E-learning in Times of Radical Uncertainties

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Abstract: As teachers and teacher educators in the United States, we offer this editorial based on our lived experiences with the political, social, and environmental precarities where we live. Among these precarities are our looming U.S. presidential election after the last one included a plot by bad actors to abscond with our State's electoral votes, our constant struggle for water in a desert state, and our weak overall internet connectivity. We call our wonderings about how we are living in and somehow surviving these times, *radical uncertainties*. In this editorial, we canvas radical uncertainties related to e-learning about digital literacies, generative text, datafication, and the camera gaze. Alongside these uncertainties, we offer alternative avenues for collective thinking based on Chicana Feminist epistemologies. We intend for readers to consider how local knowing can and should inform e-learning planning and practice.

Introduction

The onset of the COVID-19 pandemic brought sudden, increased, punctuated attention to e-learning, which was already experiencing rapid growth in all areas of education–from primary and secondary, to tertiary (Capano & Coletti, 2023; Education Week, 2020; Zancajo et. al., 2021). At the time of widespread school building closures, many people believed, or were led to believe, that this was a crisis necessitating a somewhat innovative response and that once it abated–in an expected several weeks or so–all would be well again. Yet, here we are in this space, almost four years into "crisis ordinariness" (Berlant, 2010, p. 5). As teachers and teacher educators from the United States, we notice that we have become remarkably accustomed to illnesses, absences, and death. We feel the political precarity, living in the state that was nearly co-opted by unauthorized persons to cast our electoral college votes for president in 2020 (Bryan & Lee, 2024). We also have the lowest levels of surface water of any U.S. state at a time when climate change effects have arrived in earnest and water is demanded for technologies. Governments choose to destroy water and deny water access, rather than protect it (Grover, 2024). Even after taking resources for the sake of so-called progress, we have less internet connectivity than people in other states (Gleason, 2023). You cannot do e-learning without the internet.

However, even if we all had fast internet bandwidth and every child and college student had a state-of-the art laptop, we have wondered, would it matter, or are we headed toward– "slow death" (Berlant, 2007, p. 754). This death

comes from capitalism's takeover of our ability to control when, how, and whether we live. We have dubbed our collective wonderings radical uncertainties, drawing on Roth's (2019) explanation, "the impossibility to cognize with any certainty an action." We canvas our uncertainties related to e-learning in this editorial related to digital literacies, generative text, datafication, and the camera gaze. Alongside these uncertainties, we offer alternative avenues for thinking based on Chicana Feminist epistemologies (Anzaldúa, 1987; Calderon, et al, 2012; Delgado Bernal, 2001). These scholars disrupt "transmission of official knowledge" and "unsettle dominant modes of analysis" with concepts such as "cultural knowledge," "ways of knowing," "systems of knowing," and "new tribalism" to guide educational theory and praxis (Calderon, et al., 2012, p.561-562). To navigate uncertainty is to acknowledge Indigenous peoples by seeing their literal presence and by acknowledging their social and political contributions (Todd, 2016).

Digital Literacies

While local indigenous peoples and historically present Indo-Hispan@ peoples are still suffering from nuclear testing, Los Alamos, New Mexico is famous for the atomic bomb (Tsosie, 2015). In Classical Greece, Democritus used the Greek word for "indivisible," to name the atom (Schoefield, 2002). In 1996, scientists were able to move an atom (Barad, 2007). The 2500-year history of mostly stable knowledge about atoms followed by important breakthroughs is one reason Barad (2007) wrote, "Atoms aren't what they used to be" (p.353). The same year our understanding of the atom moved, an international group of literacy scholars met in New London, Connecticut to question what literacies would look like in the 21st century. The group published their findings in a 1996 paper called, *A Pedagogy of Multiliteracies: Designing Social Futures*. The authors decided that a singular, defining concept of multiliteracies was "the increasing complexity and inter-relationship of different modes of meaning" (p. 78). Just as the human understanding of the atom has undergone significant change, human interaction and communication have undergone a phenomenal shift with the proliferation of devices like the smartphone and their algorithms (Kruikemeier et al, 2021). Secondary students have not inhabited a planet that did not afford them handheld screen devices. Over the modern experience for e-learning also looms the uncertainty of purpose when engaged in acts like scrolling. Lupinacci (2020) found that scrolling was preceded by a sense of pointlessness. Scrolling is passive engagement with content; at best it is ambiguous, time-wasting (Lupinacci, 2020). Literacies require active stances. But what happens when crisis ordinariness overwhelms a young person's will to care at the same time new technologies that can produce text and image are emerging?

Generative Text

The sudden and precipitous rise of Generative AI (GenAI) chatbots, Large Language Models, and tools has led to many opinions and ideas from mainstream media, edu-celebrities, and educators about its uses and possibilities. The emotional tenor of these discussions or diatribes runs the gamut from gleeful to hopeful to fearful, with some heralding GenAI as the solution to all educational woe, and others as an apocalyptic, final destruction of independent thought. Between hyperboles lie the possibilities. As the frequent use of GenAI in e-learning seems highly likely, conversations and meaningful professional learning need to occur to stave off further uncritical use of

the technology, lest teachers be overwhelmed by yet one more thing that they are supposed to understand and regulate without outside assistance or help (Nash et al., 2023). The radical, educational uncertainties of this technology are manifold. What are the ethical limits of student AI use when lessons and grading are also done by AI? What are the issues of ownership when student and teacher intellectual labor is part of GenAI training data? What will the ultimate effects of GenAI use be on the teaching profession? Who benefits from the uncritical marketing and profusion of AI technologies in e-learning? How do we measure the benefits of GenAI in e-learning against known and unknown environmental impacts? Without thoughtful discussion at international, national, state, and local levels, with those most affected using these technologies in e-learning (students, teachers, and families), we trade the possibility of lasting benefit for profit for the few. Furthermore, in the absence of acknowledging the time immemorial existence of place-based knowledge sources that still guide Indigenous peoples, how can such all-encompassing issues of the future e-learning be considered anything more than a continued erasure, deculturalization and manifest destiny all supported by water, the very source of life, while water is still corporatized away from Indigenous realities? (Grover, 2024; Todd, 2016).

Data and Meaning

In 1610, Spanish settlers built the Palace of the Governors on Native Pueblo land (New Mexico History Museum, n.d.). It is an adobe building, unassuming, but with a violent past. Electronic data collected during e-learning can be viewed as equally fraught with controversy. Programs and applications within e-learning programs can collect data from users, including students, parents, and educators. These data require earth to store and endure indefinitely. The Palace of Governors may be historically present, but it cannot tell the whole story. It matters where and who this data comes from. Moreover, data cannot provide sufficient information needed for everyone who engages with it to understand it. Crawford (2021) warned that there was no neutral ground for language, and that all text collections were also going to be accounts of time, place, culture, and politics. Therefore, while data may seem useful and visibly appealing for designing educational programs, without humans giving meaning to data, the bits of data cannot communicate all they know. Hollin, et al. (2017) added that "when one apparatus instantiates a particular world another is necessarily excluded" (p. 932). Thus, data generated during learning events are entangled with stories, time, humans, and other materials.

Camera Gaze

The pandemic made the two-way video camera an important tool for e-learning (William & Pica-Smith, 2022). How does the camera "see" and curate a reality on the other side of the lens? After 200 years of considering the traditional film camera, it is the web camera's turn. Directly comparing the mechanism and experience of the film camera and the digital web camera, we can imagine a web camera as two film cameras pointed at each other. Bizarrely, we have two images at the same time sitting side by side on a digital screen, one image from each camera's perspective. They do not overlap, but how do they interplay? If we also imagine that turning the web camera off and on is like opening and closing the shutter of the film camera, then the tiny camera icon on our screen becomes a shutter to curate the scene. A synchronous meeting with multiple people, mediated through a web camera, becomes a curation of moving

self-portraits. The web camera is a generative photographic apparatus. The advent of the web camera is foreshadowed in *Wege in visuelles Neuland* (Franke, 1975). Its author, Herbert Franke, was a member of a small group of artists who were exploring "generative photography" in Western Europe from the 1960s to the 1980s. While other early generative artists were exploring "generative aesthetics" through the computer as apparatus (Taylor, 2014), Franke and colleagues saw the potential for cameras to perform algorithmic functions.

More recently, with web cameras ubiquitous in our lives, another branch of algorithmic art, generative photography, has the opportunity to grow through the web camera. Using old metaphors tied to the mechanical shutter camera and expanding them to include web cameras, we can ask new questions about e-learning. E-learning, mediated through the web camera, changes the experience of connection and learning. But what does it mean for a learner to see through a camera, while the scene on the other side is looking back at them? Also, what can we learn about issues like the colonial gaze, our bodies, our corporal connections to others, and resistance to perceptions of bodies in precarity (Eileraas, 2003)?

Conclusion

As we look onward in radical uncertainty, we see opportunities to enact reciprocal duties to consider aspects of e-learning by acknowledging presences of peoples and resources (Todd, 2016). This includes making e-learning more considerate of students' ethnic cultural-linguistic historical realities in an an educational system that has historically willfully deculturalized students (Spring, 2016). Learning within family knowledges and centering local knowing have been critical for Chicana feminists (Delgado Bernal, 2001). Surviving these radical uncertainties seems more likely when people have spaces to learn that acknowledge more aspects of context.

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