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Putting out Fires through a Re-Grounded Critical Literacy: Slowing the Spread of Misinformation through Teacher Education

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Abstract

In this essay, we discuss the challenges teacher educators face when preparing secondary teachers to educate adolescent learners in an age of seemingly-ubiquitous online mis- and disinformation. Mis- and disinformation about COVID-19, the climate crisis, or even the shape of the planet Earth are abundant in our mediasphere, and teacher educators can play a central role in supporting secondary-level learners in navigating the multiple and conflicting claims they come across. We explore a literacy teacher education approach that marries discursive analysis with empirical investigations, and share an example of critical textual analysis bolstered by scientific investigation.

Keywords: critical literacy, climate crisis, disciplinary literacy, multidisciplinary learning

People trying to reduce confidence through misinformation — that's unfortunate and it's something that's sort of hard to fight…it's wrong, and it does spread like wildfire.

--Dr. Ajay Sethi, an epidemiologist at the University of Wisconsin-Madison School of Medicine, speaking of misinformation about coronavirus vaccines. (as quoted in Whyte, 2021)

Rapidly-spreading false information is nothing new in our society. Yellow journalists[1] hyped a misleading narrative to encourage Americans to engage in violence in what became the Spanish-American War in 1898, and opportunists sold panicking passersby "anti-comet" pills following a published (and soon debunked) claim that cyanide detected in Halley's comet's tail would enter Earth's atmosphere during the comet's visit in 1910 (Davis, 2020). As the expression goes, misinformation spreads like wildfire, and given the technologies and platforms of the past three decades, misinformation and disinformation[2] spread even more quickly in young people's mediaspheres. A recent example of false information was the cause of actual wildfire: during California's 2020 fire season, some residents of fire-prone communities were convinced by social media posts that the wildfires were started by "left-wing radical activists", and several of these residents refused mandatory evacuation orders to stay and defend their homes from a nonexistent, imaginary threat (Healy & Baker, 2020). (The fires were, of course, the result of people building in highly flammable places, poor historical forest caretaking practices, the Santa Ana winds, and our intensifying climate.)

[1] Yellow journalism is a form of sensationalized reporting that appeals to readers' emotions rather than focusing on established facts. The term originated in late nineteenth-century New York, when two newspapers fought for subscribers and exaggerated their reporting to gain attention.
[2] Misinformation refers to knowledge that is false and may or may not be intentionally misleading; disinformation is misleading information that is deliberately false.

Other examples are easy to find: in the latter half of the 2010s, platforms like Youtube played a significant role in the propagation of the belief that the earth is flat (i.e., the flat-earth ideology, see Landrum, Olshansky, & Richards, 2021). In 2020, a man died in a homemade rocket while attempting to find evidence for this belief (BBC, 2020). Recent years have sadly given us additional potent examples of misinformation-to-action: the attempted coup on January 6th, COVID-19 denialism, misinformation about the efficacy or testing of mRNA vaccines, and the notion that the as-yet nonexistent Green New Deal was at fault for the February 2021 energy grid failure in Texas. Young people spend an average of 9 hours online each day (Susman-Pena, 2020), a number that has surely grown during the pandemic, at least in communities with stable online access. How might we teacher educators educate teachers as they navigate the challenges of this online mis- and disinformation with their adolescent students? Scientific literacy and background knowledge are undoubtedly necessary, but the ability to critically read information is also vital. The supply of false or misleading information is seemingly endless.

With an actual wildfire, putting dirt or soil on the flames can slow the flow of oxygen and thus help to slow the spread. How might we literacy teacher educators offer grounding practices that might hinder the spread of misinformation through metaphorical dirt or soil? How might this curb the demand of this seemingly-endless supply of false information? We have a central role to play in reining in demand: through our work, we can prepare teachers to support secondary-level learners as they negotiate the texts and claims that cross their paths in increasingly cacophonous mass and social media ecosystems. In this essay we, a secondary-level literacy teacher educator and a high school science teacher, describe the challenge facing educators, review affordances and limitations of current approaches to dealing with false information, and offer a multidisciplinary “re-grounded” critical literacy approach to negotiate the sorts of texts and truth

claims young people encounter. Re-grounding refers to investigative and empirical explorations that encourage readers to go beyond the text to ascertain if claims have merit. This involves engaging multiple disciplinary literacies in which adolescent readers are invited to read and reflect like mathematicians, historians, or scientists (Moje, 2008). We offer an example of re-grounding via a multidisciplinary English Language Arts and Marine Biology short unit situated within our model. Throughout, we use the example of misinformation about the climate crisis (Guardian, 2019) as an example of the readily-available and problematic misinformation (or disinformation) adolescent learners come across, and that we teacher educators must prepare the future teachers we work with to negotiate.

Conflicting information on Climate

If secondary-level students on the west coast wanted to learn more about the wildfires they are experiencing, they might search online and find the International Panel on Climate Change (IPCC)'s recent report that summarized its findings as follows:

> Human influence on climate has been the dominant cause of observed warming since the mid-20th century...temperature rise to date has already resulted in profound alterations to human and natural systems, including increases in droughts, floods, and some other types of extreme weather; sea level rise; and biodiversity loss – these changes are causing unprecedented risks to vulnerable persons and populations. (IPCC, 2019, p.52)

They might also search online and find the Non-governmental Panel on Climate Change (NPCC)'s report that maintains:

> there is no consensus...whether future climate trends can be predicted with sufficient confidence to guide public policies today. Consequently, concern over climate change is not a sufficient scientific or economic basis for restricting the use of fossil fuels. (NPCC, 2019, vi)

This latter source might even be introduced to students in a high school science classroom, as boxes of NPCC books have been sent, free of charge, to resource-starved schools across the

country, some of which may not have enough licensed science educators (Farber, 2017). The differences between the two sources are stark: One focuses on human influence and associated extreme weather, the other maintains we do not know enough about human influence to even consider policies restricting the use of fossil fuels.

Depending on adolescent students' scientific literacy and background knowledge, reading these texts alone may not allow them to determine which is empirically grounded: the NPCC document intentionally mirrors the genre conventions of scientific research, including formatting, citations, and references. This mirroring is intentionally engendered by those with something at stake in relevant policies, with the intention to create the appearance that there are two credible sides to an issue, and media outlets seeking to appear 'balanced' often fall into the trap of giving credence to positions with little to no empirical support (i.e., 'both sides-ism', see Damico, Baildon, & Panos, 2018 and Phillips, 2018).

This is the challenge secondary-level students face in a media climate that affords immediate access to the texts created by both the IPCC and NPCC: both texts follow the genre conventions of scientific reports, offer a panel of authors with impressive titles, and have long lists of references. Evidence that this challenge is a serious concern goes far beyond anecdotal: in a recent assessment, 96% of high school students were unable to discern conflicts of interest when investigating a website that claims to offer neutral scientific reporting about the climate crisis (Breakstone et al, 2021). (Many of these students, in this study of over three thousand adolescent learners, also had difficulty distinguishing between ads and news, and readily believed there was strong evidence of voter fraud in the 2020 presidential election after watching one individually-produced video.) This echoes earlier findings: after studying reliability and online sources, young people previously assessed as "proficient online readers" frequently

accepted information from a spoof website (Leu et. al, 2007). How are we teacher educators preparing teachers as they engage with these and other examples of conflicting information? Are we doing enough via our current approaches?

Current approaches in education

How do we currently train teachers to educate their adolescent students when confronted with this conflicting information? Based on an informal snowball sample from teacher education colleagues, popular approaches include checklists, the Common Core State Standards in Literacy, Lateral Reading, and a range of Critical Literacy practices.

Checklist approaches

As teacher educators, we often offer a "checklist" toolkit to our candidates: we teach teachers to encourage their adolescent students to check if the text comes from a reputable source, to investigate if the document in question follows the conventions of the genre, and to follow up with the references. Popular approaches come from the library sciences, and include CRAPP (Currency/timeliness, Relevance, Authority, Accuracy, and Purpose; Blakeslee, 2004) and RADCAB (Relevancy, Appropriateness, Detail, Currency, Authority, and Bias; Christensson, 2021). While an opening to critical consumption of text, checklist approaches amount to "[bringing] a can opener to a knife fight" (Caulfield, 2018) given the reality that interested parties can easily create and disseminate checklist-passing texts that portray their points in a favorable light and make biases hard to discern (e.g., the NPCC's book on climate and energy policy).

Common Core and Argumentation

At first glance, the Common Come State Standards (National Governors Association, 2010) seem to offer learning targets that will prepare adolescent readers to navigate

misinformation. CCSS calls for adolescent students to be able to "comprehend as well as critique", "value evidence", and "use…digital media strategically and capably"(Introduction, National Governors Association, 2010). Any standards document is, at best, the 'setting of the table' for the work of teachers and students (Luke, 2012, p.12), but it is worth exploring what these learning targets hold as ideal literacy practices. These literacy standards invite students to "delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient, identify false statements and fallacious reasoning" (RI.9-10.8). The overarching emphasis of the Common Core Learning Standards in Literacy is one of constructing and critiquing arguments. As seen with the limitations of the checklist approaches, it is far too easy for purveyors of misinformation to create and disseminate texts that follow genre conventions, offer (false) evidence, and otherwise mirror empirically-grounded and verified representations of the world. This makes CCSS Standard RI.11-12.1, which calls on students to "Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text" (National Governors Association, 2010), of limited use in determining the veracity of the text's use of evidence and claims to truth beyond the text.

Further, the Common Core's hyper-focus on interpreting and constructing arguments can obscure the fact that other modes of discourse (e.g., emotional appeals, aesthetics, identity-based belonging, politics) contribute to the ways we read, believe, and engage. The Common Core can also foster the mistaken belief that the best argument or strongest evidence is always valued and wins out in the policy arena; people in power can simply ignore evidence or arguments if these prove inconvenient to their interests (Destigter, 2015). This holds true for arguments that are bolstered by strong evidence (e.g., the energy policy changes needed to avert the worst outcomes

of the unfolding climate crisis), and it is vital that we prepare teachers to explore issues of power and access while concurrently teaching students to critique and produce arguments.

Lateral Reading

One emerging approach to navigating misinformation online is lateral reading, the seeking out of other digital texts to ascertain if the initial text is credible (Wineburg & McGrew, 2017). In practice, adolescent students are encouraged not to ascertain the claims to truth in an online text by only reading that text, but to explore the broader web to see who wrote the article, who they are connected with, what conflicts of interests they might have, and others' views on the issue, a process akin to fact checking. This reading across the web encourages real-time verification as adolescent students practice evaluating the credibility of the initial text's claims by comparing them with other texts and claims, or by researching the publication, author, or funding sources. This connects with one learning target of the CCSS ("Integrate and evaluate multiple sources of information presented in different media or formats", RI.11-12.7), though one that has not been the most emphasized in our experience.

This going beyond the text is indeed generative: if a high school student decides to learn more about the IPCC's and NPCC's claims about the climate in the example discussed above, they might learn that the IPCC is an intergovernmental body of the United Nations dedicated to rigorous science to study human-induced climate change and the NPCC is an organization funded in the past by industry-tied entities like the Koch Foundation and fossil fuel corporations like ExxonMobil (Desmog, n.d.; Negin, 2018). As mentioned above, the latter organization has, in the past, sent "free resources" to science teachers across the country by mailing books to resource-starved schools, books that intentionally muddy established scientific knowledge in the service of teaching "both sides" of a nonexistent debate about climate change (Farber, 2017).

Knowing the creator of a text, and the politics surrounding the production and reception of the text are undoubtedly valuable when assessing the text's claims to truth (Share, 2017). Given such nefarious attempts to muddy established scientific knowledge, we see great promise in the "going beyond the text" approach inherent to lateral reading. (For more on lateral reading, see the Civic Online Reasoning Institute, and resources are available at https://cor.stanford.edu/curriculum/collections/teaching-lateral-reading.) Lateral reading can pave the way for analyses of issues of power and access to platforms as adolescent readers explore content creators' ties or conflicts of interest.

Critical Approaches

Critical literacy scholars hold that a central part of teachers' "work involves helping kids decide which texts are worth reading and writing, how, where, and to what ends and purposes," and, given the potential stakes of misinformation, this constitutes "an ethical and social responsibility"(Luke, 2003, p.20). Many teacher educators have long considered a wide range of analytic practices to be necessary critical literacies for our students (e.g., de Roock, 2021; Golden, 2017; Alford & Kettle, 2017; Pandya, 2012; Mora, 2014). Critical literacy education "examines the role played by text and discourse in maintaining or transforming [social] orders" (Janks, 2014a, p.349). Through practices associated with critical literacy, students and teachers can pose questions such as: "What is 'truth'? How is it presented and represented, by whom, and in whose interests? Who should have access to which images and words, texts, and discourses? For what purposes?" (Luke, 2013a, p.20). Critical literacy education has a long tradition of problematizing the status quo and encouraging social actions with the potential to transform or reshape pertinent elements within our social worlds (e.g., Janks, 2014b). There are two camps of critical literacy praxis: critical pedagogy (also known as emancipatory or Freirean approaches)

and critical text analysis (also known as discourse analytic approaches). Each offers teacher educators important frameworks and associated practices to critique, question, or problematize the status quo.

Critical pedagogy

Freirean-inspired critical pedagogy sees emancipation from oppression and false consciousness as the goals of a dialogical, problem-posing education (e.g., Sleeter, Torres, & Laughlin, 2004). By engaging with learners' funds of knowledge and participating in cultural exchanges, teachers and students can question the world around them, and, through dialogical social analyses, work to transform social realities. Valuing future teachers' and adolescent learners' prior knowledge and experience and questioning normative relationships and practices are necessary components of teacher education, yet the tenets of critical literacy can be co-opted towards nefarious ends (Bacon, 2018). Bacon offers the example of climate crisis deniers "defend[ing] their position using the language of criticality… us[ing] the motif of 'questions for critical thinking' to refute scientific data on carbon dioxide"(2018, p.4). To remedy this co-opting of critical approaches, Bacon recommends analyses of power and position. In the context of our examples from the IPCC and NPCC reports on the climate crisis, this means that readers would reflect on whether fossil fuel industry leaders' voices or scientists' voices carry more weight in policy decisions, or whose knowledge and priorities are seen as having merit in the established hierarchies in our society.

Critical textual analysis

Discourse analytic approaches to critical literacy focus on the ways that texts work, inviting readers to explore the ways particular genres or modes of discourse or interpretation align with social power (Janks, 2005). This work can involve studying rhetorical techniques

employed in persuasion and propaganda (e.g., Hobbs & McGee, 2019). Readers are encouraged to question and critique the representations of the world proffered by a text's creator, and to reflect on whether or not their experience aligns with those depicted in a text. Understanding the communication and textual styles in explicit ways can support marginalized people in drawing upon those literacy practices (or reworking these practices in novel ways) to understand the unwritten rules of social games. In the context of the climate crisis and secondary education, this might mean that learners pose questions about relevant texts, interpret representations of climate change, create their own arguments and texts to engage others on these issues, and develop literacies associated with advocacy and activism (for an excellent resource on this, see *Teaching Climate Change to Adolescents* by Beach, Share, & Webb, 2017). Discourse analytical approaches can also involve micro-level explorations of clauses, structures, tenses, and active or passive voice to explore power relationships and representations of the world (e.g., the difference between 'some scientists believe the changing climate means we ought to consider alternative energy sources' and 'scientists have determined that policy-makers need to limit fossil fuels if we are to avert the worst of the human-caused climate change impacts').

Going beyond the text: **Re-grounding Critical Literacy**

We appreciate aspects of the models and approaches detailed above, particularly the practices associated with critical literacies. But we remain concerned about the ease with which unscrupulous or uninformed actors can create texts which pass the checklist tests, the challenges of finding out more about the authors and interests behind a textual claim, or the ways the language of criticality has been co-opted in the service of demonstrably false claims (e.g., Bacon's example of 'questions for critical thinking' being used to try to refute empirical data about human activity and the greenhouse effect). Further, all of these approaches remain within

the world of text: lateral reading encourages the seeking of relevant information from other online texts, but this might lead to a rabbit hole of other false or misleading information. For this reason, we want to encourage teacher educators to add an additional tool to the critical analysis and production toolkit, one that we argue can help to slow the spread of misinformation. We argue that teacher educators and teachers should prepare adolescent students to go beyond the world of textual representations when learning about natural phenomena like the climate crisis or the ways one might contract a virus. Consider texts arguing for or against the importance of vaccinations, or texts highlighting or obscuring the historical record documenting the genocide of indigenous people in what settler colonialism made the state of California. Given that texts purport to represent knowledge such as historical events or biological processes, we cannot limit pedagogical explorations to textual worlds as we teach others to assess claims to truth. Multidisciplinary projects that involve both critical reading and inductive explorations beyond the texts offer a means of empirically "reading the word and world" (Freire & Macedo, 1987).

In reflecting on these challenges and discussing possible tools for classroom praxis, we are guided by the work of critical literacy scholar Allan Luke, who argues that we educators need to "reground" critical literacy by marrying it with empirical investigations in the world. This re-grounding requires not endless textual interpretation and analysis but "an acknowledgement of the existence of 'truth' and 'reality' outside of the particular texts in question and, indeed, realities outside the complex web of intertextual descriptions and relations formed by multiple available texts" (2013b, p.146). Instead of limiting our analyses in a web of "textual representations of the world," teacher educators should invite these multidisciplinary investigations as one way to support learners in determining "truths, facts about history, [and the] social and material reality [these texts] purport to represent" (p.146).

When assessing the claims made by a media text, critical literacy approaches have historically advocated for engagement with questions like "What values, points of view, and ideologies are represented or missing from this text or influenced by the medium?", "Whom does this text advantage and disadvantage?", and "Who are all the people who made choices that helped create this text?"(Share, 2017). To these and other vital questions, we want to add "How might you go *beyond* the text to investigate the claims made within the text?" and "What tools or disciplines (e.g., analysis of primary source documents, scientific research) might be useful in investigating these claims?" These sorts of interdisciplinary and extratextual investigations have the potential to be the grounding soil that reduces the oxygen feeding metaphorical fires of misinformation.

Navigating This Challenge

Multidisciplinarity is a strength: collaborations between teacher educators and secondary-level educators who focus on textual analysis (e.g., English Language Arts educators) and those who focus on inductive investigations (e.g., biology teachers) can be generative when engaging the multiple and conflicting claims adolescent learners come across. Collaborations with historians, other social science teachers, mathematics educators and other disciplinary teacher educators and experts is undoubtedly generative as well, but we want to think through textual analysis and the practices of science for a moment, for the following reasons: argument is central to the practice of science, but what constitutes an argument in science goes beyond the textual assertions and evidencing customary in the field of, say, English education. Empirical data is a pillar within argumentation, one that connects with established knowledge in the form of peer-

reviewed textual evidence. Scientific knowledge is public and vetted; it is built by consensus and often takes time to be adopted and embraced.

Literacy teacher educators can support teachers in educating their adolescent students as the students navigate this media climate by marrying textual analysis with empirical investigations. Specifically, when investigating texts making claims about the world, we need to foster a multidisciplinary approach. Literacy teachers can teach critical analysis of texts, but the proliferating misinformation that follows the conventions of reputable and established genres makes this approach difficult on its own. Science teachers can help ELA/literacy teachers by engaging in empirical investigations and inductive reasoning that can help students assess claims made in texts, and support textual analysis in an ELA course. Similarly, scientific knowledge is sometimes reported in ways that exaggerate or misunderstand findings, and literacy educators' area of expertise-- critical production and analysis of media or print texts-- can be useful in communicating scientific knowledge and processes. Expanding literary practice into the science classroom through a variety of authentic and relevant activities and discussions has the potential to increase student engagement (Behizadeh, 2015), deepening understanding of critical literacy principles and encouraging learners to develop *actionable* literacies within and beyond the classroom. Relying solely on ELA instruction for learners' literacy growth can restrict the capacity for students to demonstrate their understanding of learned principles in an array of authentic contexts (Brozo, 2017).

Curricular example: Ocean acidification lesson

We are working from this framework to create responsive, interdisciplinary lessons to enact in our teaching and learning spaces. One example we would like to share here: in a secondary-level English Language Arts class (or a teacher education course in which teacher candidates

design or critique similar plans), students will be invited to read selections from both the IPCC and NPCC reports. After studying these texts to determine their fidelity to genre conventions, authorial expertise, and use/misuse of peer-reviewed knowledge, the students will read selections of these reports in an effort to understand the values and assumptions that ground them and the conditions of their production (Share, 2017). They might notice, as examples, that the IPCC report is concerned with people vulnerable to rising ocean levels and wildfires and biodiversity loss while the NPCC report draws on economic and scientific data to focus on "human prosperity" and argue that the benefits of fossil fuels outweigh the costs. In their study of discourse communities and lexicons, they might learn that scientists talk about 'degrees of evidence' rather than 'proof,' and subsequently note that the IPCC document uses 'proof' exactly zero times while the NPCC makes use of 'proof', 'prove', or 'proves' scores of times.

Of particular interest in the NPCC report are the statements about ocean acidification, one of the effects of climate change. The report states that "Many laboratory and field studies demonstrate growth and developmental improvements in aquatic life in response to higher temperatures and reduced water pH levels" (NPCC, 2019, 7.3). The report continues: "Other research illustrates the capability of both marine and freshwater species to tolerate and adapt to the rising temperature and pH decline of the planet's water bodies" (7.3). Learners in the ELA classroom will draw upon their critical textual analysis practices and note the differences in discursive positioning between 'ocean acidification' and 'pH decline.' Further, the students' diligent lateral reading will lead to an understanding that cited texts are misused: one article cited by the NPCC report (Pandolfi et al, 2011) details various species of marine algae and their relative abilities to tolerate and adapt to increasing acidification. In contrast to the conclusions of their NPCC report, the cited peer-reviewed article maintains that ocean acidification is indeed a

significant problem, as many species cannot tolerate it, and this can impact symbiotic relationships with coral, drastically reducing coral survivability. Beyond this example of 'cherry-picked' and misleading use of empirical data, students may still have questions about ocean acidification and whether or not it is a problem. To build understandings that go beyond what they can learn from readings the IPCC or NPCC reports (or any other texts), our students must be guided in the practices of science.

Within the science classroom, students can engage in guided discourse (Lederman et al., 2013) and examination of historical vignettes (Clough & Olson, 2007; McComas, Clough, & Almazroa, 2002) that better reflect the nature of science. Much of scientific knowledge production is built through the analysis of relevant, real-world data, providing learners with a means to practice the utilization of appropriate terminology (e.g., evidence as opposed to proof, theory as distinct from law, the difference between correlation and causation) in addition to providing context for the combination of – and distinction between – rational processes and empirical evidence (i.e. identifying and utilizing the epistemological differences between *a priori* and *a posteriori*).

This type of beneficial, multidisciplinary practice can be seen in a lesson exemplar created by one of us, Breanna. This lesson aligns with an array of Next Generation Science Standards, Common Core Literacy Standards and elements of the P21 Framework for 21st century learning. In this lesson, students explore the concept of ocean acidification by observing and making assumptions about the acidification phenomenon (Khan Academy, n.d.) followed by virtually collecting and analyzing empirical data displaying evidence of the negative effect of pH variation on the development of sea urchin larva (Virtual Urchin, n.d.). The ability for students to both manipulate and observe this process through the eyes of scientists, provides them with an

opportunity to gain context pertaining to the detrimental effects of ocean acidification. The resulting sense of authenticity then allows them to further their knowledge by once again analyzing the article that the NPCC report authors 'cherry-picked' to suit their agenda. The peer-reviewed article conveys the effects of ocean acidification on other marine organisms that rely on stable pH (Pandolfi et al., 2011). Students again discuss the duplicitousness of the fact that this article—while it helps to support their own empirical findings — was cited by the NPCC to make contradictory claims.

The discourse scaffolding provided by a combination of scientific argumentation and critical literacy practice through this and similar exemplars enable the students to discuss the repercussions of the type of data-misrepresentation shown in the NPCC document. Additionally, this activity begins to provide the context that allows students to practice actionable literacy by arguing for the spread of empirical data rather than economically-biased opinions like those displayed in "scientific reports" produced by the NPCC.

We believe these sorts of interdisciplinary approaches involving critical reading coupled with relevant empirical investigations will allow future teachers and their students to ground their critical literacy practices in exploration of events and processes beyond the texts that claim to represent them. In our exemplar, future teachers can help adolescent scholars to understand in a deeper way that the NPCC report is a mash-up of marketing and economic propaganda that follows many of the genre conventions of science writing while the IPCC report is an overview of the best available interpretations of all relevant data. Being able to draw on the skillsets of marine biologists (or chemical engineers, historians, economists, etc.) when reading a text allows for disciplinary literacies that are critical and grounded.

Implications: The Politics of Teaching

Readers of *Literacy Practice and Research* are well aware of the politics of teaching in this day and age: we began the discussions that lead to this essay while sheltering-in-place during the first months of the Covid-19 public health emergency, and the early days of the pandemic are not difficult to recall: in early March 2020, people's political ideologies indicated the degree to which they took the coronavirus as a serious threat or a 'hoax' intended to hurt the then-current president (Heath, 2020). Closing or opening schools, the wearing of masks, and debates about vaccinations are only some of the issues that have been shaped by political ideologies in recent months. Viruses, of course, are not dependent on people's belief in or concern about them, and our country has been ill-prepared to navigate these very real health concerns, in part due to a lack of preparation for testing, and protective equipment for medical professionals and other necessary worker in the weeks before the virus and associated disease appeared in the United States. The ways we read media texts and the actions we take based on them, can literally have life or death consequences.

Our additional tool, the practice of re-grounding critical literacy by coupling textual analysis with empirical investigation, is in no way a panacea, as readers' identities, desire for confirmation bias, and political ideologies very much shape the ways texts are interpreted (Damico, Baildon, & Panos, 2018; Schultz et. al, 2020). Enactment of such collaborative and project-based work undoubtedly can be taxing on already-overwhelmed educators, though taking on this challenge can have the benefit of fostering positive professional identity and growth (e.g., Tsybulsky & Muchnik-Rozanov, 2019). A more difficult challenge is that the lesson exemplar involving the conflicting claims from the IPCC and NPCC reports is already out-of-date: as more and more people experience the effects of the climate crisis, the fossil fuel industry is shifting

from disinformation to blocking legislation for alternative energy sources (Mann, 2021). This shows the need for advocacy and activism beyond textual analysis or empirical investigations about truth claims in media texts. Still, there is a great need for teacher educators to address the mis- and disinformation in the mediasphere, as we agree with others (e.g., Kahne & Bowyer, 2017) that critical analysis and the ability to judge truth claims is necessary for democratic practice. If there is a tool that can slow the oxygen feeding the wildfire of a false or misleading claim, we want to see it in teacher education and secondary-level classrooms.

The use of critical analysis and empirical investigations can make an impact: consumers of media can and do change their minds when presented with new information (e.g., Vraga & Bode, 2017). Building these habits in teacher education courses can support future teachers in building them with their adolescent students. While it is only part of the work we need to do, we believe there is much promise in teacher educators and future teachers inviting secondary-level scholars to read and critique texts using 'beyond the text' investigations and knowledge production. From where we stand, re-grounding critical literacy is vital as both literal and metaphorical wildfires spread.

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