Assessing the Impact of Communication Technologies on Texts and Curricula in Business Communication

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Introduction

Several years ago, I became fascinated by the idea that advances in communication technologies would finally make it easy to integrate digital literacies in business communication curricula. Today, digitized texts have, indeed, gained increasing importance in business communication and have become an integral part of the curricula. Students are expected to use digital media applications for learning concepts, preparing assignments, collaborating with peers, attending totally or partially online courses, among other activities. These developments have made it clear that, within academic writing departments, students need digital skills for learning and research purposes in order to cope with the exigencies of the academy and their future professional careers.

What the academy has not done is develop students' proficiency in digital literacy. Students are already using mobile and web based technologies for personal use, but that use has not made them experts. The myth of the 'digital native' (Prensky, 2001) denotes expert young technology users when in fact many students struggle with basic Word Processing. That myth has resulted in simplified misunderstandings of students as digitally literate. Yet it influences and shapes academic expectations of students' technological capabilities with the result that often the only caveat in the syllabus is "have Internet access for the entire semester." This caveat is limited in its assumption that students have an innate technological proficiency. It conflates access to technology with proficiency in technology. Anecdotal evidence indicates that this generation of learners' engagement with technology is mostly about consuming information rather than creating and authoring through demonstrated competencies and skills.

Rationale

Educators have not reconciled students' use of specific technologies with the general practices that digitization supports in learning. When it comes to reading, for example, educators assume that students will naturally transfer their print reading skills to digitized text. However, research has shown that students approach digitized texts in fragmented, often erratic ways (see Dillon's (1992) critical review of empirical literature on reading from paper versus screens). Moreover, the relative newness of onscreen reading has impediments ranging from vision, screen quality, and portability. As well, Nielsen (2001) contended that even documents in Portable Document Format (PDF) are not suitable for onscreen reading because they are often bulky, content heavy, and have no built-in navigation tools. While the same could be said of documents that lack navigational features, it appears that what affects these documents' readability may lie with the authoring tools themselves; tools that transfer print (linear) technology to digital (non-linear) technology without optimizing the content for the digital platform. These and other constraints deter students' ability to navigate the texts relative to the display structure, which in turn slows their comprehension, and deters their ability to attain fluency in reading digital texts. It helps that some of these concerns have been mitigated with improved technology and

findings from usability studies. It is now possible to annotate, markup, and highlight PDFs, for example. Still, educators cannot assume that students know how to transfer their reading and learning skills to digital multimedia.

Another concern raised by studies is the materiality of literacy and the related issue of tactility, where the digital screen as the interface may, in fact, distance the reader from the text as Haas (1996) observed. As if in response to this concern, computer technology has reintroduced tactility into an otherwise dematerialized world through features made possible by touch screens. To date, pinch-to-zoom to increase font sizes on the touch screen and swipe to turn pages offer readers control and a sense of feel for the text. There is a return of the materiality of literacy, as it were, to the immaterial world of digital media (for a detailed discussion of the material aspects of literacy, see Ormerod & Ivanic 2000). Materiality and a functional user interface are credited with developing an interactive reading experience for learners.

Aside from readability, one other obstacle is the lack of uniform access, by students, to the technology of digital texts. Technology resources, including newer technologies and application software, can make or break the work of integrating digital literacies in the business communication classroom. Their absence greatly limits advances in digital media.

This discussion will examine these constraints on teaching digital literacy and explore how educators might extend their pedagogies to expand the learning styles of students in light of these developments.

Digital Literacy and Related Literature

In general, literacy often reflects the conditions and existing designations of what it means to be literate at any given time. Thus digital literacy refers to the ability to read, write and function in digital media. It takes into account written, visual, and audio forms of communication and the competencies necessary to apply them.

For an extended period of time, human understanding of literacy was defined by the ability to read and write. Havelock (1986) offered that owing to its simplicity and predisposition to being internalized, the "Greek alphabet enfranchised modern literacy" (p. 41). Then being literate was a mark of sophistication. To be literate was considered liberating for it made intellectual pursuit possible (Cremin, 1970). Indeed Eisenstein (1983) suggests that the transition from oral to print was the breakthrough technology of the Middle Ages circa 1436. Because digital literacy can be traced back to those developments, it is fair to asset that the technology of writing did indeed revolutionize the word. But as with all new technologies, that change was not without controversy. Ong (1982) documented that printed texts were not widely accepted for reasons, such as eliminating presence (p. 36) and fixing words in a visual space on a page (p. 47). That technology, though, made knowledge visible and made it possible for literate people to engage in philosophy and other intellectual pursuits.

This brief overview is important for this paper, because, as Ong emphasized, print did not eliminate orality altogether, but rather made it possible to interface the word. It is thus not a stretch to suggest that all communication is interfaced, and that the onset of a new form of communication, in this case, digital literacy, does not negate the older but allows for the "evolution of consciousness" (Ong, p.47). Moreover, recent work on the interplay of orality and print literacy has ushered in a new consensus within which the oral is no longer seen as a sphere wholly prior to and autonomous from written and printed texts. For Gunner (2004), "Current work on orality emphasizes its place in contemporary practice

and its often dialogic role with writing or print and with the electronic media" (p. 11). Because writers are both oral and literate, they often revisit oral modes of production to reclaim certain features that they incorporate in their written and digital platforms. For example, Elbow (2010) has suggested that writers treat writing as speech. As well, digital media thrives on elements of orality such as the connectedness that comes with the networked community made possible by digitization. Ong (1982) referred to this hybridization as a secondary form of orality (pp. 134-136). Literacy is, indeed, underwritten by the alphabet (Havelock, 1986) and is the foundation for digital literacy.

The trajectory of literacy shows that its meaning has not remained static (Coiro, Knobel, Lankshea, & Leu 2008). In its evolution, literacy has come to take on new meanings beyond the ability to read and write. It includes, as McGarry (1991) posited, the ability to read with meaning because literacy "is the fundamental act of cognition" (p. 23). Similarly, Clifford (1984) saw in literacy the ability to move from basic reproduction of texts to "logical thinking, higher order cognitive skills, and reasoning" (p.474). Thus we see in literacy the ability to demonstrate competence beyond merely engaging in mechanical reproduction. To further complicate matters, Lanham (1995) took literacy to new heights writing, "The word 'literacy', meaning the ability to read and write, has gradually extended its grasp in the digital age until it has come to mean the ability to understand information, however presented" (p. 176). Lanham's iteration of the meaning of literacy motivates the exigency for my argument.

Based on Lanham's (1993) explicit differences between print and digital literacies, we understand that digital literacy is the ability to decipher images, sounds, and print texts. That literacy, once attained, should then translate into students' ability to author their own digital media, just like they do with print. The challenges and demands placed on readers of digital texts, including but not limited to spatial and temporal placement are numerous and need to be explicitly taught. In the digital 3D that Lanham writes about, space makes us think and probe the individual letters, and what their different renditions suggests. They force us to ask questions that never occur to us in conventional reading. In other words, we do not simply gloss over the texts.

From the New Literacy Studies (NLS) perspective, literacy is about knowledge and about 'people's conceptions" (Street, 2003, pp. 77-78) of it. This perspective opens up a number of issues. First, the contested nature of knowledge and its composition means to be digitally literate is itself challenged. Second, the changing nature of technologies can render one who is not familiar with a newer platform temporally illiterate. What is not contested, however, is that once one has the fundamentals, one can attain higher levels of digital literacy just like it is with the noetic alphabet.

An important consideration to make pertaining to the technology of writing is that either due to its long historical legacy, or because of its ontology, writing has, much like orality, as Ong (1982) showed, always reinforced writers' thoughts so that we associated a person's writing/words with his or her intellect. While that association has long been without question, Carr (2011) saw this tie severed by digital platforms. Carr offered that the multimedia format disrupts and fragments content thereby negatively affecting the hitherto thoughtful, critical reader's ability to, in turn, spur the writer to explore new ideas. Carr's concern has to do with the rendering of content rather than with the lack of content. You see, digital media, in general, plays with our sense of textuality. Do we focus more on the sight or on the sound? And does our sight focus on static text or moving images? Indeed, Lanham (1993) celebrated the idea that electronic textuality makes "no invidious distinctions between high and low culture, commercial and pure usage, talented or chance creation, visual or auditory stimulus, iconic or alphabetic information" (p. 14). His enthusiasm blindsided him to what this lack of 'invidious distinctions' translates

into. Readers have to oscillate between the critical-aesthetic on the one hand, and the trivial-subcultural on the other, placing great demand on their level of concentration.

Does this mean digital media is predisposed to low level literacy habits such as cursory reading so that as readers get 'propelled" (Carr's word) to other texts, they become distracted and hurried in their thinking about what they've read? Carr worries that not much learning may take place in such an environment. However, the same can be said of print. Some of it is lacking in depth and, depending on how it's written, may induce cursory reading. And, as Palfrey and Gasser (2008) countered, there is little evidence to suggest that digital screens diminish literacy, because readers "learn how to evaluate information quality" (p. 182). That's a mark of literacy.

Still, it would be naive not to acknowledge the risk, inherent in digital texts, of using multiple media. From video and flash animation, sound and moving images, to links propelling users to yet more information—these mesmerizing qualities are likely to derail readers or, as noted earlier, interfere with their textuality. Educators recognize that digital forms of presentation are markedly different from print texts and yet they expect that students will metacognitively transfer their print literacy to the digital platform. There is need for a more conscious decision to engage pedagogy that specifically teaches digital literacies.

Challenges to Teaching Digital Literacy

The proliferation of digital texts in classrooms has not definitively resulted in a corresponding pedagogical shift. Instead, studies show (Kellner & Share, 2007) that, for the most part, educators rely on print-based literacies for instruction. This lack of movement is dictated, in part, by the 'digital divide', which is how the National Telecommunications and Information Administration & U.S. Department of Commerce (2000) characterized the "inequities of access to technology based on factors of income, education, race, and ethnicity." This divide is also precipitated by the vast diversity in digital skills among students.

From the field of New Literacy Studies (Gee 1999; Street, 1995, 2003), accounts of some of the barriers faced in literacy practices related to digital media have emerged. These accounts indicate, for example, that while young people are adept at social networking sites and smartphones outside of the classroom (Dowdall, 2006) those skills do not transfer to educational contexts. It is not immediately clear why this gap exists, but to the extent that it does, it poses yet another challenge for educators of business communication wanting to integrate home and school, as it were. To deal with this gap, Honan (2008) conducted a study, which began by exploring the digital competencies of educators and of students. In that study, students listed the kinds of digital media that they regularly used outside of the classroom including social networking, smartphones, games, and software. Educators too showed themselves to be adept at all the latest technologies. However, when it came to integrating students' know-how in the classroom, educators were constrained by (a) the technologies that they did have, namely computers, and (b) what they didn't – the latest devices the schools could not keep up with. Further still, educators limited their classroom practices to teaching "technical or operational skills" (Honan, 2008, p. 41) and not the literacies associated with critical thinking and meaning making. Honan (2008) also found that focusing on (certain types of) production (such as PowerPoint presentations) was an additional barrier to teaching digital literacy because it was technologically determinate. These challenges are similar to those I have experienced and witnessed in business communication classes. Some of the challenges are a result of outcomes based policies that exert any number of constraints on what educators can do in a

semester or quarter-long session. Other limits, such as projects geared more toward production as a final outcome, may be self-inflicted.

In addition, Solomon, Allen, and Resta (2003) also singled out the quality or lack thereof of technology integration in the classroom as a factor stemming from locating computers in hubs, labs, and or separate computer classes only accessible for limited periods. Such stand-alone classes outside the business communication class impact educators' ability to teach digital literacies. That distance gives educators and students the impression that digital platforms are add-ons and are not a part-of their daily curricula. And so educators satisfy themselves with presentations, slideshows, and websites without due regard to multimedia authoring.

A third issue, related to this last model is a positive one. Educators hope that students, because of their exposure to a wide variety of media, will acquire and bring with them skills with which to author digital media on their own. And that is a good thing. However, when students are left to acquire skills on their own without the theoretical and ideological grounding, they fall short in attaining digital literacy as most of those skills are largely technical. Given the definition of digital literacy I have laid out, there is need to do more than rely on what students already know beyond their technical skills. There is need to take a further step to assure critical digital literacy beyond its instrumental function.

Below, I focus on two aspects of digital literacy, namely, reading and authoring texts.

Reading Digital Texts

Luke and Freebody (1999) outline the four basic roles necessary to satisfy digital literacy competencies. These competencies allow students to "break the code….participate in understanding and composing…use the texts functionally…critically analyze and transform texts by acting on knowledge that texts are not ideologically natural or neutral" (p. 9). Educators can create new avenues of learning, in which media technology, which already accords the greatest tools for creative, evocative instructional content and has the potential to involve the whole learner, *restructures students' consciousness* (Ong, 1982). To succeed, educators will have to eschew the traditional neglect of simultaneous attention to merging form and content, reason and persuasion, poetic and prosaic.

Assuming students' familiarity with digital texts, educators plan and assign digital based activities. Research, however, indicates that the infiltration of digital platforms into business classrooms is not widespread. While making digital platforms widely accessible is beyond individual educators' purview since that decision depends on institutional policy, educators cannot assume that students are always already digitally literate. Thus where there is access to computers and software with which to author digital texts, educators ought to integrate digital media in business communication.

By exploring the ways in which students are already using mobile and web based technologies, some educators have harnessed the capability of smart phones to integrate this notion of the social and educational in their business writing classrooms.

In my classes, I have brought the résumé assignment to a close by requiring students to view their résumés on their hand-held devices. From this exercise, students have appreciably valued résumé design by comparing poorly designed résumés to the polished look made possible through document design and the portable digital format. This is an authentic context for practice that allows students to make explicit connections between authoring tools and optimizing delivery for persuasive effect.

Educators should engage digital literacy from a rhetorical perspective. By teaching texts using multiple digital platforms they can create engaging activities through which students can examine how meaning is constructed and reconstructed in different media. An excerpt from one of the business communication textbooks I have been given access to:

Your textbook includes access to nine additional online readings-one for each thematic chapter-that include multimodal models like infographics, web presentations, and videos.

A closer look at the readings in the eBook shows their thematic link. The content is reinforced through infographics, web presentations, and videos— elements of semiotics and intertextuality in digital media that educators can explicate so that students are neither distracted nor enchanted by them to the point of interfering with their learning. Students benefit from examining the multimodal elements of content. They can see the role of media in meaning making. As Ball (2004) has argued:

> How audiences make meaning from animated graphics, for example, is different than how they make meaning from a sentence, paragraph, or full-length article. The formation of argument in new media texts, then, becomes not a linear construction linking one sentence – meaning to a consecutive other. It is, instead, a persuasion, a juxtaposition of modal elements from which readers infer meaning. (p. 406)

This is certainly the intent of digital media publishers: juxtapose media content so readers can extrapolate significance multimodally.

I have, for example, had students read a political stump speech and then had them listen to and watch the delivery of that same exact speech on YouTube. The exercise afforded the class an opportunity to discuss the canons of rhetoric and to determine how delivery affects meaning in business communication. Students were not only able to isolate and understand how the cannons function together, their consensus was that while text was well constructed, its delivery, both visually and aurally, was rather ineffectual.

Digital texts should not be approached as though they were secondary to, or even, supplemental to written texts. Written texts deal with a completely different technology altogether: the written word. For example, digital texts rarely make a linear argument. Instead, they are meant to be navigated through the built-in associations among image, text, and, video, audio, links, all of which work together rhetorically for a more persuasive argument. Consider this follow up to the excerpt above:

For example, review Ben Jervey's "Tracking the Language of the Environment" (as cited in Eschholz, Rosa, & Clark 2013). The pedagogy for each e-Page model includes not only Discussion Questions, but also "Thinking Multimodally" questions that ask students to consider the impact of the medium.

Different technologies render meaning differently (Ong, 1982; Ellul, 1964; Barthes, 1977). Yet owing, perhaps, to the longstanding hegemony of print, the first mistake made in teaching digital media is to transfer print literacy practices onto digital literacy ones. Lanham's (2007) work is instructive on this matter for its insight on why digital media ought to be approached on its own terms. By his account, digital media makes possible the collusion between word and image. Lanham demonstrates how words, and even individual letters, have "a visual imagination" (p. 97) that harkens back to the era of primary

orality. He suggests that digital media "yearns to recapture the imagistic notations that preceded [alphabetic expression]" (p. 98). Yet, because of the hegemony of print and the uneasiness created by the too-cozy juxtaposition of text and image that characterizes digital media, Lanham laments that fissures between alphabetic expression and the world of gesture and human behavior embodied in (moving or static) images are smoothed over, which he considers a reversion to the "plain style" (Lanham, 1976). In spite of this, Lanham shows that rhetorical style has suffused alphabetic expression since Plato, and it is rhetorical (stylistic) devices that work to actually heal the fissure by (re)introducing a fruitful “oscillation [and] bi-stability” to texts (p. 117).

Therefore, one of the ways educators can instruct reading of digital media is by examining the stylistic/rhetorical devices at work through oscillating between the form and the content in the quest for interpretation. In Lanham’s (2007) words, "We want words to move for the same reason we want everything else to move, because movement means life" (p. 86). This, I argue, is at the core of every multimedia product that utilizes the authoring and delivery technologies necessary to distinguish digital from print texts. There is thus no question that in digital media, training in rhetoric is invaluable because rhetoric both explains the structure and teaches those who operate in it the art of attention filtration.

A conceptual understanding of the medium/form of texts is a necessary element in reading digital texts. If we take Luke and Freebody's (1999) digital literacy competencies as foundational, we might allow students to "break the code" so they can participate in understanding, authoring, and using the texts both functionally and critically. As Johnson-Eilola (1993) pointed out, there is a "decentering of the author" in digital media that allows readers to "become complicit" in the construction of the text" (p.382). Thus texts available on multiple platforms open themselves to questions and critique, allowing students to examine the assumptions of the rhetor, the sense of audience, and the conceptual formulations of the argument, often accepted unquestioningly in print media, which Ong (1992) noted, "locks words into position" (p. 54). Owing to its tidiness and justified text, print, "encourages a sense of closure…that what is found in a text has been finalized, and has reached a state of completion" (p. 58). This calibration has long afflicted the analysis of text be it philosophical or scientific. It has not, however, been a problem with digital media, because it thrives more on the aesthetic practices of language and art. Granted, this interpretation echoes the theory of grammatology and electracy (Ulmer, 2003) which I do not wish to grapple with in this paper, but, to the extent that students as readers contribute to the construction of the text by closing in on it aesthetic practices, they are able to develop critical scholarship autonomously from their teacher.

Authoring Digital Texts

On what it means to be literate, scholars like Vygotsky (1962) and Freire (1972) conceptualize literacy as a socio-cultural practice. That is to say, literacy both reflects and embodies what that society values which is echoed in how learning is measured. Placing a premium on student motivation and engagement is one of those practices. Therefore, to further consolidate the critical understanding of texts, educators expand literacy to the authoring and production of digital texts. Authoring digital texts requires an understanding of what Ohler (2013) has called "media" (p. 13), which for him is an amalgamation of technical skills, aesthetic sensibilities, design, and production skills to generate digital texts. In authoring digital texts, students' capability to self-representation is made possible. This explains why using a functional skills based approach to teach digital literacy is reductive for it limits the theoretical grounding that informs the texts and their production.

According to the core principles of the *National Association of Media Literacy Education* (2007), digital media are often understood through active inquiry. Consider how YouTube videos draw audiences. It is through their (audiences') active inquiry of the context and exigency of those videos. Being mindful of this creates opportunity for both teacher and students to, for example, conceptualize the rhetorical situation by engaging students to discover what occasions the text and to examine the suitability of given texts for the moment. Moreover, engaging students in the media production process allows them to expand their scholarship from the traditional library research of transcribing, to critically examining how their ideas translate into digital text. Because in addition to exploring audience, purpose, and stylistic choices, students' invention process would require generating scripts, storyboarding, collating, shooting, creating, editing, producing, and finally sharing their work. They would learn to merge meaning and image into a single entity that is at once *looked at* and *looked through*, and thus to dramatize the collusion between substance and style. At least this is how Lanham (2007) envisioned instruction in the digital realm of computer graphics, animations, and GIFs.

Compelled to determine what makes certain videos more popular than others obliges students to examine persuasion in conceptual and practical-applicable ways with the result that their theoretical skills expand exponentially. That theory in turn informs the composition of the digital screen where images are constantly moving and therefore changing one's sense of perception.

To become active producers of digital media, students need to be taught the digital authoring tools. Ohler (2013) attempts to allay not only educators' fear of technology but also the idea that their teaching efforts would curtail students' learning by identifying the kind of 'help' students might need in the production process. He calls one such intervention "just-in-time training" (p. 42). This is the kind of help students can be given from both peers and the teacher, and what they can collectively gather from Internet resources.

I have engaged this practice in my classes. Where I have encountered students that are more skilled at the technology than I am, I have identified and designated *communities of experts* within the classroom. Their willingness to offer expertise to individuals otherwise stymied by the technology necessary to complete their projects helps promote digital literacy in the class. The key is to create an environment where sharing is openly embraced. I have witnessed commendable results and a lot of camaraderie from these interactions. More importantly, I can state without equivocation that student experts help alleviate the fears of their fellow students, particularly, those who are more apprehensive about technology. And there are many.

The Internet too is a great resource for free authoring tools that can be used in the business communication classroom. With computers in the classroom and access to Internet, a trove of technical skills abound. The teacher's role is to help leverage these tools for the practical purposes of production. I know my share of students who are unaware of the availability of free image and video editing tools, audio recording and editing software, ready-made templates for storyboarding, and, sometimes step-by-step instructions on how to work in various media. Helping students locate these tools is part of the digital literacy project that broadens their communication skills as Elbow (1973), who advocates writing without teachers might suggest.

As is the case with critical pedagogy, students cease to be mere consumers of knowledge once they become producers of knowledge. In the process, they recognize and develop their own sense of agency so that the concept of agency ceases to be an abstraction. It confirms Jasinki's observation that "speakers and writers manifest rhetorical agency when they display an ability to identify and manage or

. . . orchestrate resources (e.g. styles, lines of argument, traditions, tropes and figures, etc.)," (as cited in Geisler, 2004, p. 11). Furthermore, students who already inhabit digital spaces in their day-to-day lives would now have the chance to author content in their favorite medium. Except now they will produce from a place of critical understanding, a place of digital literacy.

Digital texts often show rather than tell how different technologies affect literacy (Ryan, 2004). If students understand this concept, they can engage digital texts with the comprehensive approach warranted, such as bring together concepts and actions in embodied and visible forms. In the digital platform Hansen (2006) called this capacity to embody and instantiate meaning "digital performativity" (p. 142). The most basic example is Kinetic typography, which can, for example, be manipulated to visibly signify concepts. The signification can also be oral/aural, making imagistic animation and the written story spatially compatible. Such text is infused with a sense of immediacy and of presence that is otherwise distant in print texts.

Theorists and practitioners of digital media (Zettl, 1990; Meyrowitz, 1998; Ohler, 2013) have indicated that *media grammar* is necessary in authoring digital media. Media grammar is a broad category that recognizes that each medium has standard production variables used to "shape perception and response to mediated communications" (Meyrowitz, 1998, p.99). Just like print, which can be manipulated through typeface/size, spacing, paragraphs and punctuation, for example, digital production requires a set of grammatical techniques. To wit, video uses cuts, zooms, and split screen; audio employs sound perspective, silence, speed changes; and, images are manipulated through framing, angle, contrast, to name a few (For a detailed list of media grammar, see Meyrowitz, 1998, p. 100). These elements of media grammar become the authoring tools to help the writer discover the means of persuasion. Therefore understanding the authoring tools of digital media is as empowering as deploying effective writing practices.

Digital authoring can be the means to tell stories and critique the genre at the same time. To generate ideas, digital literacy utilizes imagination, memory, and technical tools while relying on stylistic devices to integrate form and function in a vision of style that disrupts the age-old divisions calcified in print media, but necessary to attain "the rhetorical ideal of life" (Lanham, 1976) which is at once inclusive and selective.

It is my claim that rhetoric can serve as a practical toolkit for comprehending and fashioning understandable and compelling arguments in digital media. Regardless of the arduous task of communicating knowledge in digital media, which we like to think of as reason, it is necessary to remember the architectonic nature of knowledge. That is to say, it regards all our knowledge as belonging to a possible system and the possibilities of that system are quite promising.

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