Civic media literacy as 21st century source work: Future social studies teachers examine web sources about climate change

James S. Damico, Alexandra Panos *

Indiana University, Department of Literacy, Culture, and Language Education, 201 N. Rose Ave., Bloomington, IN 47401, United States

ARTICLE INFO

ABSTRACT

Civic media literacy entails understanding complex topics and events that are increasingly mediated by digital sources of information and where it can be challenging to evaluate the reliability merits of these sources. The goal of this study was to discern the ways undergraduate preservice social studies teachers with different climate change beliefs read and evaluated the reliability of four diverse Web sources about the complex socioscientific topic of climate change. Findings highlight clear alignment between most participants with climate change beliefs at either end of a beliefs continuum with less alignment for participants with climate change beliefs toward the middle of a continuum. Findings also point to the benefits of whole group deliberation to help participants more critically evaluate a Web source that opposed the scientific consensus about climate change. In an age of "alternative facts," this study points to the importance of students and educators having opportunities to evaluate, discuss, and determine the credibility of a range of online sources.

Copyright © 2017, The International Society for the Social Studies. Published by Elsevier, Inc.

Recent large-scale studies highlight challenges youth and young adults have detecting misleading online information (Wineburg, McGrew, Breakstone, & Ortega, 2016) or the accuracy of online truth claims about controversial public issues (Kahne & Bowyer, 2017). This study engages this scholarly conversation by examining what happened when a group of university students, undergraduate preservice social studies teachers, read and evaluated the reliability of four diverse Web sources about climate change at three distinct time intervals: when the participants evaluated screenshots of each source (T1); when students had online access to each source and responded to a set of questions that prompted close, critical reading (T2); and then when students discussed the reliability of each source through a whole group discussion (T3) (Parker, 2006). Building from the work of Masyada & Washington (2016), we employ a civic media literacy framework with an emphasis on 21st century source work to guide our analysis.

While doing source work is not new to social studies education, working with Internet sources presents key challenges, including the likelihood that online readers will consume perspectives that align with their own (Jamieson, 2008; Kahne & Bowyer, 2017; Prior, 2013). This challenge has intensified in a US social and political context marked by the proliferation of fake news and "alternative facts" (Journell, 2017). Thus, the ways readers of any age evaluate the objectivity of online sources remains of central importance (Cooke, 2017; Marchi, 2012), in particular with divisive socioscientific issues such as climate change. The instructional model embedded in this study helps address this challenge, as students identify their own beliefs about the topic, work independently with sources to better understand how they each individually process the information,

and deliberate ideas with others through a whole group discussion (Parker, 2006). This led a majority of the students to a more robust understanding about the reliability merits of one source, which posited an extreme minority view in light of the scientific knowledge base about climate change and reflected the political biases of its sponsors. Overall, findings from this study highlight the advantage of a focused multi-step process to evaluating sources, especially the value of a whole group deliberation process.

Civic media literacy framework

Masyada and Washington (2016) propose a model of civic education that integrates media literacy with conceptual thinking. They draw from core principles of the National Association of Media Literacy Education (NAMLE) (2007), to outline how media literacy education "requires active inquiry and critical thinking about the messages we receive and create" with the goal to develop "informed, reflective and engaged participants essential for a democratic society" (2007). Masyada and Washington then define conceptual as "a focus on the foundational ideas of civics that are transferable across time, place, and situation - no matter the content that is being studied… [ideas that] include such concepts as liberty, equality, security, collaboration, and conflict, among others." They use the C3 Framework from the National Council for the Social Studies (NCSS, 2013), which includes a student-driven and teacher-led inquiry process with four dimensions: ask compelling questions; use disciplinary perspectives of history, geography, economics, or civics; gather and evaluate information sources; and communicate findings and take action. Masyada and Washington then demonstrate their civic education model in action with the concept *civil liberties* and a focused examination of the statement: "The needs of national security might promote restrictions on individual liberty" (p. 91). The authors conclude by stating how their conceptual model, with its grounding in media literacy and commitments to the C3 Framework, reflects an "education for citizenship" perspective, one which centers upon addressing core questions and problems of democratic life.

While Masyada and Washington addressed *civil liberties* as their concept, we consider *reliability*. To determine if someone is reliable and can be trusted, we typically assess their past performance and our previous experiences with them. We determine whether an information source is reliable by evaluating its provenance (author's background, expertise, experience), purpose (to inform, persuade, etc.), and content (claims, evidence, and corroboration with other sources) (Damico & Baildon, 2015). Flanagin and Metzger (2008) contend that reliability, trust, credibility, quality, reputation, authority, competence, and expertise are closely related concepts and, taken together, comprise two dimensions: *trustworthiness*, which emphasizes reputation, reliability, and trust, and *expertise*, which considers quality, accuracy, competence, and authority. Flanagin and Metzger (2008) also outline a framework we think succinctly captures the challenges of doing 21st century source work. The framework includes three overlapping, interdependent factors: 1. *source credibility*, which includes an author's and sponsor's credentials and affiliations, website comprehensiveness, and professionalism; 2. *message credibility,* which pertains to content accuracy and structure of information, such as evidence to support claims and citations used; and 3. *media credibility,* the channels used to communicate information, such as newspaper, radio, television, or Internet. We emphasize *source* and *message credibility* for the analysis in our study. Similar to Flanagin and Metzger, we also understand *credibility* and *reliability* as companion concepts and use them interchangeably in this study.

Source reliability

An emphasis on source attribution or identifying author motives and intended audience is one key component of social studies education (e.g., Beck, McKeown, & Worthy, 1995; McKeown & Beck, 1994; VanSledright, 2010; Wineburg, 2001). Building on the work of Wineburg (1991), and his "sourcing heuristic" in particular, researchers have found that students can become more skilled at evaluating sources after receiving explicit instruction with this heuristic (Nokes, Dole, & Hacker, 2007) or through the use of a computer application (Britt & Aglinskas, 2002). It has also been found, however, that college students view information to be more credible than adults and verify information less (Metzger, Flanagin & Zwarun, 2003) and that high school and college students struggle when asked to evaluate the reliability of historical sources (e.g., Britt & Aglinskas, 2002).

While discerning whether or not sources are reliable has long played a part in social studies inquiry, the concept of reliability has gained greater significance the past few decades in our Internet age as new forms of information and communication technologies reshape the nature of reading, writing, and communication and necessitate "new literacies" (Lankshear & Knobel, 2003; Leu, Kinzer, Coiro, & Cammack, 2004). Evaluating the trustworthiness of sources, assessing how extensively to investigate a source or author, and following links to do additional research have become essential online reading behaviors (Liu, 2005). The challenge is that near endless streams of Internet sources, much of it not vetted through more traditionally well-established pathways, heighten the challenge of assessing the credibility of information (Damico & Baildon, 2015; Burbules, 2001). One consequence is the greater ease and likelihood that readers of online information will consume ideas, perspectives, etc. that align with their own views (Jamieson, 2008; Kahne & Bowyer, 2017; Prior, 2013). Put another way, people's knowledge and/or their analytical skills can have limited value when it comes to politically charged or divisive topics (Kahne & Bowyer, 2017; Lavine, Johnston, & Steenbergen, 2012; Taber & Lodge, 2006). One's political beliefs and affiliations can engender different views about basic facts tied to politically divisive issues, such as the Iraq War (Kull, Ramsay, & Lewis, 2003), income inequality (Bartels, 2009), and climate change (McCright & Dunlap, 2011). Moreover, adults