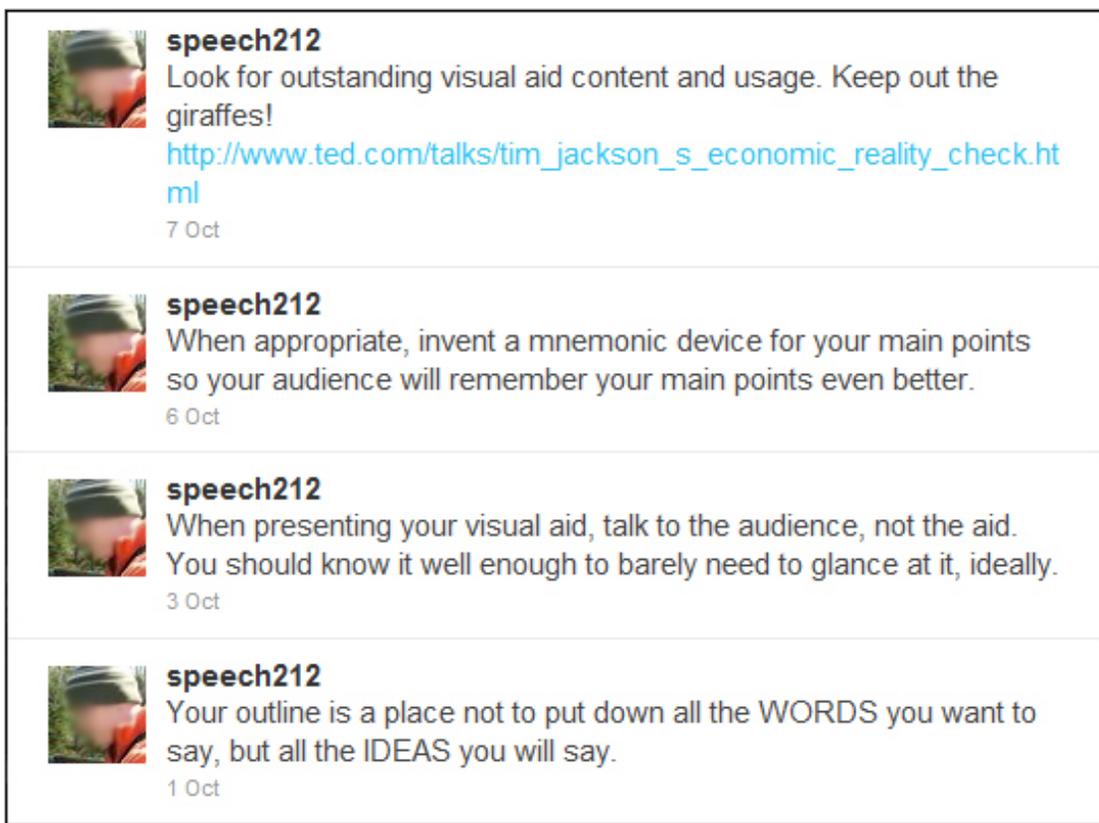**Figure 4. Public speaking tips made available to students via Twitter**

from speech 212 class. For him, Twitter was a good communication medium because of

its 140 character limitation which would encourage brevity, and for its web 2.0

immediacy, so that students could receive "on the go" texts to their phones or iPods.

Also, in an effort to differentiate instruction and extend learning beyond the classroom,

Eller's incorporation of Twitter into his pedagogy provided a higher level of instruction (than he could provide within the time limits of the class) for those students who wanted the extra coaching with speech preparation and delivery. When asked what students' perception of Twitter was Eller mentioned the following student remark: *"I really enjoyed the tips. They were easy because I already use Twitter and look at it often."* Although Eller's specific purpose for using Twitter was different from Mann's, both instructors provided opportunities via Twitter for students to engage in textured literacy experiences which, in part, informed students' literacy practices (Selfe and Hawisher; Vie; Yancey).

Instructors such as Mann and Eller are not unique. Other professors around the country are experimenting with social media in the classroom, and many are finding Twitter to be a convenient mode of communication for their courses. The subsequent discussion of Twitter use in the classroom focuses on the following professors whose published course syllabi and assignments were accessible via their websites, blogs, and Twitter feeds.

- Tricia Farwell, Assistant Professor of Public Relations and Media Writing at Middle Tennessee State University;

- Janice W. Fernheimer, Assistant Professor of Writing, Rhetoric, and Digital Media at The University of Kentucky (formerly from Rensselaer Polytechnic Institute);

- Susan Jaworowski, Assistant Professor of Law at the University of Hawai'i at Manoa;

- Daisy Pignetti, Assistant Professor of Composition and Rhetoric at the University of Wisconsin-Stout;

- Monica Rankin, Assistant Professor of Mexican and Latin American History at the University of Texas at Dallas;

- David Silver, Associate Professor of Media and Environmental Studies at University San Francisco;

- Richard D. Waters, Assistant Professor of Public Relations and Communication at North Carolina State University;

- Bill Wolff, Assistant Professor in the Writing Arts Department at Rowan University.

Using the data gathered from the personal interviews of Mann and Eller, and the instructors listed above, three key concepts appeared which also helped to explain the parameters of and reasons for a pedagogy which incorporates Twitter in the classroom. These key concepts include a discussion of voluntary versus mandatory participation in Twitter, the learning connection found in creating ambient awareness as well as its role in building social presence, and finally the importance of rhetorical research and its role in collaboration within an ecological environment.

Voluntary versus Mandatory Participation with Twitter

One debate that is occurring within the educational environment is whether social media use in the classroom must remain voluntary or whether it may be mandated. There are strong feelings on both sides. Many professors such as Monica Rankin of the University of Texas at Dallas believe that mandated social media use in the classroom is not prudent due to student privacy issues. She subscribes to the current argument that a cautious stance is necessary for both students and educators to maintain an ethical distance between their personal and academic lives. Rankin, therefore, provided an alternative for students who would not (due to privacy issues) or could not (due to a lack

of technology) use Twitter during her class. For them, Rankin required that responses and questions be written on slips of paper and given to the TA moderator who would then post them under an assumed name to the course hashtag. Although a somewhat cumbersome accommodation, Rankin showed sensitivity to students' ability to participate in the project.

Even though Rankin's stance on the importance of privacy is an accepted one, there are still some who believe otherwise and argue that mandating social media use is necessary (in some instances and for certain courses). For example, David Silver, who teaches Media and Environmental Studies at the University of San Francisco, feels strongly that students must use social media as part of his classroom pedagogy. Silver establishes the following context for mandating social media use in his courses:

> *I have been asking college students to make public media for nearly fifteen*
> *years! On the first day of classes, I was very explicit: you will be making public*
> *media in this class, and you will be making it under your real name.*
> *I…encouraged students to come see me if they had any problem with this. None*
> *of them did* (Silver).

Silver's rationale is based upon his knowledge of students' current technological practices. He contends that many U.S. college students already create a large volume of public media, and comments that "personal broadcasting is practically *de rigueur* for younger/youngish people in the U.S." Because of this trend, educators must consider two divergent approaches to teaching digital literacy within the context of public media. First is the traditional approach, in which instructors "teach students to be measured and careful of the dangerous ways of public media" (Silver). By contrast, the second

approach (which Silver claims is the preferred method) is "to teach students to be creative and responsible as they put their work (and lives) out there on the public web."

Silver's rationale makes a significant point: educators should recognize that students must act responsibly when creating public media, much in the same way they must live and act responsibly in other areas of their public lives. Furthermore, leaving behind a reputable digital footprint is important considering that participation in 21st-century literacy practices involves communication within "multi-leveled, multi-faceted environments" (Fleckenstein et al.). This increasingly interconnectedness of educators' and students' private, academic, and professional lives is causing change within and among our cultural ecologies of practice (Cooper, Fleckenstein et al, Selfe & Hawisher).

Bill Wolff of Rowan University concurs: "Ultimately, using Twitter in Information Architecture reinforced my belief that microblogging is an important communication medium and as such it is important for burgeoning writers to understand it both theoretically and practically." Wolff chose Twitter for several reasons. First, he wanted to "showcase the meaning-making opportunities afforded by applications that open their API for external [software] developers." Secondly, he wanted to give students the opportunity to review the Twitter applications online via a public discussion, and most importantly, he wanted students "to think about how Twitter could facilitate a meta-discussion about our actual discussion" (Wolff). Wolff describes the first opportunity he created for students to think critically about Twitter:

> *For the first class meeting, I asked students to read "Brave New World of Digital*
> *Intimacy" by Clive Thompson and watch "Twitter in Plain English." This allowed*
> *us to move right in to a (rather abstract) discussion of ambient awareness which*
> *led into students signing up for their Twitter accounts. –Bill Wolff*

Wolff adds that his desire to use "Twitter in the classroom [was] a way to have a meta-discussion about the real-life (RL) discussion while the RL discussion was taking place" and cites an unanticipated benefit of Twitter was how students were using it outside of class for discussions about class which "provided phenomenal insight into how students were thinking about readings, the course overall, and the assignments." As a measure of assessment for this project, Wolff kept track of the number of Tweets students posted, the number of followers each student had and the number of Twitterers each student followed. In addition, Wolff tried to "reinforce the importance of engaging with the Twitter community by requiring students to include in their final project (and [to] analyze in terms of the theories discussed in class) screenshots of their Tweetstats and Twitter Top Friends Network."

In the end, Wolff found that students had been given the opportunity to think critically about "Twitter as a medium and not just a tool." As a result of becoming more critically aware, "students were more successful…users of Twitter and its related applications." Finally, according to Wolff, the project "succeeded in helping students gain confidence in their public voice….By placing their reviews online they [were] becoming authorities on the subject and helping educate the larger Web audience." Both Silver and Wolff concur—students must be given opportunities to acquire a critical stance on social media use and to discuss the ethical implications of a ubiquitous virtual presence which now shapes our non-virtual realities (Silver; Wolff).

Ambient Awareness and Social Presence

In the examples discussed thus far, students used Twitter in traditional classroom settings, but one venue that has frequently used Twitter is distance learning classes and blended (traditional and distance learning) classrooms. One of the benefits of using

Twitter in courses delivered through distance instruction is the ability to replicate in cyberspace a sense of social presence and ambient awareness. Joanna C. Dunlap and Patrick L. Lowenthal advocate for Twitter use in distance learning courses because they believe (in accordance with Lev Vygotsky's theoretical framework) that social interaction is a crucial component for cognitive development and learning (Vygotsky). While online management systems provide for structured interactions such as information and document sharing, social media such as Twitter can provide the water-cooler, out-of-class conversations that are missing with standard online course management systems. "To be truly effective, online learning must facilitate the social process of learning….Out-of-classroom interactions…can help strengthen interpersonal relationships between and among students and faculty that enhance the learning community inside the classroom" (Dunlap and Lowenthal 1).

> *"In the Spring 2009 semester, I asked all three sections of my ENG 102 students, two online and one face-to-face, to create Twitter accounts." –Daisy Pignetti*

In response to student privacy issues, Pignetti's original reason for choosing Twitter for academic and professional use instead of Facebook was to "start in neutral territory" since most students were using Facebook for their private microblogging and would not want a professor to have to "friend" them. Twitter allowed students to keep their academic and private lives separate (Pignetti).

Her objectives for her Twitter assignment were relatively simple. She wanted to create active readers and encourage classroom community in her undergraduate composition courses. Since her assignment required students to post 200 updates throughout the course of the semester, this caused the face-to-face group of students to "live-blog" during her lectures as well as outside of class in order to meet the assignment

requirement of 200 status updates. In addition, her two groups of distance learners

"greatly benefited from updating their status and began to rely on each other for answers

rather than just emailing [her] when they had a question." She remarked on the benefits

of her own use of Twitter as well:

> *I plan on using the site more during my virtual office hours rather than relying on*
>
> *instant messenger or discussion boards [or even email] because of the ease and*
>
> *speed with which questions can be answered and resources shared* (Pignetti).

Interestingly, an unforeseen benefit Pignetti observed while using Twitter pedagogically

was the "humanizing effect" that occurred within the distance learning classes. She

comments:

> *The humanizing effect was one that I hadn't initially planned on, but is obviously*
>
> *representative of Web 2.0 technologies where the users are producers,*
>
> *consumers, and collaborators. Many online students expressed how they*
>
> *enjoyed the fact that I Twittered too, that I was* 'more like a teacher and less of a
>
> server in some basement.*' They also enjoyed learning more about their*
>
> *classmates, remarking that this course was* 'the only one so far in which I've
>
> even known my other classmates' names.' (Pignetti)

The humanizing effect felt by the distance-learning students definitely illustrates the

need for and benefits of social interaction within the context of learning (Vygotsky). In

addition, the use of Twitter in the socialization and learning processes undergirds the

concept of a convergence culture—one that is a "participatory culture" where

convergence "occurs within the brains of individual consumers through their social

interactions with others (Jenkins 3).

After using Twitter to enhance social presence within a convergence culture of increasingly collaborative practices, Pignetti collected student reflections on Twitter use in the classroom. She found the following reflection most revealing about its humanizing affect, and its ability to create ambient awareness:

> *Throughout the past year and a half I have been taking distance education classes; therefore, I have used reading not only to gain knowledge from text books, but I have also used reading as a way to stay connected with peers from a distance. Twitter…allowed me to informally post comments about my classes, what I was doing, and what was going on in my life. I didn't like posting or reading other Twitter messages at first….Sooner than later, I found that I often desired to read about other students' studies, tests or late nights of doing homework….The reading made me feel connected with others and gave me the energy to push on because I knew I wasn't the only one stressed about school work (Student qtd. in Pignetti).*

This individual's reflection on Twitter's role in the learning process indicates (that for some students) using Twitter increased their level of active reading and helped them form a sense of community.

Rhetorical Research and Collaboration

> *"People all around the world are writing to connect to one another, to spread ideas, and to enable their words to make an impact."* –Janice Fernheimer

For Janice Fernheimer, Assistant Professor of Writing, Rhetoric, and Digital Media at The University of Kentucky, Twitter allows students to communicate within an ecological model of writing which encourages collaboration and rhetorical research. In this paper, the term *rhetorical research* is defined as research that is conducted using

the aggressive immediacy of delivery that Twitter provides to find the topoi of a subject. Fernheimer has three specific objectives for her Twitter assignment in her Israel and Its Conflicts course. First, she wants students to "read more news" than they would otherwise and from "a variety of sources." Secondly, students should improve "analysis and summarization skills." Third, students should sharpen their understanding of "rhetorical audience [and] purpose while also increasing collaboration and community" (Fernheimer). In her class, which discusses Israel and its conflicts, discovering and understanding the *topoi* of the subject matter provides students a venue for gathering together various sources of information in order to study the argumentation employed within them. Even though Fernheimer's Twitter collaboration focuses primarily on the *topoi* employed in rhetorical invention, other educators have used Twitter with particular attention given to the rhetorical canons of style, memory and delivery.

Tricia Farwell, Middle Tennessee State University, and Richard D. Waters, North Carolina State University, posit that collaboration should not be "confined within one organization…but…should reach across organizations into the global community" (Farwell and Waters). Grounded in this concept, they conducted a research and collaboration project between the students of their respective universities in which students from an advertising course at one university were paired with students from a public relations course at the other university. The objective was to teach students how to converse within the parameters of Twitter's 140 character microblogging style, use appropriate social media etiquette, and communicate and build relationships in an asynchronous collaborative environment (Farwell and Waters). On the surface this may have seemed to be a rather simple assignment, but students found that "communicating in a cross-discipline, cross-university environment with only 140 characters at a time

prove[d] to be quite challenging" (Farwell and Waters). According to this pair of educators, understanding technologies such as Twitter is important for student literacy and potential success in the ecological environments of journalism and mass communication. Farwell and Waters primary use of Twitter employed the rhetorical canon of style (students should learn and use the proper microblogging etiquette style) within their collaborative environment. Increasingly, educators are experimenting with Twitter in the classroom to facilitate research and to promote collaboration (Farwell and Waters; Fernheimer; Jaworowski).

Another significant feature of Twitter in collaboration and research is its rapid mode of delivery. Susan Jaworowski, University of Hawai'i at Manoa requires students in her LAW101 course to utilize Twitter to link to current events. Desiring to "capture the global pulse," Jaworowski chose Twitter for its immediacy of delivery in order "to present timely, same day information and to help students see the relevance of real life experiences to the classroom" (Jaworowski). Students also shared with her that they were "reading tweets in the online, hybrid, and face-to-face Law 101 sections" (Jaworowski 111). In addition to student participation, Jaworowski comments on her own Twitter use. Since tweets were not constrained by classroom parameters of time, Jaworowski comments:

> *"I found that I posted many more times on Twitter than the number of news items I had previously shared in class."*

See figure 4 on the next page for some of the news items posted to Jaworowski's law101 account. Notice her use of the retweet function to broadcast information from another user's status update. In this pedagogical use, Twitter has become a necessary strategy in acquiring breaking news and sharing it with others. Looking at Jaworowski

use of Twitter in the classroom through the canons of rhetoric illuminates Twitter's

capability for memory (databases to archive updates) and delivery (status updates via
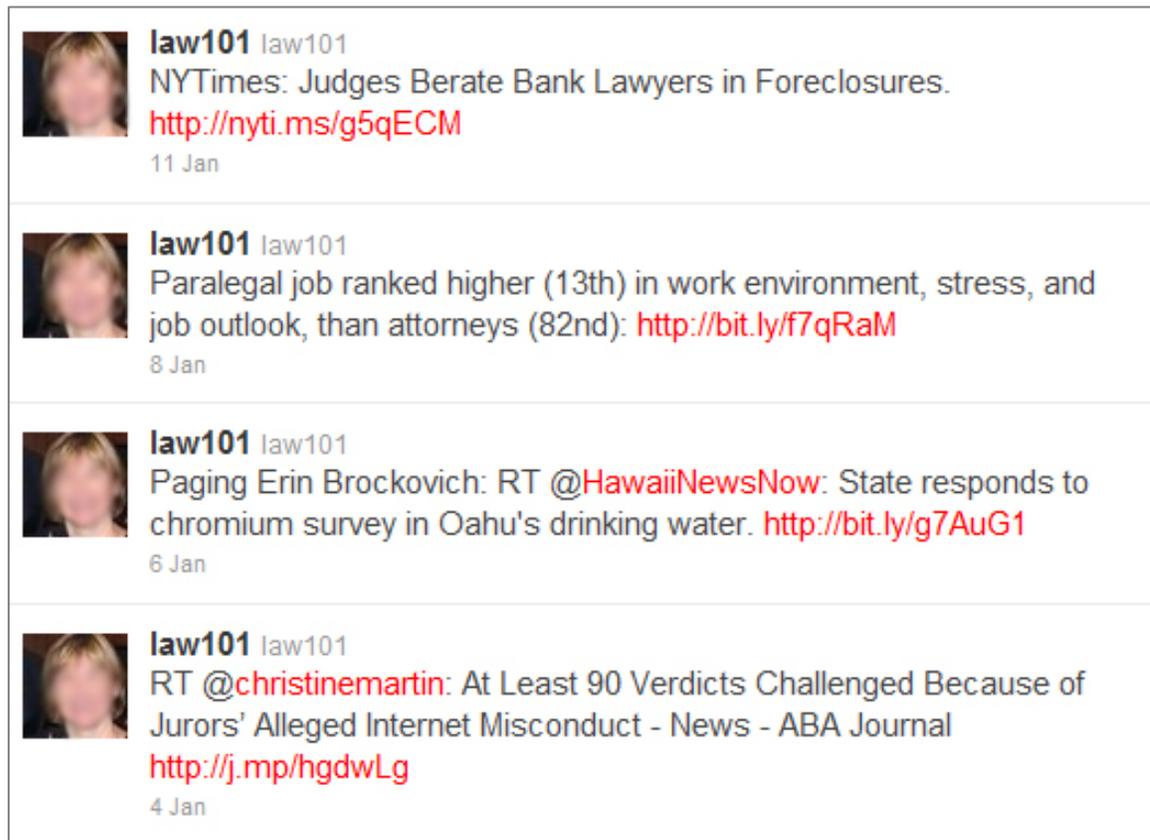

Figure 5. Law professor and students share breaking news via Twitter

mobile device or computer). As a performative act of communication Twitter's ability to

aggregate information and disseminate it quickly to the class members, provides yet

another example of how new technologies remediate old ones.

CHAPTER 5: IMPLICATIONS

Through the medium of Twitter, the initial goal for this research was to explore how the theories of rhetoric, composition and professional communication intersect and what could be contributed to the teaching of writing and communication in the university classroom. Originally, Twitter was developed by Jack Dorsey et al. for business employees to be able to communicate in brief 140 character posts, but this quickly transferred to personal use. My initial inquiry asked whether educators were using Twitter pedagogically, and if there were any rhetorical reasons for doing so. My research verified that some educators are using Twitter pedagogically and that Twitter is often chosen for educational purposes because of its accessibility and immediacy, because it is a free service and an alternative to Facebook, and because it is a host to a number of free applications that have been especially created to "facilitate Twittering from the desktop, mobile phone, and the web" (Wolff). Although just one Web 2.0 application among many, Twitter use appears to be increasing an individual's capacity to connect with people, create social presence, enhance ambient awareness, and provide a venue for communicating with fewer boundaries especially within distance learning communities.

Twitter—a Harmonious Pedagogical Ecology

With such widespread use of Twitter both inside and outside of the classroom, the research presented here also attempted to place Twitter within a harmonious ecological environment in order to understand how it functions rhetorically as a communication medium. In order to accomplish this task, I investigated theorists from three interrelated yet distinct fields—rhetoric, composition pedagogy, and professional communication in order to construct an ecological environment that might adequately

address the distinctive communication mode of Twitter. In the area of rhetorical theory, I examined Aristotle's five rhetorical canons—invention, arrangement, style, memory, and delivery. Then, in order to accommodate for the Web 2.0 interface as part Twitter's communication structure, I applied Brooke's, and Bolter and Grusin's theories of New Media which reconceptualized the classical canons in order to address the rhetoric of the interface rather than the rhetoric of the printed page.

Developing the Twitter Genre

In establishing a rhetorical construct for New Media technologies, I asked whether a tweet fits the socio-rhetorical conceptualization of genre as posited by Miller and others. Carolyn Miller's open classification system based upon "a situation-based fusion of form and substance" provided the space for "a point of connection between intention and effect" and allowed for new genres to evolve and old ones to decay (Miller 152-53). With this in mind, Twitter's open platform provides a form of social knowledge and responds to exigence in a socially recognizable way and provides a method for making "public our private version's of things" (Miller 158). Marilyn M. Cooper builds upon Miller's construct by applying Kenneth Burke's rhetorical theory that states language use equals action. From this application Cooper invites us to consider writing as existing within an ecological environment. She says that people who interact through writing are "connected by various systems" and that "ideas are out there in the world…always being modified by ongoing human discourse" (Cooper 12). Based upon this construct, then, it would seem plausible to admit the Tweet as a genre. What is still left for speculation is the longevity of this form of communication. Will its evolution be met with its immediate decay? Only time will tell. Nevertheless for the moment, Twitter functions within an ecological environment and exhibits the characteristics of

interdependence, diversity and feedback (as defined by Fleckenstein et al.) which are essential for establishing a harmonious and holistic approach to writing.

Evaluating Twitter Rhetorically

By remediating the rhetorical five canons of invention, arrangement, style, memory and delivery for the interface rather than the printed page or spoken word, Twitter is able to function as an Ecology of Practice. In the Canon of Invention, it was shown that some instructors used Twitter to research and collect ideas—the topoi—for their course disciplines. For example, educators such as Janice Fernheimer in her Israel and Its Conflicts course and Susan Jawarowski her Law101 course use Twitter so that students may collect and share topics which in turn provide the basis for further class discussion and analysis. In Fernheimer's instructions for Twitter use she states: "class tweets must be a link to a relevant article, [then write] a short summary explaining how it relates to the topoi and why others might want to read it for this class and [place it on] our course hashtag #IPRPI" (Fernheimer). For Jawarowski, Twitter was used to disseminate breaking news and provides a space for discussing current events during class. In both instances, these professors were using Twitter at the undergraduate level for the rhetorical purpose of the invention of ideas. Because their course content mandates a discussion of current events, Twitter provides a more dynamic method to receive news than the traditional sources of broadcast media.

For the Canon of Arrangement, Twitter's open structure especially makes sense within an ecology of practice because Twitter's arrangement relies not on how words are physically placed on the page but instead on the frequency, relevancy and immediacy of the Twitter application. This is most clearly seen in the instances of retweeting and trending topics in which users lend strength and credence to topics under discussion.

For example, a review of figure 4 shows Jawarowski's Jan 4th and 6th posts are retweets. In those posts, her retweeting adds strength and credibility to the original tweet of the posted URL as well as hyperlinking the student to the original article. Another example of the importance of frequency, relevancy and immediacy can be found in recent events such as the 2011 protests in Egypt, and earlier events such as the 2010 earthquake in Haiti, in which Twitter and other social media forms were the first sources to deliver news from a compromised area. In these examples immediacy plays an important role in the Twitter communication stream because of the democratization of information. Also, since Twitter can be accessed via mobile device or computer, the user gains more flexibility and experiences a gamut of networking capabilities that provide for greater frequency of communication. As a pedagogical strategy, then, Twitter is useful because students have a resource at their disposal that provides a way for information to be democratized and disseminated quickly and collaboratively.

Additionally, for the Canon of Style, Twitter embodies a coded short-hand that works within a 140 character limit. Users must learn to be succinct and clever as well as abide by a type of short-form communication etiquette. Instructors Tricia M. Farwell and Richard D. Waters intentionally designed a cross-collaborative assignment between their respective universities in order to inform undergraduate students' practices on the power of collaborative microblogging and social media etiquette. In order to achieve the appropriate level of brevity, students learned that ancillary applications such as the hashtag, bit.ly and yfrog enabled them to say more with fewer characters. Additionally, for graduate level students, in Media Studies and Information Architecture courses taught by David Silver and Bill Wolff respectively, Twitter is a good medium to experience the benefits of an open API structure which allows software developers to

create applications for Twitter in response to the needs of users thus facilitating a more democratized syntactical approach to style.

Likewise, in the canon of memory, the database (frequently built to be dynamic so that information is webbed and linked in such a way that the outcome is dependent upon how the user accesses the information) has remediated human memory. Within an ecology of practice that embraces the dynamics of the database, communication appears as *"symbiotic clusters:* knots of nonhierarchical, locally enacted semiotic-material" (Fleckenstein et al 394). Twitter provides a mode of communication which spans distance allowing online students to develop the social interaction piece which is crucial to learning (Vygotsky).

Instructors, Joanna C. Dunlap and Patrick Lowenthal in their distance instruction courses at University of Colorado, Denver recognized the importance of providing informal opportunities for social interaction among students and between instructor and students as part of the cognitive development process. Although the instructors strongly encouraged it, participation remained voluntary among students. Feedback from one of their students suggests Twitter was useful in creating social presence and ambient awareness: "Twitter has been a great way for me to…[hear] how other's were feeling about school, how life was treating them…This is something much more intimate than mandatory weekly discussions, although they carry their own merit" (Dunlap and Lowenthal). Students collected social experiences via the Twitter database which were then internalized within the human memory and thus resulted in a display of ambient awareness and an acquisition of social presence within a convergence culture as part of Dunlap and Lowenthal's distance instruction classes.

As for the canon of delivery, Twitter functions within the whole performative nature of the communication act primarily due to the precarious balance of tension that exists between the New Media characteristics of hypermediacy and immediacy. Twitter users look *at* the technology as well as look *through* the Twitter application to the content. This also is a distinction of a current convergence culture which morphs the roles of both consumer and creator (Bolter and Grusin, Brooke, Jenkins). It is this aspect of students living and learning within a convergence culture which suggests strongly that educators must provide opportunities for students to develop a critical stance on it. Web 2.0 technologies have placed us in unchartered territory, both educators and students must think critically about how our literacy practices will influence our abilities to communicate effectively. Both David Silver and Bill Wolff concur. The perfomative nature of Twitter makes it a powerful technology. The potential for social action is great. The need for a critical understanding of it is significant. Because Twitter exhibits these rhetorical characteristics, it seems necessary then to consider using it pedagogically.

Assessing Twitter Pedagogically

Initial findings from this research indicate that there are some educators who already are using Twitter in the classroom. Reasons for use varied but the most salient inclusions showed Twitter to be a contributory force in class participation and feedback, rhetorical research, collaboration, social presence, ambient awareness, classroom community, literacy and critical stance. Educators differed on whether it was ethically acceptable to require students to use Twitter for class. Two approaches emerged from this discussion. The first, more conservative approach was to offer Twitter as a voluntary means of communication as in the case of Mark Mann's undergraduate Technology, Rhetoric and Professional Communications course and Edwin Eller's Speech

Communication 212 course. Other professors such as David Silver believe that students should be taught how to responsibly use public media, and one way to do that is to require them to publish using their real identities as part of the course syllabus. While mandating social media use may be admissible in some graduate level courses such as media studies or technology courses, most instructors (especially at the undergraduate level) should consider what affordances they might make for students who are unable or do not desire to use social media for their course work.

Generally, the implementation of Twitter into classroom pedagogy was more successful when the professor had specific goals in mind for its use and created detailed instructions for students to follow in their integration of it as a part of their course work. For example, Tricia M. Farwell and Richard D. Waters created a harmonious ecological environment when their students who were from two different departments and universities collaborated and conducted rhetorical research via Twitter.

In the case of distance learning, instructors found Twitter to be a means to enhance ambient awareness and build classroom community. For example, the end result in Daisy Pignetti's courses was a "humanizing experience" which allowed students to view Pignetti as a real person as well as to interact with the other individuals in the class on a level that simulated the type of informal interaction that happens in a face to face environment. Finally, there were a few educators such Bill Wolff and David Silver who consciously incorporated Twitter into classroom pedagogy in order to provide opportunities for students to obtain literacies of technology (exploring and learning about applications), practice composing in textured literacies, and provide occasions to have the meta-discussions necessary to develop a critical stance.

While these instances of Twitter's use cited here were relatively successful and fulfilled specific purposes, this researcher cannot definitively say that Twitter alone must be a required literacy for every student. However, addressing web 2.0 technologies in general does seem to be necessary since these are the technologies that students use daily without really considering how their use affects their lives. In this researcher's opinion, additional qualitative research that allows students to be co-inquirers about web 2.0 technologies (in general) and Twitter (specifically) is necessary before solidifying Twitter's place within the composition classroom. In addition, issues of access when an instructor mandates Twitter use should be addressed as part of the critical stance taken by an educator as well as for students' own deep thinking about the technology. Finally, more research needs to be conducted beyond these practitioners or early adopters of web 2.0 technologies who already have an inherent bias toward its successful use. Therefore, research by detached observers is needed who can design a methodology according to traditional, social science research where the researcher is an impartial observer in the classroom.

Implementing an Ecology of Practice

"Writing is one of the activities by which we locate ourselves in the enmeshed systems that make up the social world. It is not simply a way of thinking but more fundamentally a way of acting." (Cooper 13). When educators consider the teaching of writing as part of social action, then a harmonious ecological model is required to affect change. Moreover, educators, who pay attention to the types of technologies students already use, can provide those students with opportunities to form critical stances on them; and accordingly, give students the agency they need to succeed (Selfe, Vie).

In addition to an acquisition of agency, educators can also improve students'
literacies by offering course work which allows them to publish responsibly and by
discussing their roles as producers and consumers in the collective process of acquiring
knowledge and creating meaning within a convergence culture (Jenkins). Clearly, social
media such as Twitter are remediating the way we think, compose and communicate in
our "ecologies of practice" (Cooper). As educators, we must push past the idea that we
are paying attention to technology by giving mere credence to computer use in the
classroom. Instead we must pay attention to the latest remediation—Web 2.0
technologies—in order to provide students with those opportunities necessary to live,
work, and communicate in a larger social ecology. Affording students these opportunities
should help them to leave behind a digital footprint worth considering and to become
socially adept communicators within our 21st-century harmonious ecological
environment.

NOTES

1. The two ISU instructors who allowed me to interview them are assigned the pseudonyms of Mark Mann and Edwin Eller respectively as a condition of their consent to participate, for which I am grateful to them.

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