Chapter 3.10: Critical Digital Literacy

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Abstract

This chapter overviews critical digital literacy (CDL). The concept of CDL has been used to describe literate practices which 1) lead to the creation of digital texts that interrogate issues of power, representation, and agency in the world, and 2) critically interrogate digital media and technologies themselves. Current framings of CDL can be traced back to the sociocultural "turn" in literacy studies, the politically-engaged critical literacy movements of the 1970s, and a more recent interest in understanding how language, literacy, & power are mediated through digital technologies. While some critiques of CDL have been grounded in historical resistance to critical literacy more broadly, others focus on issues related to access to digital media & technologies themselves. In response, CDL scholars have offered models of practice that take into account the practical concerns of teachers in classrooms, while retaining a philosophical commitment to rendering visible the ideological dimensions of digital technology. Following the precedents set by scholars of the New Literacy Studies, current research in CDL has focused less on a standardization of definitions and principles, and more on everyday relations, especially in terms of how educators and students realize the production and consumption of digitally literate critical practices in their own contexts.

Definitions of Key Concepts

Definitions of critical digital literacy (CDL) have their genesis in the nexus between sociocultural understandings of literacy, digital literacy and critical literacy.

A sociocultural framing defines literacy as more than a set of discrete skills associated with reading and writing print-based texts in formal educational contexts, and is instead focused on how literate practices are mediated through social and cultural contexts (Gee, 1996; Heath,

1983; Street,1995). As a result of this "sociocultural turn" among researchers and educators, conceptualizations about literacy have shifted from something which is the sole domain of schools, to something that takes place everywhere, and from the singular 'literacy' to the plural 'literacies.' This has created space for thinking more broadly about what it means to be literate and reconsidering how literacy educators prepare learners for the literate demands of adult life (Luke & Freebody, 1999).

With the shift to literacies in the plural have come efforts to explore the social and cultural factors associated with new technologies and their relationship to self-making and identity practice (Alvermann, 2004). Early interest in digital literacies tended to focus on the provision of computers and the skills necessary to operationalize this technology (Molnar, 1978). However, the notion that digital literacy is more than the skills which operationalize new technologies has become central to the thinking of those who argue that what we do with the digital is always sensitive to contextual factors and tied to negotiations of identity and self (Alvermann, 2004; Hagood, 2009; Lankshear, Green, & Snyder, 2000). For Bulfin and North (2007), digital literacy practices are never simply at-school or at-home. Rather, they are traced and sourced across our whole lived experiences, and intricately tied to ongoing identity work. For Sefton-Green (2004), the digital technologies of young people's lives have reconfigured personal and social structures, including: accelerating the contradictory tendencies between globalization and localization, creating new relationships between users and hardware/software and online communication systems, and impacting on the adult-child relationship in formal educational contexts.

Critical dimensions of digital literacies can be understood in terms of the critical literacies movement and its emphasis on education for social change and the emancipatory

capacity of schooling (Freire, 1972; Giroux, 1983). Allan Luke defines critical literacy as the " use of the technologies of print and other media of communication to analyze, critique and transform the norms, rule systems and practices governing the social fields of everyday life" (2012, p.5). This definition addresses two important aspects of this movement, developing understanding and action. The former is interested in all kinds of technologies, old and new, at-school and out-of-school, and understanding how they are designed and how they position us. The hope is that developing new understandings about the constructedness of these texts will impact how they are consumed. The latter is focused on the transformational capacity that arises from this new knowledge. It emphasizes the importance of literacies as tools that have the capacity to change power relations between people and systems.

Critical digital literacies (CDL), as a broad, descriptive term, brings together digital technologies with a dual interest in knowing the world and acting upon the world. As Avila and Pandya state, CDL practices are "those skills and practices that lead to the creation of digital texts that interrogate the world; they also allow and foster the interrogation of digital, multimedia texts" (2013, p. 3). Understanding and critiquing the digital world which we inhabit includes knowing how that world is constructed and how language and power are mediated through a range of technologies that often mask the nature of the systems (Benjamin, 2019; Eubanks, 2018; Noble, 2018). While users in a digitally-mediated society connect through screen-based interfaces, what lies beneath the screen, in terms of data storage and manipulation, agency and control, ownership, the trustworthiness of information, access, and sustainability, both environmental and relational, all represent hidden characteristics of digital literacies often shrouded by its surface features (Golden, 2017; Lynch, 2017).

In one sense, CDL has been used to describe social practices that lead to the creation of digital texts that interrogate issues of power, access, and agency in the world. We can see examples of this in the ways that activist movements have mobilized on social media to exchange ideas, disseminate information, and publicly critique oppressive systems and institutions (Carney, 2016).

In another sense, CDL has also been used to describe social practices aimed at critically interrogating digital media and technologies themselves. One argument for interrogating contemporary online systems is made by Virginia Eubanks (2018), who has explored the ways that computational algorithms designed into software have been a part of the automation of inequality through the disproportionate surveillance, profiling, and punishment of poor and working-class people in the U.S. Understanding how these algorithms shape online media practices would require, at the very least, attentiveness to the ideologies that are enacted through the outputs of these algorithms. Other scholars, including Safiya Umoja Noble (2018) and Ruja Benjamin (2019) have explored the ways that issues of racialization are embedded into the algorithms of search engines and other technologies often taken for granted in everyday life.

Critiques of Critical Digital Literacies in this Domain

Arguments against expanding critical literacy imperatives to ever-more popular digital technologies have centered around three concerns: the negative effects of prolonged technology use, the impact on the aesthetic enjoyment of texts, and unequal access to the digital technology necessary to mobilize CDL as a means for educational and social transformation.

Firstly, debates around "screen time," which entered into the public discourse between the 1960s and 1970s, when televisions were becoming widespread household technology in the United States (Siyahhan & Gee, 2018), now manifest in terms of concerns about young people

spending too much time engaging with a wide-range of devices, including computers, video game consoles, and mobile devices (Turkle, 2017; Twenge, 2017). There has been a tendency, in both media and public discourse, to focus disproportionately on the negative effects of these technologies and to develop ways to mitigate their impacts (Orben & Przybylski, 2019). These concerns are tied to debates about the purpose of schooling and literacy, and whether already limited time for formal learning is the best place for more engagement with the digital. The belief that literacy instruction should be focused on technical, skills-focused, and clinically-researched methods promoting letter-sound awareness, decoding, and comprehension (Flesch, 1955; 1981; Goodman, 1998; NGA Center & CCSSO 2010; National Reading Panel 2000), coupled with historical ideas about the role of literature in schools, which argue that all students should be taught a specific, canonical collection of cultural ideas rooted in the world views of the politically and economically dominant culture (Hirsch et al., 1988), has created barriers to the critical interrogation of practices associated with the digital world. The fear is that time spent studying digital technology will detract from traditional foundational literacy skills and from developing the knowledge of literature necessary to develop a shared cultural heritage.

Secondly, critiques relating to issues of unequal access to the technology necessary to pursue CDL objectives have been raised. As contemporary scholarship has demonstrated, "digital divides" manifest in different ways across global contexts, and these inequities can impact the work of educators and researchers interested in exploring CDL (National Digital Inclusion Alliance, 2017). For example, in many communities, connectivity to an internet network is still limited with many classrooms in developing countries lacking access to computers or other resources to connect to a virtual community (Martínez-Cora, 2018). Thus,

while educators consider the benefits of engaging students in CDL as a means for educational and social transformation, they must also keep in mind these issues of access and equity.

Thirdly, concerns have been raised regarding the impact of developing critical dispositions towards the everyday digital texts from which people gain so much pleasure. What happens when we demystify the everyday world? Is there a risk of minimising the aesthetic enjoyment associated with the uncritical consumption and production of digital texts? What will be the consequences of CDL instruction on positive affective responses? Misson and Morgan (2006) have discussed these concerns with regards to bringing critical literacy to young people's everyday aesthetic texts and the potential impact on individual identity, human emotion, and creativity. Similarly, Pangrazio (2016) expresses concern with the impact of developing dispositions of critique that may alienate an individual's personal affective response. The challenge is reconciling the development of an ideological critique with an individual's right to personal and affective experiences with digital media (p. 168).

Responses to any Critiques and Current Research in the Area

In response to those who problematize young people's engagement with digital technologies, or who link excessive screen time with all of society's ills, scholars have highlighted the diversity of today's media landscape, criticizing the tendency to treat all information and entertainment-based screen media as equivalent. Contemporary digital media enable social, participatory, and youth-organized spaces for creativity, collaboration, and activism online, and the ever-expanding body of literacy practices associated with digital media (Garcia, 2017; Jenkins et al., 2018). The tendency for many popular media outlets to treat all digital practices homogeneously simplifies complex social and cultural interactions, each of which gains meaning only when its local antecedents are addressed. For example, recent research

on intergenerational play has demonstrated the value of families playing with and around games and other digital media for meaning-making, relationship-building, and connected learning (Gee, Siyahhan, & Cirrell, 2016).

While issues of access continue to produce obstacles for those seeking to understand CDLs, researchers emphasise the need to push forward with efforts to both examine the complexity of these practices and produce pedagogic responses so that educators can work with learners to develop critical understandings. Despite the differential access to the technologies necessary to engage in digital literacy, there is much the educational community can still do to ensure that all literacy learners are given opportunities to engage in cultures of digital consumption and production (Rowsell, Morrell, & Alvermann, 2017).

In response to back-to-basics rhetoric which rejects the value of spending time on digital literacies, frameworks have been developed demonstrating the multidimensionality of all literacy experiences, and the importance of moving beyond a focus on operational literacy practices. For example, Luke and Freebody's (1999) Four Resources Model recognizes the importance of literacy practices that focus on "breaking the code" of written language, while simultaneously emphasizing a reader's role as a *participant* in the meaning-making of a text, a *user* of texts in everyday contexts and experiences, and a critical *analyst* of a text's assumptions, biases, & social positioning. Their model has been extended to allow for visual and multimodal texts that have gained prevalence in contemporary digital culture. Serafini (2012) highlights the value of pedagogies that explore practices of *navigating*, *interpreting*, *designing*, and *interrogating* multimodal texts. When focusing on digital, interactive media specifically, Aguilera (2017) has offered a pedagogical framework that invites students and teachers to engage with the *content*, *computational*, and *contextual* dimensions of these media from critical perspectives. Scholars of

critical digital literacies have moved discussion beyond the basics, highlighting the importance

of a range of practices which are essential to engaging with digital media and computational

texts.

Current research relating to CDL seeks to address many of the critiques raised above,

focusing on both out-of-school digital literate practices, as well as pedagogical responses aimed

at formal learning contexts.

Research suggests that one affordance of digital literacy practices associated with

contemporary life is the tendency for new forms of political participation. For example, Jenkins

et al. (2018) have explored the potential of the media and the advances of digital language to

explore new forms of citizen participation activities that emerge from the practice of

participatory culture in the youth population. Likewise, the work of Carslon et al. (2017), has

highlighted the individual and collective ways that indigenous Australians respond to racial

vilification on social media platforms. Through the term *hacker literacies*, Santo (2013)

describes the ways that digital media technologies have been critically repurposed, remixed, or

reconfigured by individuals and groups seeking more equitable shifts in power relations in social

and virtual worlds. Santo's examples include the Arab Spring, the Occupy Wall Street

movement, the development of the Twitter hashtag, and public responses to Facebook's changes

in privacy policy. Finally, Mundt, Ross, & Burnett (2018) provide exploration of the use of

social media to *scale up* the Black Lives Matter movement in the U.S., though the authors

caution that "careful management of online media platforms is necessary to mitigate concrete,

physical risks that social media can create for activists" (p. 1).

Research has also sought to understand how these predominantly out-of-school digital

literate practices might become the objects of critical study in formal educational contexts. In the

context of teacher-education, Castrillón-Ángel (2020) investigated podcasting as a CDL practice to center the life narratives of preservice teachers and inform their own pedagogical praxis. Within classroom settings, Sealy-Ruiz and Haddix (2018) have discussed the ways that teachers and schools can use purposefully-positioned digital media to empower the learning of urban youth of color, including centering students' interests through media production, shifting power relations by reconfiguring digital assessment practices, and reframing classroom policies to better respect youths' existing media practices. Garcia's (2017) research into the critical literacy practices of adolescents in an urban high school through a technology-mediated exploration of the socioeconomic history of their school community demonstrated how a 'critical mobile pedagogy' can help us address some of the challenges associated with recontextualizing youth literacy practices in institutionalized settings.

Interest in how critical literacy objectives can be applied to a range of new technologies in formal learning contexts has created sub-fields of inquiry such as: critical media literacies (Alvermann & Hagood, 2000; Buckingham, 2003), critical game literacies (Apperley & Beavis, 2013; Bacalja, 2018), critical visual literacies (Costa & Xavier, 2016), and critical social media literacies (Alvermann, 2017; Smith & Hull, 2013). Taken together, these examples illustrate some of the many ways CDL researchers continue to expand across contexts, as well as center epistemologies and literacies that have historically been marginalized in educational research more broadly.

Implications for Pedagogy

Focusing on CDL in formal learning contexts has raised a number of pedagogical issues that all educators will need to consider, including: recognizing local contexts, encouraging

transformative practice, shifting classroom power dynamics, and re/mis-appropriating digital literacies for educational purposes.

Situating CDL pedagogy in local contexts reflects arguments made by critical literacy advocates who have long stated that developing critical dispositions should start with where students are at and born out of their contexts (Freire, 1972; Giroux, 1983). This sentiment is expressed in Paolo Freire's description of the world of his first reading, drawing connections between the sights and sounds of his home as a child, a place where the texts, words and letters were incarnated in the things; the old house, the songs of birds, the thunder and rain, and his experience and construction of self. Emphasizing the importance of carefully considering the context of the learner, and the dynamically intertwined relationship between language and reality, contemporary critical literacy advocates remind us that critical literacy is less about any single text, or in the case of CDL, any single digital technology, and more about the issues that matter locally (Alford, Schmidt, Lyngfelt).

Much like research associated with participatory culture, which argues that empowerment comes from meaningful decisions within real civic contexts (Jenkins et al., 2009), educators will have to consider how they make CDL learning individually meaningful. Given the many ways that young people now negotiate their identities through digital media, CDL instruction which is locally situated, authentic and relevant will need to be prioritized. As Luci Pangrazio (2019) has found in her fieldwork with young people investigating what they do with digital media, digital narratives are a product of personal background and life experience. These narratives develop through a complex interplay between place and space, which young people navigate as a part of their everyday digital practice. While there will be a temptation to formalize CDL goals into policy and curricula, this is territory that will need to be carefully traversed.

Another consideration for educators is how to move learners from roles as critical consumers to active producers. The forms of Participatory Democracy advocated by Freire, where the pursuit of *conscientizaçao* entails comprehending our relationship in and with the world, involves being able to express the world's reality through creative language and simultaneously transforming the world through actions (2000). At a time when the global reform movement (Sahlberg, 2012) with its emphasis on standards and accountability, has closed off opportunities for the language and literacy learning (Pandya, 2011), CDL theorists continue to emphasize developing a new critical consciousness towards digital technologies which shift learners from new knowledge and new consciousness towards new and meaningful activity. Research into critical literacy and popular culture has shown that young people can be scaffolded towards literate practices in the real world that seek to disrupt power, authority and 'truth-telling' (Ávila & Pandya, 2014; Hagood, 2009).

Critical literacies interest in issues of power and authority also requires thinking carefully about the dynamics of teacher to student relations. As Avila and Pandya state, many critical digital literacies' contexts produce power relationships between learners and teachers that are fluid (2013). Teachers give up their control as boundaries between 'us' and 'them' blur, and as the roles of experts and teachers are shared with learners. Students and teachers become "joint seekers of knowledge and joint producers of new media," and in some cases, students forge their own paths to authority. This is especially important given research findings which suggest that the more teachers seek to retain control, the less room available for student choice and the fewer critical literacy skills fostered (Ávila & Pandya, 2014, p. 10).

For some educators, classroom teaching which focuses on CDL will be liberating, placing students at the center of learning will constitute an act of resistance against centralized and high-

stakes forms of teaching that relegate students to passive recipients of knowledge. For others, this will be a challenge, the success of which will be at least partially tied to beliefs about the value of what students bring with them to the classroom.

Lastly, while some proponents of digital technologies highlight the value of these tools and media to promote "boundary-crossing" between the everyday lives of students and the worlds of school and work (Gee, 2013), there is concern regarding recent trends in formal schooling where digital practices are appropriated and taught in ways that standardize, commodify, or otherwise recontextualize them - in some cases alienating the same students that engage in these practices beyond their schooled lives (Sefton-Green, 2014).

Implications for Research

While current research in CDL suggests a number of implications for literacy research and educational research more broadly, a particular area that this chapter will highlight are some of new ethical dilemmas being raised as scholars explore digital-age affinity spaces (Gee, 2005), distributed teaching & learning systems (Holmes, 2017), online communities (Fields et al., 2013), virtual worlds (Steinkuehler & Duncan, 2008) and other examples of what Lammers, Curwood, & Magnifico (2012) call "literacies on the move" (p. 4). One framework for thinking through such dilemmas comes from Curwood et al. (2019), who identify issues of *accessibility*, *positionality*, *relationality*, and *temporality* as key areas of consideration for expanding institutionalized ethics and considering new ways of thinking about and doing research.
In this framing, accessibility takes on a different connotation than it has in disability studies, and instead focuses on the ways that researchers recruit participants in digital literacies research. Gaining access to a digital affinity space or online communities, for example, may involve learning about the participation of individuals who have not necessarily consented to being a part

of the research study, but through their contact with recruited participants, risk having their own expressions and communications unwittingly exposed through research.

This framework's consideration of issues of positionality include both the ways participants may choose to represent themselves and construct identities within and across digital contexts, as well as the ways researchers might position themselves in these spaces. Ethical dilemmas of positionality also touch on issues of privacy, anonymity, and safety in the ways that participants, researchers, and the broader social context of research are positioned in relation to one another in ways that place-based research has not yet had to consider in the same ways. These issues tie to the framework's concerns with relationality, that is, the ways that researchers develop, maintain, and critically interrogate their own relationships between participants. One key feature of online affinity spaces, for example, is their "porous" nature - participants can freely come and go in a given space - which will raise complications for researchers who must consider how participants form part of that space or community (Hayes & Duncan, 2012).

Finally, this framing highlights issues of temporality as something that might be experienced in digital spaces in qualitatively different ways than physical place-based research has established. "Studying online spaces asks us to consider time in multiple, layered ways," posit Lammers et al. (2019, p. 68), alluding to the ways that participants in online communities and affinity spaces can quite literally link back to discussions of the past, revise and update digital artifacts for a more current audience, and program future events and changes that can impact the literacy practices in a given context. Considering temporality as a dimension of methodological focus can drive deeper explorations of how this sense of altered time can inform the ways that participants engage in critical literacy practices to interrogate their digital contexts,

or how they engage in critically-oriented digital practices to engage with the world beyond the screen.

In response, researchers have begun to suggest ways that research in these sites might take place. With regard to the limits of place-based methodologies for studying digital literacy practices, Leander and McKim (2003) have proposed approaches such as 'connective ethnography' as a way to trace "flows of objects, texts, and bodies, analyzing the construction of boundaries within and around texts, and focusing upon the remarkable ways in which texts represent and embed multiple contexts" (p. 211). Ethnographic approaches, while forming an important foundation for current research, must be continuously expanded beyond singular spaces or contexts in order to account for the mobile nature of literacy practices in contemporary times (Garcia, 2017; Leander & McKim, 2003; Stornaiuolo et al., 2017). Extending the interpretive dimensions of these approaches, Stornaiolo, Smith, and Philipps (2017) have outlined an analytical framework for understanding the transliteracy practices of adolescents as the move across spaces, communities, and contexts.

Implications for our Social Responsibility as Academics

Educators and academics have been challenged by CDL research to transform their pedagogical practice toward more equitable partnerships with students. Not only must those in positions of authority reconsider their roles as supposed gatekeepers of existing power structure, but they are also being called upon to question how they mobilize areas of expertise to empower meaningful social change on behalf of the communities they serve. Two ways that have been suggested include questioning the "siloed" nature of disciplines, seeking out interdisciplinary collaborations that yield new directions for knowledge building and social transformation, and challenging the purpose and effect of scholarship which will entail asking of CDL work; *for*

whom, *toward what ends*, and *under what conditions* our efforts to generate knowledge in the field occur (Luke, 2012).

Recommendations for Future Research and Praxis

Given the speed with which new digital technologies are being conceived, and the changes in literate practices that follow their rapid uptake, there is a need for research that responds to these new communication forms. Current vocabulary advocated for study, such as 'free', 'friend', 'like', and concepts such as platforms, algorithms, interface and privacy will soon be replaced with new terms, demonstrating the need to constantly evaluate novel digital media (Pangrazio, 2019). Similarly, given community concerns regarding data protection, online identity issues, and cyber crime, research will need to address these aspects of digital literacy and the need to develop the types of habits of mind which Freebody and Freiberg (2010) argue should be the outcome of all critical literacy education.

Likewise, we need to continue to expand literacy frameworks to explicitly address exactly what it is that makes digital texts, and the literacy practices associated with them, unique from other kinds of representational media. Initial thinking which explores digital literacy frameworks has already begun, for example, in Janet Murray's (1997; 2017) work on computational media as *participatory*, *encyclopedic*, *procedural*, and *spatially navigated*, in Katie Salen-Tekinbas and Eric Zimmerman's (2003) frames for digital game design, and in Pangrazio's (2016) thinking regarding digital design literacy. However, the speed with which new digital literacy practices emerge requires continually reassessing how the critical is brought towards these and other emerging models for teaching and learning.

While a focus on the productive capacities of CDL practices has been commonplace in popular and academic press (Vee, 2017; Lankshear & Knobel, 2008), scholars express concern

that this focus might crowd out research investigating social and political understandings of digital technologies (Pangrazio, 2016).

As issues associated with algorithmic bias, data extraction, and digital systems of surveillance and punishment evolve, there is value in working with educators and learners to raise awareness of the ways digital technologies are imbued with the perspectives, biases, and agendas of their creators (Eubanks, 2018; Noble, 2018; O'Neil, 2016). Scholars of CDL are well positioned to engage in participatory action research that aims to transform the social and technological worlds we all inhabit (Mirra et al., 2015).

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