A CASE STUDY EXPLORING HOW K-12 STUDENTS LEARN TO USE SOCIAL MEDIA FOR CIVIC GOOD

By

Emilia Shirin Askari

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ABSTRACT

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This case study explores what K-12 students learn from a 13-week class activity about attracting attention to civic issues on social media. This research responds to calls by scholars of civic education to expand notions of civic engagement and digital citizenship, which often have focused on urging students to protect their reputations in digital spaces. In contrast, the learning activity examined here encourages communityoriented digital citizenship, preparing students to inform and possibly empower social change. This study is grounded in Cognitive Flexibility Theory, which focuses on learning in ill-structured domains such as public social media. Further, the study builds on the increasingly popular idea of the Fifth Estate, which posits that people acting in civic ways in public spaces can be a powerful check on government, playing a role similar to that of journalism institutions, sometimes referred to as the Fourth Estate. Data collected in this study included a pre-survey, a written reflection and post interviews with 4 students as well as artifacts such as social media posts. Students employed two main strategies to draw attention to civic issues on social media: audience-signaling and networking. Further, students learned to seek credible and diverse information using class accounts on TikTok, Instagram, and Twitter. Finally, students offered definitions of digital citizenship and shared thoughts about how schools should teach it via social media. This study fills a gap in the research literature about K-12 teaching with social media; few prior studies take advantage of social media's

affordance as a bridge between the classroom and communities outside the school. This study also illuminates learning as schools globally moved online in response to the pandemic. Copyright by EMILIA SHIRIN ASKARI 2022 This thesis is dedicated to my children, Bryce and Leila; my husband, John; my parents, Augusta and Amir; and to life-long learners everywhere. Thanks to all who believed in me.

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I hope your confidence in me, and this project, encourages similar teaching and research projects in other schools.

vi

TABLE OF CONTENTS

LIST OF TABLES	ix
LIST OF FIGURES	х
INTRODUCTION	1
LITERATURE REVIEW Definitions Youth and Civic Engagement Teaching Civics in K-12 Classes Youth Civic Engagement via Social Media Teaching Digital Citizenship via Social Media Summary	4 6 10 14 16 21
CONCEPTUAL FRAMEWORKS: COGNITIVE FLEXIBILITY AND FIFTH ESTATE	23
PURPOSE AND RESEARCH QUESTIONS	27
METHODOLOGY Research Context - Current Events Case Selection Student Sample Selection Research Context - School Profile Collaborative Lesson Design Data Collection Student Pre-Survey Student Interviews Artifacts of Student Work Students' Written Reflections Data Analysis Quality and Validity Researcher's Role and Positionality	29 30 32 36 39 40 45 46 46 48 49 50 52 54
RESULTS Student Profiles RQ1. Student Use of Social Media to Draw Attention to Civic Issues Audience signaling Networking Challenges RQ2. Student Learning about Civic Engagement while Using Social Media Seeking Credible Information Seeking Diverse Perspectives	57 57 60 63 65 74 75 82

RQ3. Students Learning about Digital Citizenship while Using Social Media Definitions of Digital Citizenship	85 85
Digital Citizenship: Power and Identity	86
Teaching Digital Citizens to Use Social Media	92
DISCUSSION	95
Becoming Part of the Fifth Estate	95
Learning Civic Skills by Creating Civic Posts on Social Media	98
Expanding Notions of Digital Citizenship to Include Active Participation	100
IMPLICATIONS	103
Implications for Research	103
Implications for Teaching	106
CONCLUSION	110
APPENDICES	113
Appendix One: Teacher Screening Survey	114
Appendix Two: Consent Forms	116
Appendix Three: Student Interview Questions	122
Appendix Four: Codebook, A Sampling of Key Codes	124
Appendix Five: Accounts that Followed Owls4Justice	126
Appendix Six: Accounts Followed by Owls4Justice	130
REFERENCES	137

LIST OF TABLES

Table 1. Potential teacher-participants based on screening survey	34
Table 2. Profiles of student-participants	39
Table 3. Checklist for source reliability created by 9th grade class	43
Table 4. Checklist for source reliability created by 10th grade class	43

LIST OF FIGURES

Figure 1. Screenshot. TikTok video prepared by Jordan's group	61
Figure 2. Screenshot. Students using hashtags	62
Figure 3. Screenshot. Student posts tagging decision-makers	63
Figure 4. Screenshot. Post quoting actress Regina Hall without tagging her	66
Figure 5. Screenshot. Owls4Justice TikTok account home page	68
Figure 6. Screenshot. Owls4Justice Instagram account home page	68
Figure 7. Screenshot. Owls4Justice Twitter account home page	69
Figure 8. Screenshot. Owls4Justice tweet about the Flint water crisis	70
Figure 9. Screenshot. Owls4Justice Instagram post about water crisis	70
Figure 10. Screenshot. Owls4Justice Instagram post about unemployment	71
Figure 11. Screenshot. Owls4Justice tweet linking to a news story	72
Figure 12. Screenshot. Owls4Justice TikTok video about student debt	73
Figure 13. Screenshot. Owls4Justice TikTok video about road problems	73
Figure 14. Screenshot. Experts followed by Owls4Justice on Twitter	77
Figure 15. Screenshot. Accounts followed by Owls4Justice on Instagram	77
Figure 16. Screenshot. Hashtags followed by Owls4Justice on Instagram	79
Figure 17. Screenshot. Owls4Justice post quoting Kaiser Family Foundation	80
Figure 18. Screenshot. Owls4Justice Instagram post quoting unspecified study	81
Figure 19. Screenshot. Owls4Justice Instagram post quoting Hank Johnson	81
Figure 20. Screenshot. Owls4Justice student tweet tagging a politician	88
Figure 21. Screenshot. Owls4Justice Instagram post quoting a CNBC reporter	88

Figure 22. Screenshot. Owls4Justice tweet quoting Robert Reich	89
Figure 23. Screenshot. Owls4Justice TikTok video about the Flint water crisis	92

INTRODUCTION

In this study, I explore what and how K-12 students learn about civic engagement when they use social media to draw attention to civic issues as part of their formal learning. I see this social media activity as a form of civic engagement that schools should teach and encourage. Indeed, I contend that knowing how to draw attention to community concerns and solutions via social media is an important aspect of citizenship today.

Many scholars argue that social media is an important platform for discussion of civic problems (Gil de Zúñiga, Jung & Valenzuela, 2012), with potential to drive community action (Loader, Vromen & Xenos, 2014; Obar, Zube & Lampe, 2012). For instance, Gil de Zúñiga, Jung & Valenzuela (2012) found that people who seek information via social media increase their social capital, or the resources in their social networks, and are more likely to participate in civic and political behaviors. These findings are based on a 2008-2009 survey of 475 social media users. Similarly, Obar, Zube and Lampe (2012) surveyed 169 people working with activist organizations in the U.S. about their use of and thoughts about social media. The researchers found that activists felt that social media was an important tool for communicating and motivating civic action; they used social media with this intent every day. In their introduction to a special, social media-focused edition of Information, Communication & Society, Loader, Vromen and Xenos (2014) note, "the political identity and attitudes of young citizens are...seen to be increasingly shaped less by their social ties to family, neighbourhood, school or work, but rather

by the manner in which they participate and interact through the social networks which they themselves have had a significant part in constructing" (p. 143).

In fact, many young people experience a disconnect between K-12 schoolbased approaches to teaching civics, which typically emphasize traditional measures of civic engagement, such as voting and joining a political party, reserved for people 18 or older (boyd, 2014), and their experiences as contributors to civic conversations on social media outside of school. Traditional outlets for civic engagement may seem far removed from the lives of middle and high school students, but social media is integral to their everyday lives, offering an alternative outlet for youth civic participation in social change (Anderson & Jiang, 2018).

Despite popular and scholarly acknowledgement of social media's potential as a bridge between schools and civic life (Mihailidis, 2018; Middaugh, 2019) and recognition of the ubiquity and importance of social media in the life of teens (Anderson & Jiang, 2018), students' use of social media for civic engagement is under-studied in the educational research literature. In K-12 settings, learning with social media often occurs in closed social media groups, offering limited or no engagement (civic or otherwise) with the world outside the school (Greenhow & Askari, 2017; Greenhow, Galvin, Brandon & Askari, 2020). Recent literature reviews also reveal that most studies of young people's learning with social media focus on college-age learners or on informal learning, outside of schools (Greenhow & Askari, 2017; Manca & Ranieri, 2013). The purpose of this study is to explore what and how K-12 students learn about civic engagement when they use social media to draw attention to civic issues as part of their formal learning.

This study contributes to the growing knowledge base on how young people are using social media to engage civically (e.g., using social media to prompt people to take actions in the civic or public interest) (Mirra and Garcia, 2017; Garcia and Philip, 2018; Heath, 2018). Yet here the goal is to examine youth practices connected to their K-12 schooling. These teacher-initiated civic actions via social media might include engaging in conversation about civic issues; sharing and signing digital petitions; promoting or documenting a public demonstration or rally; soliciting donations to civic causes; encouraging empathy for people seeking social justice; or sharing experiences related to a civic concern, such as the COVID-19 pandemic. The need for this kind of research is demonstrated by the March 11, 2019, announcement that 21 U.S. universities are forming a new Public Interest Technology University Network to "train the next generation...to develop, regulate and use technology for the public good" (Singer, 2019).

In addition, this study fills a need in social media and K-12 learning research for studies of learning with social media that take advantage of the medium's affordance for connecting to people beyond school walls. The insights developed as a result of this study will not only serve scholars in education and communication, but also will inform K-12 teachers with a civics component to their classes, who may seek to meaningfully integrate social media. The added context of the global pandemic, which has forced Michigan schools and thousands of others across the globe to move online, makes this case even more compelling.

LITERATURE REVIEW

In this section, I summarize the theoretical and empirical research that undergird this study. I begin with definitions of key terms to orient the reader, followed by brief overviews of what is currently known about: 1) youth engagement with civic issues generally; 2) how civic education has typically been taught in secondary schools and how this practice is changing; 3) youth civic engagement with social media primarily outside of schools; and 4) teaching digital citizenship as a subset of civics education. My work seeks to explore the intersection of these three literatures: youth civic engagement, teaching civics education, including digital citizenship, and social media in education.

Definitions

Scholars define *civic engagement* as composed of three elements: "political involvement or civic activities; concern for others and tolerance; and allegiance, attachment, or membership" (Sherrod, Torney-Purta & Flanagan, 2010, p. 8). While some scholars argue that a concern for social justice is "a critical aspect of civic engagement and view activism as an important form of participation...concern for others, participation in community service, and activism for social justice are not universally acknowledged as forms of civic engagement" (Sherrod, Torney-Purta & Flanagan, 2010, p. 8).

Similarly, *citizenship*, according to *The Cambridge Dictionary* (2019) is defined in a traditional way: "the state of having the rights of a person born in a particular country...carrying out the duties and responsibilities of a member of a particular

society." In recent years, scholars have suggested an expanded definition of citizenship that is less tied to duty or country, and more connected to support for social justice concerns without political boundaries. Sherrod, Torney-Purta and Flanagan (2010) assert that "an important issue for the definition of citizenship is whether tolerance, concern for others, and altruism should be viewed as a component of citizenship" (p. 7).

An aspect of citizenship, *digital citizenship*, can be conceived of broadly as civic engagement in digital spaces such as social media (James, Weinstein & Mendoza, 2019). Definitions of digital citizenship seem to assume *media literacy*, or "the ability to access, analyze, evaluate, create and act using all forms of communication" (National Association for Media Literacy Education, 2019, paragraph 1). Indeed, supporters of the Partnership for 21st Century Education (P21) (2019) conceive of *digital citizens* as possessing both civic and media literacy. They emphasize not just students' critical and creative use of media to communicate and their understanding of legal and ethical issues surrounding information technology use, but also *civic literacy*, or the ability to:

- "Participate effectively in civic life through knowing how to stay informed and understanding governmental processes;
- Exercise the rights and obligations of citizenship at local, state, national, and global levels; and
- Understand the local and global implications of civic decisions." (P21, 2019, p. 3)

Opportunities to teach civic engagement and digital citizenship fall within

civics education, the definition of which is widely contested, as documented in an analysis of civics education requirements across U.S. states (Godsay, Henderson, Levine, and Littenberg-Tobias, 2012). The authors found that civics most often is taught in classes labeled U.S. Government, Government or Civics. Yet Social Studies classes often address these topics as well. State standards related to civics often encourage understanding historic government documents, such as *The Constitution*; studying current political debates; and "developing *civic skills* (specifically, communication, deliberation, collective decision-making, critical analysis of information" (Godsay, Henderson, Levine, and Littenberg-Tobias, 2012, p. 3).

Social media offer students potential platforms for practicing such civic skills as critical, informed communication and interaction around local, state, national or global issues. *Social media* are defined as "online applications that enable users to create and participate in various communities through functions such as communicating, sharing, collaborating, publishing, managing, and interacting" (Greenhow & Lewin, 2016, p. 6).

Next, I provide a select review of the youth and civic engagement, civic education, and social media in education literature that underlie my proposed study.

Youth and Civic Engagement

At the beginning of the century, Harvard professor Robert Putnam argued in his best-selling book, *Bowling Alone: The Collapse and Revival of American Community* (Putnam, 2000) that Americans -- particularly youth -- were growing less

civically engaged. According to Putnam, television and other societal trends were making Americans less neighborly, less community-minded and more likely to abandon weekly bowling leagues in favor of bowling alone. Putnam earlier discussed the term "bowling alone" in a *Journal of Democracy* article in 1995 (Putnam, 1995), sparking national conversations about the importance of interpersonal relationships as a valuable resource. He called for research into "what types of organizations and networks most effectively embody -- or generate -- social capital, in the sense of mutual reciprocity, the resolution of dilemmas of collective action, and the broadening of social identities?" (Putnam, 1995, p. 76).

Around the same time that Putnam's ideas about waning civic engagement were gaining currency, other forces focused attention on the need to develop more civic agency among young people. The United Nations held a Convention on the Rights of the Child in 1990, prompting many countries to address these rights in their laws and regulations. These political developments inspired a research boom on the topic of youth civic engagement.

One of the key issues addressed in this new research was how civic participation should be defined. Should the definition move beyond the traditional measures, such as voting and joining a political party, to include other activities that connect with community life and government functioning, such as joining public debates on civic issues and signing petitions or promoting donations on behalf of civic causes? Related to this question, some researchers asked: should empathy and exhibiting a sense of civic justice be considered integral to good citizenship? Sherrod and Lauckhardt (2008) suggested that civic engagement should be

measured by three qualities: 1) *participation in civic events*, 2) *empathy/tolerance for diverse people*, and 3) *affiliation with a group or groups*. A landmark IEA Civic Education Study (summarized in Torney-Purta, Schwille & Amadeo, 1999; and Torney-Purta & Barber, 2004) highlighted how ideas about what makes a good citizen differ around the world. Some cultures emphasize individual acts, such as voting, which are deemphasized in other countries without functioning democracies. Some cultures might place more emphasis on good citizens who forgo personal goals and glory for the good of a group. In some cultures, debating government policies is more unusual and courageous than in other countries, with traditions of a free press. The IEA Study concluded that having open communication on civic issues in school, thus empowering students to express their opinions on civic issues in schools, is positively correlated with interest in civic issues outside of schools (Torney-Purta and Barber, 2004).

The rising popularity of social media also has caused some to criticize Putnam's views of what constitutes civic involvement, suggesting that Putnam too narrowly focused on traditional expressions of community, such as contributing to political parties and joining bowling leagues. In an analysis of prior research of youth civic engagement, Youniss et al. (2002) acknowledged that the increasing prevalence of information technology provides an unprecedented opportunity for youth to participate in civic matters and lead globally. Bennett, Freelon and Wells (2010) analyzed the differences in the way that citizenship has been understood by past generations and by the generation coming of age in the second decade of the 21st century. The authors suggest that, for most of the 20th century, there was a pervasive understanding of *dutiful citizenship*,

which obliged good citizens to vote and participate in formal civic organizations or campaigns. In the 21st century, the authors argue that there is widespread understanding of *actualizing citizenship*, which is creative and open to many forms of expression within and outside of traditional institutions such as governments and political parties. According to Bennett, Freelon and Wells (2010), *actualizing citizenship* is tied to self-actualization and self-expression, and is often based on loose ties to global networks of people working on similar issues and actions.

The Partnership for 21st Century Education echoed those observations (2013), noting that citizenship is a more complicated concept now that digital communication devices give most people around the world the potential to connect with millions of others, on a global scale. According to the report's authors, "This environment rewards people with global competencies such as the ability to make local-to-global connections, recognize divergent perspectives, think critically and creatively to solve global challenges and collaborate respectfully in different types of social forums" (Partnership for the 21st Century, 2013, p. 6).

Evidence of this more global concept of citizenship, particularly among youth, has grown in recent years. The trend has become increasingly obvious in the United States since the February 2018 shootings at a Parkland, Florida high school, which sparked a student-led anti-gun movement called March for Our Lives. As Witt (2019) observes:

The March for Our Lives students marked the beginning of a year of youth activism, but it would be a mistake to say that they ignited it. Youth activism had been growing for several years: United We Dream, the youth-led immigrant organization that advocated for the dream act and occupied the halls of Congress last spring, was founded in 2008; the anti-racism and anti-police-violence movement Black Lives Matter, which has since grown into

the Movement for Black Lives, started in 2013. Young people who worked for Bernie Sanders's 2016 Presidential campaign went on to revive the Democratic Socialists of America as a political force and, in some cases, ran for office themselves. The Sunrise Movement, the youth-led climate-changeadvocacy group that has helped put the proposal for a Green New Deal on the Democratic policy agenda, started in late 2017. And, as the Parkland students discovered when they began their work, there was already a network of youth activists working to end the epidemic of gun violence. As another example, environmental issues, particularly climate change, have been a potent motivator for youth political engagement in recent months.

The power of youth activism to push for global political reform was displayed on March 15, 2019, when hundreds of thousands of students in more than 100 countries walked out of class to protest climate change (Adman and Uba, 2019). The organizer of the global youth climate strike, a 16-year-old Swede named Greta Thunberg, promptly was nominated for the Nobel Peace Prize. A few months later, in September 2019, millions of people around the world — led by Thunberg and other youth activists staged a climate protest in the run-up to a United Nations conference focused on response to climate change (Hauck, 2019). This reverses a downward trend in United States youth engagement on environmental issues from a previous peak in the 1990s to a low point in 2005, documented by Wray-Lake, Flanagan and Osgood (2010). Surveys by the Pew Research Center show that concern over climate change has increased significantly over the past two-three years both in the United States (Funk and Kennedy, 2019) and globally (Faigan and Huang, 2019).

Teaching Civics in K-12 Classes

Developing engaged citizens has been a goal of education since at least 1916, when John Dewey wrote *Democracy and Education*. In that famous book, Dewey discusses the right to a good education as a foundation for an engaged

citizenry that both supports and challenges their government. Abowitz and Harnish (2006) reviewed the discourse around citizenship in K-12 education from 1990 to 2003, identifying seven dominant frameworks for defining citizenship in school contexts, and challenging the concept that citizenship is necessarily tied to one country. Around the same time, Westheimer and Kahne (2004) analyzed a two-year study of civic education programs in the United States, finding that existing civics classes promoted a "narrow and often ideologically conservative conception of citizenship" (p. 237). In contrast to traditional measures of civic engagement, such as voting, news-reading and membership in community clubs, Westheimer and Kahne (2004) promoted civics teaching that produces three qualities they believed critical to good citizenship today: 1) a *sense of personal responsibility for community*, 2) *participation in civic conversations* and 3) a *justice orientation*. Similarly, in a review of the state of civic education, Haste (2010, p. 162) notes the increased emphasis on personal responsibility and civic action:

Substantive shifts in psychological and education theory are focusing attention on the growing individual as an active agent, in dialogic relation to the social and cultural context. This moves the analytic emphasis toward a socially constructed and mediated development of identity and agency, in which the experience of action is at least as important as the acquisition of knowledge.

As the emphasis in civic education expands from teaching about the functions of different parts of the government to encouraging action in a civic context, Haste observes that defining who is a citizen, in a legal sense, is increasingly problematic as immigration increases. This, Haste asserts, has led to the increasing popularity of the notion of *global citizenship*, which embraces a justice orientation and individual

action over voting and party affiliation, which assumes legal affiliation with a particular government. The concept of global citizenship is intricately linked to digital technology, and what McLuhan (1994) described as the "global village." Haste (2010, p. 176) calls for more and better instruction on how to effectively use technology to interact with dispersed people in civic ways:

In principle, everyone with the technology and basic skills can access every piece of information in the history of the world. As sophisticated handheld devices with Internet capability become more accessible, user-friendly, and cheap, this will expand even further (Dede, 2007, 2009). There will still be inequality, but it will be greatly reduced—in the same way that, 40 years ago, television ownership became essential at all economic levels. However, access to such rich information does not of course guarantee its productive use. One of the goals of future education must be to structure critical selection and effective deployment of materials and these rich resources.

In addition to the civic skills (e.g., communication, deliberation, collective decisionmaking, etc.) that Godsay et al. (2012) advocate, Haste (2010) argued that *trying to gather an audience for a civic message* is a key skill that can be taught and facilitated with technology. He wrote: "There is a need to recognize the potential power of new technology in civic education and action and the importance of providing a strong critical scaffolding. This includes opportunities for participation as well as information organization using new technologies" (p. 181). The Education Commission of the States (2012), in a review of civic education research aimed at policymakers, similarly concluded, "Studies suggest that the civic mission of schools has indeed broadened to include *preparation for digital citizenship* [emphasis added] and that such participation holds promise for increasing the active civic participation of digital natives...Students do not possess inborn skills for technology and civic participation. These skills must be taught and therefore should be addressed in school standards and curricula" (p. 5). Traditionally, U.S. civics teachers have taught about the three branches of government: executive, legislative and judiciary. Journalists have been referred to as *the fourth estate*. The *fifth estate* refers to people who discuss civic issues in public (often digital) places. The fifth estate is enabled by digital communication technology that makes it theoretically possible for anyone to communicate with everyone — to share our own truths, to bear our own witness to history, to draw attention to an issue and to publicly call out people we notice behaving badly. For instance, in his speech to students at Georgetown, Facebook founder Mark Zuckerberg emphasized the good that his social media platform can do for society by speaking of the power of the fifth estate when people exercise their voice and agency via social media (CNN Business, 2019):

(CNN Business, 2019):

People having the power to express themselves at scale is a new kind of force in the world. It is a fifth estate, alongside the other power structures in our society. People no longer have to rely on traditional gatekeepers in politics or media to make their voices heard, and that has important consequences. And I understand the concerns that people have about how tech platforms have centralized power. But I actually believe that the much bigger story is how these platforms have decentralized power by putting it, actually, in people's hands. It's part of this amazing expansion of voice that we've experienced through law, and culture and now technology as well.

Voice and agency are key elements of civic engagement identified by researchers promoting more expansive forms of civics education and broadened definitions of citizenship today (Abowitz & Harnish, 2006; Bennett, Freelon & Wells, 2010; Haste, 2010; Westheimer & Kahne, 2004).

Youth Civic Engagement via Social Media

Despite the potential of social media as a platform through which K-12 students can learn to express their voice and agency, participate in civic conversations, and gather audience for civic messages, recent literature reviews reveal a dearth of studies on social media in formal, K-12 education (Greenhow et al., 2020; Greenhow & Askari, 2017). Most of the research on teaching with social media has been conducted with postsecondary populations (Greenhow & Askari, 2017; Manca & Ranieri, 2016, 2013). Among the few studies of K-12 students' formal learning with social media (primarily in language learning classes), most involved social media environments inaccessible to the public, such as closed Facebook groups or password-protected Edmodo sites that do not acknowledge the media's affordances for reaching large numbers of far-flung people (Greenhow et al., 2020).

Further, many studies on learning with social media focus on advancing interaction, engagement and student collaboration in informal settings, rather than subject-oriented learning tied to formal curricula, like civics (Greenhow et al., 2020). While studies of social media integration in formal K-12 civics education are few (Chapman, 2019), digital communication via social media outside of schools has been key to the spread and coordination of youth marches and civic campaigns in recent years, including the activism efforts related to climate change and other civic concerns mentioned earlier. This has prompted increasing scholarship looking at connections between social media and civic engagement, especially among young people. In this context, it is not surprising that using social media correlates with

civic engagement in youth, according to Xenos, Vromen and Loader (2014), who studied the posting habits and political activity of youth from the UK, U.S. and Australia. The positive correlation between social media use and engagement with public discourse is not bounded by age. Looking at the link between social media and civic engagement among adults, Gil de Zúñiga, Jung and Valenzuela (2012) linked social media use and civic behaviors. The researchers found that informationseeking via social media has a significant and positive correlation with a person's social capital and traditional civic behaviors, such as voting. Obar, Zube and Lampe (2012) took the argument a step further and examined the potential for using social media intentionally as a tool to increase engagement with specific civic issues. Reporting on a survey of 169 activists, the researchers shared insights and examples of social media use to draw public attention and action to a range of causes.

Recognizing the increasingly central role of social media in civic life generally, and in the lives of youth in particular, some studies in recent years have focused on youth participatory culture in digital spaces *outside of school*. Jenkins, Purushotma, Weigel, Clinton and Robison (2009, p. xi) describe participatory culture as "a culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing creations, and some type of informal mentorship." A sense that contributions to the community are respected and appreciated is another key defining characteristic of participatory culture (Jenkins, et al., 2009). Jenkins et al. (2018) documents and analyzes digital youth activism on a range of civic issues, including a campaign to bring to justice fugitive Ugandan warlord, Joseph Kony;

efforts to pass legislation granting citizenship to immigrants who moved to the United States as young children; and the rise of the Harry Potter Alliance, a nonprofit focused on human rights in the Sudan. The activism described in Jenkins et al. (2018) is not prompted by a teacher, or any formal effort at civic education. Yet it plays a large and meaningful role in the lives of the youth participants interviewed by Jenkins and his colleagues. Although civic engagement may be present within youth participatory cultures, it is not required nor necessarily the focus of this research. However, participatory youth culture research foregrounds an opportunity for teaching digital citizenship with social media. By highlighting what some youth know about using social media and noting that this knowledge is neither universal nor comprehensive, studies on participatory youth culture reveal opportunities for teaching youth to participate as digital citizens.

Teaching Digital Citizenship via Social Media

Conceptions of *digital citizenship* have expanded in recent years to include more active forms of civic engagement, rather than just protecting one's own digital footprint. Today's scholars assert that digital citizenship should move beyond merely behaving in digital spaces in a way that will not damage one's reputation (e.g., behaving legally and responsibly) as emphasized in 21st century skills frameworks (Partnership for 21st Century Learning, 2019, p. 6); digital citizenship should require active participation in digital conversations about issues of community concern (Krutka & Carpenter, 2017; Mihailidis, 2018; Ratto & Boler, 2014; Ribble, 2015). These scholars suggest that a focus on teaching polite and supportive behavior in digital spaces grew from concern about unkindness among youth on social media

(Lenhart et al., 2011), including the extensive academic literature on cyberbullying (Cassidy, Faucher and Jackson, 2013). In addition to teaching about protecting reputations and standing up to bullies in digital spaces, growing numbers of researchers are calling for expanding the teaching of digital citizenship to include more active, prosocial behavior with social media (Mihailidis, 2018; Middaugh, 2019; Kahne and Bowyer, 2019; Mirra and Garcia, 2017).

For instance, Krutka and Carpenter (2017) call for a redefinition of the way schools teach digital citizenship, appealing for greater emphasis on encouraging students to be agents of change. Krutka and Carpenter (2017) lament that efforts to teach digital citizenship often begin and end with two goals: helping students critically evaluate the information they find in digital spaces and protecting students from making missteps that might mar their digital footprints. Krutka and Carpenter (2017) suggest that, in addition, we should teach students to more actively engage in civic issues with social media, as digital citizens seeking to create positive change for community good. Merely protecting one's online reputation and developing one's own understanding of how information spreads in digital spaces - that is too selfcentered and narrow to qualify as citizenship, Krutka and Carpenter (2017) argue. "For many schools, promoting digital citizenship for democracy will require moving from primarily teaching students to make safe and responsible online choices toward preparing for active and conscientious participation in digital spaces," Krutka and Carpenter write (2017, p. 55). "In the 21st century, students... must also understand how to leverage the positives of new technologies to strengthen their communities and fulfill their civic responsibilities." That idea has yet to take hold, according to

Heath (2018), which reviewed 44 studies on digital citizenship.

Analyzing how the authors of the reviewed articles defined digital citizenship, Heath (2018) concludes that an emphasis on safety and risk minimization dominates. Heath (2018) echoes Krutka and Carpenter (2017) in suggesting that this emphasis "hampers imagining opportunities to use educational technology to develop pedagogies of engaged citizenship for social justice" (p. 342).

Similarly, policy documents recommend preparing citizens who understand how to mobilize and draw attention to important issues to effect change (United Nations Department of Economic and Social Affairs, 2016, p. 105). For example, Bermudez (2012, p. 537) states: "Citizens participate in the public sphere by raising their voice, expressing their views regarding relevant and contested issues, engaging in deliberation and mobilizing and organizing to make their voices heard." Further, the UN's World Youth Report on Youth Civic Engagement argues for teaching young people how to use digital media skills for "change-making." "Youth should be developing their digital media skills (both media production and programming) while also being exposed to political knowledge and critical systems thinking applied to social and political problems and changemaking. Educators should find opportunities for application of these skills in practical changemaking projects at the local level that help youth test their theories of change, construct new media or technologies with a purpose, and gain confidence in their ability to assume a civic leadership role."

Given the affordance of social media to reach outside the school walls and connect to conversations attracting public attention, it is surprising how few studies directly analyze social media use in K-12 teaching of civic topics generally, or for digital citizenship, specifically. One such study by Beach and Doerr-Stevens (2011),

examined how 30 U.S. high school students used the social media platform, Ning, to discuss school policies on a community concern. Huang, Wu, She and Lin (2014) looked at how a Facebook group conversation among 83 Taiwanese high school students about science news helped increase students' understanding of the nature of science. Any discussion of news stories can be viewed as civic in nature; journalists producing news stories prompt public education and conversation about the process of scientific discovery, which often is publicly funded. Thus, discussing science news on Facebook contributed to the students' civic education, as defined by Westheimer and Kahne (2004), by building their understanding of participation in civic discussions. In a third study, Charitonos, Blake, Scanlon and Jones (2012) explored how social media was used for civic learning in a K-12 context. In this study, 29 British 13- and 14-year-olds enhanced their field trip to The Museum of London, as part of their history class, by tweeting about the artifacts they saw. This experience contributed to the students' civic education in both traditional and emerging ways. The Museum of London displays exhibits about the history of the city up to the present day; tweeting about the museum exhibits offered students the opportunity to solidify and share their understanding of how the city developed and functions. Further, the museum itself is a civic-oriented institution within the city; tweeting from the museum provided an opportunity for reflection on the role of such institutions in civic life. Finally, the student tweets were public, offering an opportunity for students to engage in discussion of the city and its museum with other citizens outside the school walls. Charitonos, Blake, Scanlon and Jones (2012, p. 803) describe the student tweets as creating an "interconnected opinion space."

Moreover, Kahne and Bowyer (2019) provide an interesting look at the impact that teaching K-12 students to use social media in civic ways can have on the youth's online engagement with politics and civic issues beyond the school. Kahne and Bowyer (2019) measured two types of online political activity believed to be influenced by teaching about digital content creation and dissemination: Online Participatory Politics and Targeted Political Pressure. The former is defined (Kahne & Bowyer, 2019, p. 213) as "activities that are interactive and peer-based and through which individuals and groups aim to express voice and influence on issues of public concern." The latter is defined as "forms of online protest activity that aim to apply pressure to businesses, nonprofit civic organizations, and governmental entities" such as, for example, politically motivated flash mobs, or gatherings of people drawn via social media to protest at a specific place and time. Analyzing the results of the Youth and Participatory Politics survey conducted in 2013 and 2015, Kahne and Bowyer (2019) found a significant link between United States youth who have been exposed to teaching about creating and sharing digital content and the online civic engagement of those K-12 students. A total of 311 youth took the survey in 2013 and were enrolled in middle school or high school at the time; 187 youth enrolled in middle school or high school took the nationwide survey in 2015 (Kahne & Bowyer 2019, p. 215). Kahne and Bowyer (2019) documented an increase in online political engagement among youth who reported they had "classes in school in which they 'Learned about how to create and share digital media' and 'Discussed how to effectively share your perspective on social or political issues online (for example, by blogging or tweeting)" (p. 2016). Kahne and Bowyer (2019) note that their findings point to an opportunity for both researchers and teachers: "By increasing

efforts to help students develop capacities for digital engagement and by ensuring that these opportunities are provided to all students, educators may significantly increase both the quantity and the equality of young people's online political engagement" (p. 220). Yet, the class activities in digital content creation and dissemination with intent to gather audiences for civic issues have not been well-documented. The researchers call for "in-depth qualitative studies of specific interventions and contexts...[that] would strengthen the confidence we have in these findings and our ability to more fully draw out implications (Kahne & Bowyer, 2019, p. 221). The qualitative case study proposed here is a step toward addressing this call.

Summary

Currently, expansive views of civic engagement promote civic activities beyond traditional measures, such as voting and party affiliation; they promote many forms of expression within and outside of traditional institutions such as governments and political parties. Young people have been availing themselves of these expanded routes for civic participation, as evidenced by recent waves of youth activism in response to pressing national and global problems (e.g., climate change, guns, Black Lives Matter). Within this context, education scholars have noted a shift toward thinking that the goal of civics education is not only knowledge acquisition but also cultivation of a sense of personal responsibility for community, a justice orientation, participation in civic conversations in public (often digital) places, and preparation for digital citizenship, which require civic and media skills. In addition, proponents argue that teaching digital citizenship today should include preparing students to use information technologies for change agency, mobilization, and

drawing attention to important civic issues. These aspects of civics education may be facilitated by social media. However, currently, we have only a handful of studies that explore K-12 students' use of social media for civics-related learning as part of their formal education. Most of the research documents young people's participatory culture with digital media outside of school, which may or may not include a civic engagement component. The field needs in-depth qualitative studies of students' civic engagement with social media in the context of their formal learning in civics class (Kahne & Bower, 2019), which is the focus of my work. Because this study will take place during a global pandemic of historic significance, this study also will create a record of the moment, documenting how both teachers and learners coped with COVID-19 and sharpened their citizenship practices as a result. Next, I provide an overview of the conceptual frameworks that inform this research.

CONCEPTUAL FRAMEWORKS: COGNITIVE FLEXIBILITY AND FIFTH ESTATE

Much research on social media in learning is grounded in Vgotsky (1978)'s Collaborative Learning Theory. Rotter, Chance, and Phares (1972)'s related Social Learning Theory also is often used as a basis for studies on social media in K-12 contexts. While both theories provide a useful lens for examining interactions among students as they learn together in digital social settings, these theories are less applicable in studies such as this one, which aim to examine students' learning from interactions with problems and people outside the school or learning community. Additionally, these theories focus research attention on interactions and engagement versus thought development related to other skills and subjects. For this study, I propose to ground my analysis in two established theories described below: Cognitive Flexibility Theory and the Fifth Estate Theory.

Cognitive Flexibility Theory (Spiro et. al., 1991) asserts that information is becoming more complex and less linear, because the Internet and other digital tools allow people to search and retrieve data in ways that were not possible when most information was accessed on paper. Further, Cognitive Flexibility Theory suggests that educators should respond to this new information culture by teaching different things in non-traditional ways. Cognitive Flexibility Theory encourages *open-ended, student-driven, experiential learning* projects. This theory asserts that when preparing students to understand and participate in ill-structured domains such as the Internet and social media, heavily structured instruction is less effective than allowing students to construct their own understanding through authentic experiences with real-world complexity (Spiro et. al., 1991). Spiro, Klautke, Cheng

and Gaunt (2017) describes how Cognitive Flexibility Theory can be used to assess learning related to innovative thinking and problem-solving. The authors note that few studies currently apply Cognitive Flexibility Theory in this way. This study helps fill that lacuna by inviting participating students to use social media to interact with civic issues and promote solutions to civic problems outside the school.

Dutton (2009)'s theory of the Fifth Estate also is foundational for this study. This conceptual framework discusses the "network of networks" that makes people communicating in digital spaces, collectively, a powerful force that contributes to self-governance and societal level self-expression (Dutton, 2009, p. 1) Dutton defines the Fifth Estate as "a collectivity of individuals who strategically use the Internet and related social media to enhance their communicative power vis-à-vis the press, governments, business, industry and other actors and institutions" (Dutton, 2019). Further, he suggests that participants engage with the Fifth Estate by "being networked (beyond the home), producing content (writing blogs, posting text and photos), sourcing (following search), collaborating (following cues), trusting (content, providers), centrality (viewing net as essential for information)."

Dutton builds on 20th Century references to journalism institutions as the Fourth Estate or the fourth pillar of a democratic government, keeping public watch on the legislative, administrative and judicial branches of government. Earlier, in Europe, scholars referred to a societal organization of three Estates -- clergy, nobility (including business leaders), and commons (government officials) -- with the press described already as the Fourth Estate. Dutton (2009) asserts that digital communication technology is creating a *Fifth Estate*, consisting of networks of

citizens watchdogging government officials and other institutions and sharing civic information in the public interest. While Torphy, Hu, Liu and Chen (2020) applied the Fifth Estate framework to a study on teacher networks on social media, few studies have used this framework as the basis for research on students as participants in civic networks on social media. In fact, conversation and email exchange with Torphy in late 2018 confirms that neither she nor Dutton are aware of any studies applying the Fifth Estate framework to research on student behavior. This study breaks new ground by doing that. Students in this study practice being members of the Fifth Estate, sharing ideas about how to address problems in their community.

Further, this study tests notions about strategies that participants in the Fifth Estate may use to attract attention to civic issues. Dutton (2019 slides) suggests that there are five key Fifth Estate strategies: searching, creating, distributing, networking, and collecting distributed intelligence. I will now expand on each of those strategies, offering ideas on how students in this study might apply them -- or not. Searching involves exploring social media and other digital spaces for information and opinions. In my study, students employed search to find information and opinions about the civic issues they plan to discuss on social media. Creating calls for posting information on social media or other public digital spaces. In my study, the teacher prompted students to create social media posts about civic issues of the students' choosing. Distributing necessitates spreading information on a network, such as social media, and trying to draw attention to that information. In my study, this was the key objective of the exercise assigned to student participants. Networking requires building a digital collection of participants who will help echo information posted for dissemination. In my study,

students were asked to think about tagging and other strategies for building such a network to help spread their civic posts. Collecting distributed intelligence demands the aggregation of information from disparate sources, to form an overarching conclusion or trend or recommendation. In my study, students had the opportunity to gather many points of view on the civic issues they choose to discuss, perhaps creating collections that are more powerful than scattered individual

PURPOSE AND RESEARCH QUESTIONS

The purpose of this study is to explore what K-12 students learn about civic engagement and digital citizenship when they use social media to draw attention to civic issues as part of their formal learning. In doing this study, I asked the following questions:

RQ1. How do students use social media to draw attention to civic issues as part of their class?

RQ2. What are students learning about civic engagement in the process of using social media in their class?

RQ3. What are students learning about digital citizenship in the process of using social media in their class?

Answering these questions has implications for theory, research and practice. I anticipated that students would change their self-perception, developing stronger identities as potential participants in solving civic problems, such as environmental problems or other issues within their communities. Further, I anticipated that students would increase their intent to participate in Online Participatory Politics and Targeted Political Pressure, as defined by Kahne and Bowyer (2019). Although the anticipated data collection timeframe for this study was a few months, preventing documentation of long-term impacts, perhaps a subsequent study can follow the youth in this study over several years, monitoring their political engagement as they move into adulthood.

This study's short-term findings are of interest to a range of stakeholders,

including teachers; journalists; politicians; environmental activists and policymakers; researchers in media literacy, social studies and environmental studies; plus, anyone who cares about the role of an informed public in a democracy.

This study addresses a gap in the research literature by studying high school or middle school students, using social media in a public way, in a formal class, to advance a specific educational goal beyond interaction with the social media platform: that is, the gathering of an audience for student-created content connected to civic issues, such as environmental issues

METHODOLOGY

To address the research questions posed above, I chose the qualitative case study method, as described by Glesne and Peshkin (1992). Case studies enable scholars to address how questions, such as those posited in this study. Case study is also an appropriate qualitative approach for investigating issues within a specific context of interest, as I did in this study. Case studies allow for triangulation by collecting a range of different kinds of evidence, including interviews and artifacts both of which I used in this study. The research outlined here is a descriptive case study (Yin, 2003), with a single class as the case of compelling interest. As recommended by Glesne and Peshkin (1992), this study focuses on the participants in this case study, combining description, analysis and interpretation. Embedded case studies of four students are highlighted. Case study is a somewhat atypical approach to research on learning with social media, where content analysis and network analysis are popular methodologies (Greenhow, Galvin, Brandon & Askari, 2020). Yet, researchers studying the intersection of social media and citizenship education are calling for this kind of qualitative case study on how students use social media to engage civically (Kahne & Bowyer, 2019; Krutka & Carpenter, 2017; Mihailidis, 2018). Results of this study will advance understanding of the relationship between youth civic engagement, civic education and social media. Next, I describe the research context for this study before explaining my sample selection, data collection and analysis procedures.

Research Context - Current Events

In the United States, the pandemic forced a rapid adaptation and transition to online, blended, and remote forms of learning. For instance, 80% of households with school age children reported some form of online learning in spring 2020 (McElrath, 2020). Therefore, my original proposal for an in-person study of one or more classroom teachers and students — i.e., through in-person observation, interviews, and collection of social media artifacts — needed to be substantially revised, including the recruiting strategy and data collection procedures, when Michigan schools suspended in-person instruction in spring 2020. Data collection, originally planned for spring 2020, was re-designed for an online implementation.

As part of my long-planned methodology, I interviewed a dozen student participants in this project from mid-December 2020 through late January 2021. By chance, this six-week chunk of a historic, pandemic school year included some high-profile political events that highlighted how social media connects to civic issues. Many observers describe how social media played a critical role in the January 6, 2021, takeover of the U.S. Capitol Building (Wu, 2021). Leading up to that event, social media helped spread controversial theories about the 2020 U.S. election, inspiring thousands to travel to Washington, D.C. for the rally that led some to storm the halls of Congress (Kranhold, 2020). Hundreds of people who invaded the U.S. Capitol on January 6 used social media platforms to plan, document and celebrate that experience. In the ensuing days, several social media platforms - such as Twitter, Facebook, Instagram, Snapchat, YouTube, and Twitch permanently banned or suspended the former U.S. president's accounts (Lima,

2021). Critics asserted that these companies were exerting inappropriate control over public communication. Others used images shared on social media during the anti-racism, Black Lives Matter protests of summer 2020 in the U.S. to compare those protests to the events of Jan 6 in Washington, D.C (Sadeghi, 2021).

It is notable that the student participants in this study are unusual for several reasons beyond the fact that they are studying digital citizenship during the historic events of late 2020 and early 2021. First, the students in this study learned about social media during a pandemic that prompted major disruptions to every aspect of life, including school. For part of the study period, classes have been offered online only.

For a larger part of the study period, classes were offered in a hybrid format, giving students the choice of attending in-person or digitally. Much human activity during the pandemic moved onto video conferencing spaces, perhaps creating a higher degree of normalization for learning on other digital platforms, such as social media. Second, these students attend school in Flint, Michigan. The city made international headlines in 2016, when the city's drinking water was accidentally poisoned with lead. So, the student participants in this study are perhaps more engaged with **civic concerns** than their age cohorts in other places. Third, the students' school is an Early College, or a high school that partners with a post-secondary institution. The increasingly popular Early College format allows ambitious high school students to take some college courses at no cost, as part of their free, secondary-school experience. Early Colleges typically offer administrators and teachers unusual freedom to experiment with approaches to learning. The Early College where I conducted my study draws from Flint

and the surrounding communities, emphasizes learning about science and social justice. For all these reasons, the student participants in this study are unusually well-placed to consider the topic of civic engagement, digital citizenship, and social media.

Case Selection

To select the classroom case for this study, I sought teachers who use digital learning activities described in Kahne and Bowyer (2019): digital content creation and dissemination of that content with intent to draw an audience. Further, my sampling focused on teachers in southeastern Michigan and northwestern Ohio. This purposeful sampling was justified in part by my transportation constraints (I live in Southeast Michigan, so this is also a convenience sample) and in part by the targeted nature of my research questions. To answer my research questions, I needed to find teachers engaged in an innovative approach to teaching that is far from universal. I sought a middle school or high school teacher who is a civics teacher or is incorporating civics into her or his teaching and is encouraging or requiring students to engage with civics issues via social media, such as requiring students to post civic content on social media, then trying to draw an audience to those posts (See Teacher Screening Questions in Appendix One).

I started my purposeful sampling by reaching out to teachers in Southeast Michigan whom I have met over the years as a parent and journalist. In addition to teachers in my suburban neighborhood, I reached out to creative educators in a lowincome community where I have conducted school-based research in the past: Flint, Michigan. As mentioned above, this community made international news in 2016 and 2017 because of problems with the city's drinking water. I also attempted unsuccessfully

to contact teachers via several organizations that work with teachers who might be likely to fit my selection criteria. I used a short screening survey that posed questions about the teacher-respondent's experience teaching civics or citizenship, using social media in class, and encouraging students to practice gathering a civic-oriented audience on social media. For instance, the survey asked: *Have you ever used social media to help teach civics or citizenship? If so, did your students create their own content on social media? Was this content posted publicly?* (See Teacher Screening Questions in Appendix One).

In total, I collected survey responses from six educators. Half of the respondents worked in high-SES, high-performing districts in suburban Detroit, while half work in the low-SES city of Flint. Two of the suburban teachers worked with middle school students, while one worked with elementary school students. In Flint, two of the respondents worked at an Early College, that is, a high school embedded on the University of Michigan-Flint campus. The third teacher was also a superintendent who oversees a suburban Flint district as well as an alternative middle- and high-school for neighboring Flint students. This superintendent launched the Flint alternative school several years ago, when the experimental school was his sole focus. When he moved into leadership of the adjacent suburban Flint district, he maintained oversight of the grant-supported alternative Flint school, which conducts most teaching online.

I conducted follow-up conversations with three educators who seemed, based on their survey responses, to offer the most promising research context for this study. As shown in Table 1, these three teachers included a suburban middle school

teacher, a Flint early college teacher and the Flint area superintendent who was also a teacher.

Based on these interviews, two teachers' classrooms initially seemed most

promising for this study: Mick Frederick and Anna Mae Knight.

Tab	le 1	. Potential tead	cher-part	icipants base	d on scree	ening survey	1	
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Teacher Names *pseudonyms	Mick Frederick*	Anna Mae Knight*	Aidan Reilly*
School Context	suburban 3-8 school with technology orientation	HS on University of Michigan - Flint campus, or "early college"	Mostly online alternative school in Flint
Subject Matter & Civics component	Social studies, "sciracy"	Language arts	Certified as social studies teacher
Grade	5-6	9-10	MS & HS
Internet & social media access of students	High	high in school, unknown @ home	high in school, unknown @ home
Social media experience	Substantial, has class Instagram account but doesn't use it	Unknown	Substantial, blogs, used to run Twitter chat for MI educators

None of the potential participants were teaching with social media in a manner that encouraged students to post publicly for an audience beyond the school. However, both Mick Frederick and Anna Mae Knight were eager to experiment with this kind of public-facing teaching with social media. Both were experienced teachers who reported strong, positive relationships with students, parents and their principals. Neither teacher anticipated strong opposition to participation in the study from parents or students. In both teacher's classrooms, students have strong WIFI plus access to digital tools such as Chromebooks or desktop computers. Both teachers anticipated using class social media accounts rather than individual student social media accounts for the social media activities that I will study. Both teachers were eager to collaborate with me on the lesson and the study before the end of the 2019-2020 school year; however, due to the confluence of factors surrounding COVID-19 in early Spring 2020, I chose to simplify the challenging logistics of this research/teaching project by partnering with just one teacher: Ms. Anna Mae Knight, the experienced teacher in Flint who had collaborated with me in the past, who was enthusiastic about devoting significant portions of her teaching time to this project, and who had strong support from her principal.

I had known Knight for three years, since I researched and supported an elective course in environmental justice that she and a teaching partner offered at the end of the 2016-2017 school year. She had two decades of teaching experience, specialized in teaching language arts, and had a social justice orientation. She was also eager to try creative, new approaches to teaching. Knight is the teacher with the most seniority at her school. She has earned an advanced teaching degree and often organizes workshops for teachers at other early colleges across the Midwest. She appreciates aspects of early college culture that embrace teaching innovation and engagement with civic issues.

With approval from my university's Institutional Review Board, we attempted to launch the research/teaching project entitled "Owls for Justice" (Owls4Justice) in Spring 2020. (The "owl" is the school's mascot; therefore, students are referred to as

"owls.") Unfortunately, the initial project launch in Spring 2020 failed to attract sufficient engagement from students, in the chaos surrounding the beginning of the pandemic shutdowns in Michigan. The teacher and I regrouped and planned over the summer, re-launching the project in Fall 2020.

As I iteratively collected and analyzed data from the study, I continued to look for opportunities to develop profiles of a small number of students as embedded case studies within the larger case study of this learning project. This methodological approach, as outlined in Scholz and Tietje (2002), is ideally suited for analyzing situations where multiple sub-units (in this case, individual students) may act independently and differently within a larger unit (in this case, the class). Embedded case study allows for use of mixed methods of analysis as appropriate to different sub-units of study.

Student Sample Selection

In September 2020, teacher Knight and I described the research project and sought consent from students, via the attached Consent Forms (see Appendix Two). A digital version of the consent form was made available to students and their parents. A total of 46 students completed a pre-project survey, consented to participate in the study, and had parents or guardians consent to the student's participation in this study. The pre-project survey was distributed in mid-September 2020, asking students about their social media use and civic engagement. (Those students who chose not to participate in the research simply completed the social media activity and related surveys as part of their educational activity).

Subsequently, in December 2020, the teacher asked each student to fill out a

short survey asking for reflections on what they had learned so far through the social media for social justice project (described in detail below). The students also were asked if they were open to being interviewed for the current research study. In early December, I asked the teacher for advice about which students she thought would be most willing to share their thoughts with me in interviews. Twenty-seven students told the teacher that they would like to be interviewed about their experiences with the social media learning project. Four were eliminated from the pool of potential interviewees because they were in the asynchronous 11th grade English class, which the teacher felt had been the least successful of the five classes she taught this term.

An additional four were eliminated because they did not complete the preintervention survey, or they or their guardian had not granted consent for the student to participate in the study. Two more were eliminated because they did not complete an end-of-term written reflection about what they had learned from the project. Seventeen students remained. Next, I considered how many students responded in a substantive way to an optional question asking if they had anything else to say about the project. Nine students fell into that eager-to-say-more category. Then I went to the pre-intervention survey to develop short profiles of those nine students. Ideally, I wanted my interview sample to roughly mirror the demographics of the school's student population. The pre-intervention survey did not ask about gender identity, though based on conversation with the teacher only two of the nine students in the eager-to-say-more group used male pronouns in school. The teacher and I decided to invite three more males to be interviewed; they were students identified

by the teacher as often willing to participate in class discussions, who had consented to and completed the study surveys, and whose guardians also had agreed to the student's participation in the study. This process created an invitation pool of 12 students that was representative of the school in terms of gender proportions. A roughly balanced mixture of 9th and 10th graders also were represented in the interview-invitation pool. All 12 students agreed to be interviewed.

I conducted the interviews via video conference between late December and the end of January. Next, I read through all 12 interview transcripts, discussing them with a member of my advisory committee. We sought to identify a small number of students for embedded case studies. In selecting students as case studies, we sought a balance of male and female students from varied racial and socioeconomic backgrounds (with parents' reported education as a proxy for income) who also demonstrated a range of social media use (e.g., different platforms, low/high number of social media connections, different frequency and purpose of use). I coded six interview transcripts, to help assess which students provided the most valuable information directly addressing the research questions in this study. Through this process, my advisory committee member and I arrived at the four students to serve as embedded case studies, a research approach that allows for focus on revealing sub-units, via use of mixed methods of analysis as appropriate. In Table 2, I describe each of the four student-participants who constituted my embedded case studies, with more description of each student-case provided in my results section. All four were students in language arts classes required by their high

school on the University of Michigan-Flint campus, or "early college."

Student Names *pseudonyms	Ariana	Jordan	Marie	Peyman
Racial identity	White/Caucasian	Black	Black	Black
Pronouns used in school	she/her	he/him	she/her	he/him
Grade	10 th	10 th	9 th	10 th
Civic issues of interest	COVID-19, racial tension	Poverty, racial injustice	Flint water crisis	COVID-19, corrupt government
Social media use		weekly; never posts; has 26-50 friends/followers	interacts on SM daily; posts monthly;	Says he interacts on SM at least weekly; never posts; has 500 friends/followers

Table 2. Profiles of student-participants

Research Context - School Profile

Knight's high school draws students from Flint and the surrounding areas, with an emphasis on preparing for careers in health sciences. The U.S. Census estimates that Flint has 95,000 residents, with nearly 40% living in financial poverty. The city's racial breakdown is 54% Black alone, nearly 40% White alone, and 5% two or more races (U.S. Census Bureau, 2019). Within this urban context, the Vehicle City Early College (pseudonym) is comprised of approximately 160 students, nearly 54% of whom qualify for free and reducedcost lunch under federal assistance for low-income students (National Center for Education Statistics, 2021). The school's students are approximately 44% Black, 37% White non-Hispanic, and 12% Hispanic. In response to the COVID-19 pandemic, which impacted the majority of U.S. schools in March 2020 (McElrath, 2020), Vehicle City Early College moved classes online in mostly synchronous sessions for Fall 2020. Throughout the ensuing school year, as local COVID-19 infection rates surged and waned, classes were offered fully online in some months, and in hybrid format in other months.

Within this pandemic-induced educational research context, Knight taught five Language Arts classes to students in grades 9-11, all of which were online when this study began in September 2020. Knight's students are from Flint, Michigan or the surrounding communities, and have been impacted by Flint's water crisis. Many are from low-socioeconomic status homes. Knight had not yet tried teaching with social media, though she was eager to experiment. This research/teaching project was situated within her Language Arts class, which was taught online and in hybrid format at different times during the 2020-2021 school year, as the school struggled to respond to changing local infection rates during the global COVID-19 pandemic.

Collaborative Lesson Design

Situated within this online classroom context, the teacher and I collaboratively designed and implemented the Owls4Justice project (owls are the school's mascot). The goal of the project was to teach the students how to use social media for civic purposes, and especially to try to gather attention for the student's ideas on social media. To accomplish these goals, the teacher created "class" social media accounts

on three platforms: Twitter, Instagram and TikTok. Students in Knight's classes were formed into teams for this project. Each team, through a process of conversation and negotiation, chose a community issue to promote on the class social media accounts. The teams submitted their posts to the teacher, who posted them publicly on the class accounts. Students then tracked responses to their posts, and also examined posts by other social media users on civic topics of student interest.

Twitter, Instagram and TikTok were chosen for this project based on classroom conversation with the students about which platforms they used, and which platforms also seemed most important for spreading civic information. Creating class accounts helped gain the consent of parents leery of social media and comply with district guidelines on use of social media. In this manner, the teacher avoided asking the students to post directly on social media. The teacher retained the passwords to the accounts, as well as the sole ability to post on the accounts, or take other actions such as liking, sharing or following. Students submitted posts to the teacher to review before she posted them in batches, as she had time. Students also suggested other accounts to follow on all three platforms, as well as posts that the class accounts might want to repost or "like" by clicking on an approval-signal icon. Through this process, the teacher created a space where the students' posts could authentically reach beyond the school walls, without creating a digital record publicly traceable to a specific student.

Throughout the first half of the school year, the teacher devoted approximately one day a week to teaching about civic uses of social media. Students

initially worked in small teams of three to four, finding credible information on social media about social justice topics that they chose as a group. Those topics included student loans, infrastructure disparities, health care costs and human trafficking, among others. After gathering credible information on their social justice topics, the student groups each produced a small handful of social media posts. The student groups also identified experts or organizations addressing their topics, so the class social media accounts could follow those experts and organizations on Twitter, Instagram and TikTok.

Below I provide a summary of the teacher's lesson plans for this project during Fall 2020.

Week 1: Teacher introduces the purpose of the social media for social justice project on Sept. 15, 2020. Students take pre-project survey. Teacher invites parents/guardians to give their consent for their students to participate in the study. Teacher asks students to consider: What issue would you like to hear the candidates for president talk about?

Students choose Owls4Justice as the name of the project, and the identity of the class social media accounts.

Week 2: Teacher leads discussion on how to find credible information on issues we care about. The students choose two initial issues to follow: making quality healthcare affordable for all, and making quality education affordable for all. Discussion on determining if a source or post is reliable and finding credible people to follow on social media. Students brainstorm to create a checklist for reliability on social media and create a list of people to potentially follow on social media. In

Table 3 below is the checklist for reliability made by one 9th grade English

Language Arts class:

Table 3. Checklist for source reliability created by 9th grade class

	-Transparent -Authority -Not Selling Anything -Up to Date -Corroboration
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In Table 4 below is the checklist for reliability made by a 10th grade English Language

Arts class:

Table 4. Checklist for source reliability created by 10th grade class

Checklist for reliability:

- Are associated with trustworthy and relevant organizations
- Have relevant experience and/or qualifications and/or position
- Don't engage in personal attacks
- Use social media in a professional way (if they use social media)

Week 3: Discussion of first Owls4Justice posts. In groups, students create posts about

education and infrastructure for Twitter and Instagram. An example of the instructions

for this assignment is:

-Create a statistic-based education post

-Find a compelling statistic relating to our theme of affordable quality education for all

Flint/Genesee/Michigan students.

-Attribute the statistic

-Use a program such as Canva to put the statement over a background. Select a

font, size, and adjust spacing

-Save and attach

Week 4: Continuing discussion of whom to follow; and posting. Decisions made to add people/organizations to follow on Twitter and Instagram. Students write an editorial based on the topic their group has chosen as their focus in the Owls4Justice project.

Week 5: Ninth graders consider why digital literacy is important. Tenth graders work in groups to compose tweets about education and infrastructure, tagging the presidential candidates, Joe Biden and Donald Trump.

Week 6: Begin considering what makes TikTok videos successful. Watch and analyze videos on The Washington Post's TikTok account.

Week 7: Generate tweets and Instagram posts based on topics of social-justice editorials written by students. Discuss: What would be the most interesting and most challenging part of making a video for TikTok video?

Week 8: TikTok videos - begin detailed planning.

Week 9: Review Twitter feed, considering which posts should be liked and shared. Continue work on TikTok videos. ProPublica editor and Flint native Talia Buford visits one class, via video conference. Education researcher and Fifth Estate theorist, Dr. Bill Dutton, visits another, via video conference.

Week 10: Find images for tweets by searching creativecommons.org. View and post TikTok videos.

Week 11: Finish Instagram posts. Discuss how the Owls4Justice project will develop in the second half of the school year, with expansion of additional civic topics of interest.

Week 12: Instagram scroll - students pick things to like and share. Twitter scroll students recommend retweets/shares and what we should say about the post. Also, students engage in a short activity called, Is it a hashtag? The premise: "Let's see if a key word or phrase related to your topic is an existing hashtag we can connect to. Post a question; test out live."

Week 13: Students complete a reflection survey consisting of five short, openended questions about their learning through the Owls4Justice project during the first half of the 2020-2021 school year.

The project continued through the end of the school year, though this study examines only the first half of the school year, September 2020 through December 2020. In the remainder of this Methods section, I will describe my data sources, the data collection procedures, and my approach to analyzing these data.

Data Collection

To address my research questions about how students use social media to draw attention to civic issues, and what, if anything, they learn about civic engagement and digital citizenship in the process, I collected four sources of data: 1) pre-project student survey data; 2) student interview data; 3) artifacts of students' social media posts; and 4) student reflection data. I discuss each of these data sources and my data collection procedures next.

Student Pre-Survey

A pre-intervention survey of all students in the teacher's 2020-2021 classes included questions directly addressing students' prior knowledge of topics addressed in this study's research questions (i.e., attracting attention on social media, engaging with information about digital issues, and citizenship). In addition, the preintervention survey included questions drawn from a national survey analyzed in Kahne and Bowyer (2019), which asked about students' interest in politics and digital information use, both in school and at home. This pre-intervention survey was followed in late December 2020 by a short, open-ended form asking all students in the teacher's classes to reflect on their learning during the first half of the school year, as related to the research questions in this study.

Student Interviews

Overall, 12 students were interviewed for this project, of which 4 were selected for embedded case study (as described above). I conducted and recorded semi-structured interviews with the students via Zoom video conferencing in late December 2020 and January 2021.

Because of the chaos created by the pandemic and the disruption to schooling, I was not able to follow my original plan of interviewing each student twice: once before the lesson or activity using social media, and once afterwards. Instead of a pre-intervention conversation, I relied on the pre-project survey that posed questions about their experiences with social media as part of their education. For instance, in order to begin to address my first research question:

"How do students use social media to draw attention to civic issues as part of their class?" I drew on students' responses in the pre-project survey about their prior social media use as well as their expectations about what kind of tactics would draw an audience to a social media post. In addition, in post-activity interviews I asked students questions such as: What did you learn about using social media from your teacher, if anything? Tell me about using social media in this assignment. What were you trying to accomplish?

To address my second research question: "What are students learning about civic engagement in the process of using social media in their class?" and my third research question: "What are students learning about digital citizenship in the process of using social media in their class?" both in the pre-intervention survey and in post-intervention interviews, I asked students such questions as: What do you think a citizen today needs to know about how to use social media? What does digital citizenship mean to you? After the activity, I added questions such as: How did this activity or lesson change your ideas about digital citizenship, if at all? Did this activity change the way you connect on social media with news stories about government or community concerns, if at all? Where on social media do you get news about civic issues? (See Student Interview Protocol in Appendix Three).

These post-intervention interviews lasted 30 to 75 minutes. The interviews were *semi-structured*, meaning they included a list of questions tied to this study's research questions, yet allowed that structure to flex to include unanticipated follow-up questions prompted by the interviewees' answers. Following the advice of

Seidman (2013), I focused on actively listening without leading, and asked follow-up questions for clarification when needed. As Roulston, deMarrais and Lewis (2003) suggest, I was aware of the issues surrounding recording and transcribing the interview and used the transcribing service Rev.com to assist with making a first transcript of the interviews, which I edited for accuracy.

Artifacts of Student Work

Because I am interested in how students learn to use social media to draw attention to civic issues and, in turn, what they may be learning about civic engagement and digital citizenship in the process of using social media in this class project, I sought to collect students' relevant social media posts and related analytics. Students' posts were publicly viewable on the project's social media accounts:

On Twitter: https://twitter.com/OwlsJustice

On Instagram: https://www.instagram.com/owls.for.justice.

On TikTok: https://www.tiktok.com/search?q=owlsforjustice&t=1654739768148 I gathered screenshots documenting students' civic posts and interactions with the posts, such as likes, comments and shares. These interactions (i.e., likes, comments, shares) gave an indication of how much audience engagement the student posts attracted. The student posts themselves are evidence of the students' thoughts on the civic issues that are the subject of the posts. Additionally, the teacher and I met via video conference nearly every week throughout the fall of 2020 to discuss lesson plans and student responses to the project. Further, I arranged for several guests to visit with the teacher's classes, including a communications professor with expertise in civic engagement and a journalist from Flint working at a

national news outlet. I also arranged for the teacher to meet with an expert in social media who works for a Michigan-based chain of news outlets, including the *Flint Journal*. These interactions with experts outside the school helped both the teachers and the students refine their understanding of how to use social media for civic purposes.

Students' Written Reflections

In December 2020, at the end of the fall term, the teacher asked all students in her classes to reflect on their participation in the social media civics progress, to that midterm point in the school year. A Google form with open-ended questions was used. After collecting the student's name and class meeting time, the form asked each student:

What are the top two things you've learned so far this school year about how to use social media to find credible information on civic topics?

What are the top two things you've learned so far this school year about how to use social media to draw attention to civic issues?

What's the most surprising thing you've learned so far this school year about using social media for justice?

What's your favorite Owls4Justice social media post so far, and why? Please add anything else you'd like to share about your experience with Owls4Justice.

The form did not mention the term "digital citizenship" because the teacher felt that the term would not be recognized by students. Instead, I decided to ask students about digital citizenship in interviews.

The form was required as part of the student's work for a mid-year grade in Language Arts, but the content of the students' answers was not graded. Instead, the teacher gave the students participation credit for completing the reflection prompts. The work on the social media learning project continued for the rest of the school year.

Data Analysis

To answer my research questions, I drew on the data sources described above, using the constant comparative analysis technique as described in Glesne and Peshkin (1992). Constant comparative analysis is an approach to qualitative data analysis that allows the researcher to constantly compare emerging themes from the data with the hypotheses and theories that prompt the study. Using this method of data analysis, the researcher categorizes chunks of interview transcripts or other data by marking them with codes relating to the research questions. In this study, emerging *emic* codes, or codes that derive from what the participants say or from their perspective, tracked how students create plans to draw attention to their ideas on social media (Glesne & Peshkin, 1992). Etic codes tracked how the participants' social media posts and statements during interviews correspond with the researchers' expectations arising from the literature on digital citizenship and social media in education. The following partial list of etic codes is based on my research questions, theoretical framework and reviews of relevant literature: Strategies for using images to attract attention on social media (RQ1) Strategies for using emotion to attract attention on social media (RQ1) Motivation for choosing a specific civic issue to promote on social media (RQ1,

RQ2)

Awareness of social media analytics (RQ1)

Actions requested re civic issue promoted on social media (RQ1) Discussion of public response to student social media post (RQ1, RQ2) Questions or ideas about how government works (RQ2)

Questions or ideas about how actions by citizens can influence government (RQ2)

Questions or ideas about digital citizenship (RQ3)

Observations about the differences between posting about something personal and posting about a civic issue (RQ3)

Reflections on lessons learned from social media civic activity (RQ2, RQ3) Things that surprised students about social media civic activity (RQ2, RQ3) Questions about social media civic activity (RQ2, RQ3)

See Appendix Four for a table showing a sampling of key codes as I applied them to the data. Some etic codes were dropped because they did not match the data. For example, the etic code "protect" was eliminated because students, in their interviews, did not mention concern about protecting their digital reputations or footprints. Some codes were fleshed out into subcodes. For example, the initial "audience signaling" code was divided into the following subcodes: Hashtags, wording, video, graphics, fonts, trends, color, music. Other codes emerged, such as "2nd source," applied to sections of interview transcripts where students spoke of verifying information found on social media by looking to see if a second, authoritative source was sharing similar information.

In reaching conclusions, I triangulated the different kinds of data, seeking to weave a truthful, clear and compelling picture of how the students use social media in this context that bridges the school environment and the world outside. For instance, students described in interviews their intent to use social media to draw attention to civic issues. However, in looking at the interaction data (likes, comments, shares) on the student posts, I realized that their posts garnered little audience engagement from people outside the class.

Audio-recorded interviews and artifacts were transcribed and coded by myself and reviewed by a member of my dissertation committee. This encouraged consistent use of the codes as the transcripts and artifacts were analyzed.

Quality and Validity

Maxwell (1992) describes five categories of validity issues relevant to understanding qualitative research: descriptive validity, interpretive validity, theoretical validity, generalizability, and evaluative validity.

Descriptive validity refers to the accuracy of the notes, reflections and other data collected. This study avoided descriptive validity concerns by relying on transcripts of recorded interviews, plus tangible artifacts such as student social media posts, student-produced responses to assignments, assignment descriptions and rubrics.

Interpretive validity focuses on the accuracy of study participants' perceptions of the activities being researched. This study diminished interpretive validity concerns with carefully worded interview questions, including opportunities

for participants to add additional thoughts that may not have been prompted by any of the researcher's earlier questions.

Theoretical validity concerns the theoretical lens that the researcher brings to or develops during a study. Are the theories in which the study is grounded appropriate to the circumstances of the study, and to the research questions? This study addressed theoretical validity questions through a thorough process of discussions and revision based on feedback from my advisor and dissertation committee.

At the beginning of this study, I expected to analyze my data through the lens of Cognitive Flexibility Theory, which is a theory about learning in complex and illstructured domains, such as social media. However, after an initial review of the data with a member of my committee, I found myself turning more to the Fifth Estate theory as a framework for making sense of the students' civic learning with social media - while still finding some points where Cognitive Flexibility Theory proved helpful in understanding the data.

Generalizability concerns provoke qualitative researchers to consider the degree to which their findings might reveal universal truths. In this study, the question is: will the findings produce insights that might be transferable to other students in other classes at other times? The kind of learning researched in this study previously has not been documented by other studies in K-12 settings. Therefore, this study serves as an exploratory case study of learning by students taught by teachers offering exemplary and atypical lessons or activities related to gathering audiences for civic discussions on social media. Because the kind of

teaching and learning observed in this study is uncommon, the findings are not easily replicable in typical K-12 classes. However, the insights gained through analysis of the data collected in this study may well be generalized to other students in similar classes, if similar lessons are more widely adopted in the future.

Evaluative validity deals with concerns about the procedures used to evaluate data. This study will reduce evaluative validity issues by following evaluative procedures commonly used in qualitative research, as outlined in Glesne and Peshkin (1992) and described above. These include engaging in peer review where a member of your dissertation committee, who was familiar with the study, reviewed the code book and coded data and then we discussed sections.

Researcher's Role and Positionality

Glesne (2011, p. 158) urges researchers to consider *positionality* by "being attuned to intersubjectivity, how the subjectivities of all involved guide the research process, content, and, ideally, the interpretations." In this section, I will consider my positionality in relationship to the students, teacher and the subject themes connected to this study.

In this study, I seek to analyze how students of a single high school teacher share civic information publicly on social media, and draw attention to their posts. I am interested in this inquiry because of the opportunities I see for today's K-12 students to shape the future of civic conversations.

As a journalist, I have decades of experience engaging the public with civic issues via sharing information in public ways, sometimes on social media. I believe

that we are living at a time of extraordinary change in the way people engage with information of all kinds, and especially with civic information. Digital communication platforms, including social media, have broken the financial model that for more than a century supported the civic work of journalists. As many local and regional legacy news organizations decline, I see a role for students to make important contributions to civic conversations in their community.

Further, my experiences as an educator and researcher lead me to believe that students can be taught some of the skills and values that will enable them to more effectively participate in civic conversations on social media. In addition to my work as a journalist, I have decades of experience teaching journalism, mostly at the University of Michigan. I also have some exposure to teaching civic engagement through journalism at the high school and middle school level. For two years, I codirected a high school journalism program run by a regional newspaper. Through this program, I coached journalism teachers and students from about a dozen Detroit public high schools.

Through Michigan State University's Center for Environmental Journalism, for half a dozen years, I planned a one-day conference about environmental and science news for Detroit high school journalists. Later, for three years, I also co-directed a journalism demonstration project with one middle school social studies teacher and her students in a low-income neighborhood of Dearborn, Michigan, a suburb of Detroit. I visited that classroom several times a month for that three-year period, coaching the teacher and students as they created prize-winning stories about their school and their community for a student news site. As I moved into the doctoral program at Michigan

State University, I did my practicum research with student journalists in the same Dearborn classroom where I earlier had co-directed the demonstration project. I conducted another research project in Flint, Michigan with high school students working towards developing their understanding of environmental injustices in their community, a civic issue that drew international attention.

Given my background as a journalist and an educator, supporting public conversation about civic issues, I recognize my hope that the educational activity analyzed in this study will have some impact on student beliefs about civic engagement and digital citizenship. I guarded against this bias in analyzing the data by asking open-ended rather than leading questions. For example, instead of asking students what they learned from the activity about using social media to draw an audience for civic concerns, I added the words, "if anything." Rather than only asking about the teacher's goals for the project, I also will ask students, "What were you trying to accomplish with this project?"

Much of my work over the years has been with people living in low-income communities. My subjective belief is that people with lower incomes often are not represented proportionally in civic conversations. Throughout this study, I positioned myself not as a journalist or a teacher but as a qualitative researcher collecting data about student learning and the teaching that prompts

RESULTS

In this section, I describe the results of this study. To orient the reader, I begin with short profiles of each student-participant followed by themes across students in answer to each research question.

Student Profiles

Ariana (pseudonym) is a White 10th grade female student with more than 500 connections (friends/followers) on social media, where her favorite platform is TikTok. "I feel like it's definitely one of the social medias that's very trendy and always comes up with new stuff," she explained in her interview. "Everyone talks about more sensitive topics that you wouldn't really talk about on other platforms that are more public. I've seen a lot of political stuff, like abortion, religion, stuff that's more controversial. So, I really like that about it, I feel like everyone's a lot more honest on it. Yeah, obviously, people attack each other on their perspectives. But, for the most part, I feel like everyone at least gives a good argument... I used to run with the stuff on TikTok a little bit more, but now that I've been doing my own research [through the Owls4Justice project], I've had different perspectives." At the beginning of the 2020-2021 school year, Ariana reported being strongly interested in politics; COVID and "racial tension" were the community issues she identified as most important. Ariana's mother is a nurse with an associate's degree, while Ariana's father has a high school degree. Ariana is interested in a career related to science. Her parents are sometimes active in community issues. Ariana uses social media every day but said at the beginning of the school year that she never posted on social media, though she views posts by other people regularly and sometimes interacts with those posts by liking them.

Jordan (pseudonym) is a black 10th grade male student who lives in Flint, with a mother and father who both have master's degrees. At the beginning of the 2020-2021 school year, he reported having 26-50 friends or followers on social media. where he interacted at least once a week, but never created his own content. His favorite social media platforms were YouTube and TikTok. He's a musician and composer who particularly relates to the audio elements of videos posted to those two social media platforms. Yet he also spoke about spending time on Instagram, particularly as the Owls4Justice project unfolded, and he began using social media to connect with people beyond his friends. He started following music theorists and music teachers on Instagram, creating a mentor relationship with one musician who also knows members of his family outside of social media. As Jordan explained, "I was able to use Instagram to get into contact with him and I've been in contact with him ever since. Whenever I want to text him and ask him stuff about bass and music and just all that, he can just tell me. That's one way that Instagram benefited my life...Me realizing that I can use that as a resource and using it to find ways to understand certain topics that I'm interested in. I probably wouldn't have done [that] if I didn't start the Owls4Justice project." Jordan agreed with the statement, "I am interested in politics." He identified the top issues in his community as poverty and racial injustice. Jordan also has a strong interest in digital gaming.

Marie (pseudonym) is a Black 9th grade female student from Flint whose mother has a master's degree. Marie's favorite social media platform is Instagram, which she saw before this project as "mostly for seeing what my friends are doing, not so

much politics." At the beginning of the school year, she reported having 26-50 followers on social media. By the end of 2020, she estimated that her followers had grown to 101-199. Marie is interested in politics, wants to be a neonatal nurse. She checks social media every day, though she posts less than once a month. When asked in a pre-intervention survey to name the biggest problems in her community, Marie wrote: "In Flint a big problem would be the water. A lot of people still feel that the water is unsafe to drink. Another problem would be Flint's crime rate. People are scared to come to Flint or even drive through Flint." By the end of the school year, her answer to the same question expanded to include racism and social justice. In a written reflection at the end of 2020, in response to a question about key issues in her community, she wrote: "1.) The Flint Water Crisis is still a big problem in Flint because a lot of people still don't trust Flint's water. 2.) Racial injustice is another big problem that is being seen more and more as we see more hate crimes against Asian people, black people, and other races."

Peyman (pseudonym) is a black 10th grade male student with more than 500 connections (friends/followers) on social media; Snapchat and Instagram are his favorite platforms. "I'm very advanced at 'chat," he said in his interview, reporting that he spends an hour to an hour and a half a day on the platform. "I'm mainly posting about my life and what I'm doing at the current moment, like I'm spreading awareness, posting a picture of me spreading awareness or me showing informational quotes or motivational quotes." Peyman lives in Flint, where his mother has a bachelor's degree, and his father has an associate degree. In a survey at the beginning of the school year, he disagreed with the statement "I am interested in politics." By the end of the fall term, he responded

to the same statement with "agree," indicating an increase in civic engagement over the fall months. Peyman identified COVID and government corruption as important community issues in his beginning-of-the-term survey. As the December break approached, he named racism and poverty as key issues for his community.

RQ1. Student Use of Social Media to Draw Attention to Civic Issues

In answering the first research question - how do students use social media to draw attention to civic issues as part of their class - I found two main strategies that students used to draw attention to civic issues: *audience signaling* and *networking*. These themes were discussed by all four of the interviewees. However, students also brought up *challenges* to using social media to draw attention to civic issues as discussed below.

Audience signaling

When discussing ways to find people who might be interested in their posts, or *audience signaling*, the students mentioned a range of techniques involving nonverbal communication: color, fonts, images and music. In addition, the students spoke of using social media features to signal to potential audience members, including hashtags, tagging and reposting. Considering texts on social media, students learned that brevity is key in this communication medium.

First, digging deeper into student insights on using *nonverbal communication techniques*, all the students described what they learned about the importance of visual elements in social media posts. Here, for example, is how Marie put it: "Using a bolder font or brighter colors will attract people's attention because when you see

a bright color, you're like, 'Oh, I want to read that.'" Peyman highlighted the importance of not just color but also photos and other images. Jordan, a composer, saw music as a powerful tool for triggering an emotional response in people, encouraging them to linger on a social media message and possibly follow a social media account, especially if the account shares information on emotional issues, such as social justice topics. For instance, Jordan explained, "If I could put the right music with the right context for that social justice situation, then I think it can have a profound impact" on attracting an audience. Jordan continued, "If I can get the right chord progressions and the right feeling into it, and if I'm able to get that heartwrenching ability, then I've done my job." We see evidence of this use of music for audience-signaling in a TikTok video about student debt posted by Jordan's group, which features Jordan's original music. Here is an image from that video (Figure 1):



Figure 1. Screenshot. TikTok video prepared by Jordan's group

Second, all four students mentioned using *social media features* — such as *hashtags* (i.e., words or phrases prefaced by '#'), *tagging* (i.e., inserting a person or organization's social media handle in the post such as @JoeBiden) — as key tools for finding people who care about the issue addressed in their social media posts.

Hashtags used in students' social media posts included: #StudentLoanDept, #HealthCare, #DrugPrices, #unemployment, #COVID19 and more. As Ariana explained, "Hashtags with wording that is relevant to your topic helps your content reach an audience that is interested in the issue." Marie noted that using a hashtag that is trending can be effective at reaching new people who already are following the issue that you are discussing in your post. As part of their in-class lessons, students tried various keywords to see if they could be combined to create hashtags that perhaps already were popular on social media platforms. See Figure 2 for an illustration of the use of hashtags in a student post.

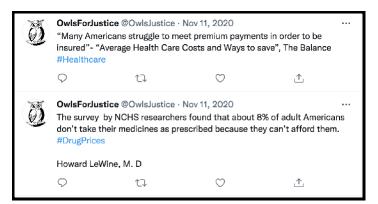


Figure 2. Screenshot. Students using hashtags

Figure 3 below shows two examples of students' social media posts from the Ows4Justice project demonstrate their use of tagging political officials and their affiliates, like former President Donald Trump (@realDonaldTrump, @TeamTrump) and former presidential nominee Joe Biden (@JoeBiden, @TeamJoe), to seek an audience for the local civic issue they care about (i.e., problems with Michigan infrastructure/roads).



Figure 3. Screenshot. Student posts tagging decision-makers

Third, to find people who might be interested in their posts, two students mentioned the importance of *brevity* on social media. For example, Amy said: "keep the message short and to the point" to create the "best chance at people actually reading." Similarly, Marie commented, "They don't want to sit there and read a long paragraph...They'll read a quick fact or a quick quote."

Networking

In their efforts to attract an audience for their social media posts, all students spoke about the pivotal role of connecting to *networks of people who already cared about the issues* that the students hoped to illuminate with their posts. The students' networking efforts encompassed outreach to strangers and to people they already knew in their families and friend groups. For instance, students networked with thought leaders on social media, such as politicians, nonprofit leaders and celebrities (e.g., former U.S. Senator Christopher Dodd of Connecticut, Gates Foundation Deputy Director Tiffany Jones, and social activist Malcolm X), typically through tagging or quoting them in their social media posts about the issue or *following* them or following related hashtags on social media. Speaking to the importance of connecting to people who already care about an issue your post addresses, Peyman shared this advice to fellow social media users: "Keep learning who is making the same topic that you were spreading awareness of...(and) following people who have a bigger audience." Ariana extended that idea to following not just people who care about your issue, but also related hashtags. When her student group in the Owls4Justice project employed that strategy, she said, that "got us to an audience that actually cared about the stuff we were talking about." Building on that practice, Marie spoke of the advantages of name-dropping famous people connected to your issue. "If you use a quote [in a social media post] from someone that's well known and trusted, that will attract people's attention as well," she explained.

Two students also discussed the importance of posting frequently and keeping content focused on a consistent topic to facilitate networking. In Peyman's opinion, to gather an audience on social media, users should focus on "being consistent...keep pushing your social media page to a bigger audience. Follow people who have a bigger audience that you might think like, see what other people are doing and how they are able to reach a bigger audience and kind of follow their lead, but in your own way." Jordan agreed that regularly posting content that resonates with the potential audience is key. "You have to grab them and say, 'Look at me.' Go like this and bring them towards you and say, 'Look at me and understand what I'm trying to do.' That's what gets people to really follow you."

Jordan added that he tried networking with people he knew outside of social media, directly asking friends and family members to click on his group's social media posts and follow the class social media accounts. Further, he asked his friends and family to reach out to their networks and promote the class social media accounts. It is beneficial, he said, to "see if you have any connections through family members or somebody, or just somebody" who might be interested in your social media posts.

Challenges

In their interviews, three of the four students brought up challenges they faced trying to attract an audience for their social media posts. These challenges ranged from missing opportunities to tag people with large social media followings, to frustration over the flood of competing messages on social media, to the difficulty of finding the most relevant and credible people and hashtags to follow on social media. Moreover, the Owls4Justice social media accounts on Twitter, Instagram, and TikTok failed to attract large audiences or much interaction, a disappointment to the students and their teacher.

First, Marie was challenged in her ability to attract attention to civic issues on social media when her group missed an opportunity to gather a bigger audience for the class social media account. Marie and her team carefully chose a quote from actress Regina Hall (known for her work in the Scary Movie series) about the importance of an affordable education (See Figure 4). Yet, as shown in Figure 4, the students neglected to ask their teacher to tag Hall, who has 2.6 million followers on Instagram, the platform where the students posted her quote. Hall was never tagged

in the students' Instagram post. Later, in an interview, Marie stated that she now understood that tagging Hall would have been like waving at the celebrity, inviting her to like or, even better, share the students' post about affordable education. Thus, this challenge also turned into a learning opportunity for Marie; in the future, she vowed to tag people she quotes in social media posts, as a strategy for potentially helping her posts stand out from the enormous flow of other posts on social media.



Figure 4. Screenshot. Post quoting actress Regina Hall without tagging her

A second challenge to attracting attention to civic issues on social media was the flood of competing messages, as Jordan noted, observing that the high volume of posts on social media could be both positive and negative. "It's probably a good thing because it gave people that choice," he said, but a downside is that the volume of information on social media makes it challenging to draw attention: "It is really hard to put your flag down and say, 'Hey I'm here.'" Jordan further expressed his ambivalence about social media as a platform for messaging about civic issues. "Social media is probably one of the best and sometimes worst ways to convey messages," he said. "The best because it's so easy to just get it out. But one of the worst habits of social media is how really eye-catching it has to be." Reflecting on the volume of posts on social media, Ariana shared Jordan's frustration, noting that when people are turning to social media for prompt information about timely trending topics, such as the pandemic, posts on other issues can be "drowned out."

A third challenge, expressed by Ariana, to drawing attention to civic issues on social media was the difficulty of determining credible and effective networking strategies. Ariana remarked that it was "difficult to use the right hashtags and follow the right people" to learn about a civic topic; finding credible influencers was not as easy as she initially thought.

The challenges of drawing attention to their civic issues on social media were further highlighted by the low numbers of followers or audience interaction on the Owls4Justice Twitter, Instagram, and TikTok accounts. Several students joined their teacher in expressing disappointment over the fact that few of their project's social media posts were attracting shares or likes; nor did the student accounts attract more than a few dozen followers, and none of the student posts attracted any comments. As shown in Figure 5, the project's TikTok account attracted 77 total likes, spread over eight posts. The TikTok account had 24 followers. The identity of the TikTok followers is hidden from public view.



Figure 5. Screenshot. Owls4Justice TikTok account home page

Similarly, as shown in Figure 6 below, the class Instagram account had attracted 62 followers between September 2020 and June 2021 with 47 posts through the 2020-2021 school year. These followers included the personal accounts of at least eight students participating in the Owls4Justice project, at least two of their parents, a prominent Flint journalist (Flint Beat founder Jiquanda Johnson), a local church and at least two educators; the rest of the followers are difficult to identify from their Instagram profiles. The followers do not include any easily identifiable politicians or other government figures.



Figure 6. Screenshot. Owls4Justice Instagram account home page

The Owls4Justice Twitter account (see Figure 7) garnered only 15 followers, the lowest number of the three accounts, during the 2020-2021 school year. They

include at least six students participating in the Owls4Justice project, at least one parent and two education researchers. (For a full listing of publicly available information on accounts following Owls4Justice posts across social media platforms, see Appendix Five).



Figure 7. Screenshot. Owls4Justice Twitter account home page

In reviewing student-created group posts (69 in total across the project: eight on TikTok; nine on Instagram; 52 on Twitter), I found that on most posts, students were engaging with civic issues on social media, but civic leaders and the communities behind them were not reciprocating by engaging with the students' posts.

Below are examples of students' posts that generated some engagement.

 OwlsForJustice @OwlsJustice · Oct 6, 2020
 ...

 "It's ironic when you live in the great lake state and you don't have access to clean drinking water," according to former Karen Weaver mayor of flint Michigan
 ...

 Image: Content of the great lake state and you don't have access to clean drinking water," according to former Karen Weaver mayor of flint Michigan
 ...

Figure 8. Screenshot. Owls4Justice tweet about the Flint water crisis

For instance, Figure 8 demonstrates a post on the class Twitter account; it attracted two likes, zero shares. In this Owls4Justice Twitter post, or *tweet*, students appear to demonstrate an aforementioned networking strategy (i.e., quoting a famous person associated with their issue, in this case, Flint Mayor Karen Weaver) to draw attention to the civic issue: the city's continuing struggles to ensure clean drinking water. However, the post, in receiving only two likes, attracted little audience interaction, and it is not possible to discern how many people actually read it.



Figure 9. Screenshot. Owls4Justice Instagram post about water crisis

Figure 9 demonstrates one of the most popular posts on the class Instagram account; it attracted 11 likes, zero shares. In this Owls4Justice Instagram post, students also seem to demonstrate quotation as a networking strategy, but this time,

rather than quoting a famous person associated with their issue, they use a provocative magazine excerpt on the Flint, Michigan water crisis. They also demonstrate audience-signaling through nonverbal communication techniques: use of color and imagery (i.e., image of blue plastic bottles).

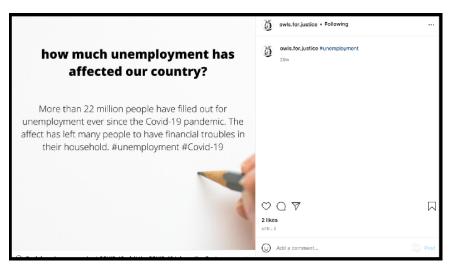


Figure 10. Screenshot. Owls4Justice Instagram post about unemployment

Figure 10 demonstrates one of the least popular social media posts on the Owls4Justice Instagram account; it attracted two likes, zero shares. In this Instagram post, students again use imagery (i.e., a hand holding a pencil seemingly to indicate people having "filled out" for unemployment benefits) and the social media feature of hashtags (#unemployment #Covid-19) related to the civic issue, unemployment and household financial troubles during the pandemic. However, the post attracted little audience interaction.



Figure 11. Screenshot. Owls4Justice tweet linking to a news story

Another example from the project's Twitter account (see Figure 11) shows the students' civic issue-oriented tweet: "Fight to protect our environment" linking to a ProPublica story about the disastrous effects of climate change. Although the tweet attracted only two likes and no shares, it was one of the most popular tweets posted on the class Twitter account during the 2020-2021 school year.

On TikTok, the most popular of the students' eight posts during the 2020-2021 school year was a video about student loan debt uploaded on November 11, 2020. Figure 12 depicts an image from that video post, which attracted 13 likes and no comments:

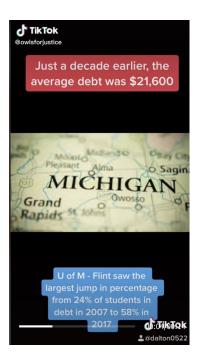


Figure 12. Screenshot. Owls4Justice TikTok video about student debt

Another popular post on TikTok was made Nov 11, 2020. Figure 13 depicts an

image from that video, which attracted 12 likes and no comments:

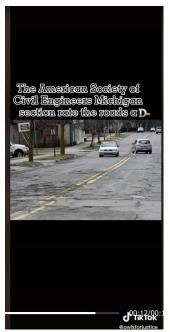


Figure 13. Screenshot. Owls4Justice TikTok video about road problems

In summary, students reported two main strategies in using social media to draw attention to civic issues as part of their class: (1) *audience-signaling*, through nonverbal communication, leveraging social media features (hashtags and tagging), and brevity; and (2) *networking*, or connecting to the networks of people who already cared about the issues that students hoped to illuminate with their posts, including thought leaders they did not know personally or family and friend networks. Despite these strategies, students expressed challenges to using social media to draw attention to civic issues, and their actual posts to the Owls4Justice social media accounts on TikTok, Instagram, and Twitter garnered little engagement, with the most popular posts garnering 12 interactions (in the form of likes or shares) and least popular posts generating only a few or no interactions.

RQ2. Students Learning about Civic Engagement while Using Social Media

In answering the second research question, what are students learning about civic engagement in the process of using social media in their class, I found two main themes in common across the four students. <u>First, students learned ways to seek credible information and think critically about it</u>. Second, students learned ways to seek diverse perspectives on civic issues. However, just as they had experienced challenges in using social media to draw attention to civic issues, students experienced challenges in using social media for civic engagement, including the fact that not many people outside the school were interacting with the Owls4Justice student-created posts. The civic issues chosen by student teams as their focus for the first half of the school year included: student debt, failing infrastructure (including city water systems and roads), high healthcare costs (especially for some

immigrants), and high unemployment during the pandemic.

Seeking Credible Information

All four students recognized that finding relevant and credible information on social media was an important first step in using social media for education, as in the Owls4Justice civic engagement project. For instance, in considering his experiences with Owls4Justice, Peyman reported that before he believes information on social media, he tries to assess its credibility "by looking at who made the information and finding out what was their purpose and audience." Ariana reported that studying how to verify information on social media helped her gain perspective on beliefs shared by her parents that perhaps were not supported by credible information sources, as in these quotes: "Obviously, I'm a kid, I just listen to what my parents say and run with it" and "So it definitely allowed me to open my eyes a little bit and take a step back and form my own opinions." Marie also spoke about how class discussions about credibility on social media had affected her outside of school. She explained, "In class, we research the person we're thinking about following [on social media when posting on her group's civic issue], and I've learned to do that on my personal social media before following someone, because they might not always be telling the truth." Similarly, as part of his newly learned research process for accessing the credibility of a social media account, Jordan spoke about checking any public list of the account's followers to see if the list includes people or organizations, he finds trustworthy.

Looking at the Owls4Justice social media accounts revealed that Owls4Justice

students-groups *followed* 73 people and organizations. Owls4Justice on Twitter followed 34 accounts, and Owls4Justice on Instagram followed 39 accounts. On TikTok students followed no other accounts, perhaps because they saw TikTok as a platform for distributing their ideas, not as a platform for gathering credible information. (For a full listing of accounts followed see Appendix Six).

In reviewing these 73 followed accounts, I found that Owls4Justice student groups were following 32 organizations and people associated with politically liberal or progressive causes, such as the Coalition to Abolish Slavery and Trafficking and Black Lives Matter. Among the accounts followed by the Owls4Justice social media accounts were 18 politicians or government agencies, such as Democratic Senator Bernie Sanders of Vermont and the U.S. Department of Veterans Affairs; 11 education-related accounts, including the National Education Association and EdSurge; 10 health-related organizations such as the Centers for Disease Control and Prevention and the American Diabetes Association; and seven new organizations or journalists at the national and local levels, including Flintside News and ProPublica. Many of the accounts followed by the class accounts represented people or organizations that are authoritative sources of information on various topics (e.g., the World Health Organization and the W.K. Kellogg Foundation), though critics of these same sources might consider them biased. See Figure 14 for two accounts followed by Owls4Justice on Twitter: the Twitter account of education researcher Bill Dutton, and the Twitter account of ProPublica journalist Talia Buford. In October 2020, both experts video conferenced with at least one of the classes participating in the Owls4Justice project.



Figure 14. Screenshot. Experts followed by Owls4Justice on Twitter

Furthermore, Figure 15 provides a sample of the politicians, health-related, or

civic advocacy-oriented accounts followed by Owls4Justice on Instagram.

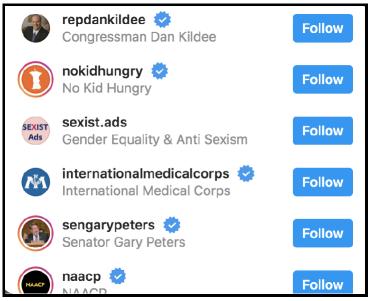


Figure 15. Screenshot. Accounts followed by Owls4Justice on Instagram

In addition to following posts from Instagram accounts deemed credible by the students and approved by their teacher, students in the Owls4Justice project employed a second social media feature to stay abreast of new information on their civic topics of interest: hashtags. As described earlier, hashtags are signals used on social media to potentially reach people who are not already following an account but are following discussion on a particular topic or mentioning a particular person or institution, across many accounts on a given social media platform. Hashtags begin with the hash sign - # - followed by some keywords without spaces. For example, one of the eight hashtags followed by the Owls4Justice project on Instagram was #Flintwatercrisis, a popular hashtag associated with more than 73,000 posts, as of mid-November 2021. Information found through following hashtags may be less credible than information found by following an authoritative social media account. However, information found by following hashtags might also lead to more diverse perspectives on the topic of interest, and more timely sharing of information as civic developments or events are unfolding. Figure 16 shows hashtags being followed by the Owls4Justice project's Instagram account. In addition to #Flintwatercrisis, they include #stjudeschildrensresearchhospital, which is associated with more than 19,000 posts, and #thenationalinstitutesofhealth, associated with just five posts. (For a full listing of hashtags followed by the Owls4Justice Instagram account see Appendix Six.)

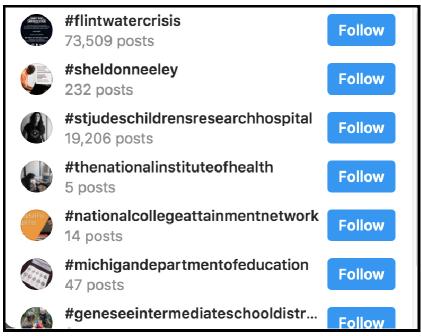


Figure 16. Screenshot. Hashtags followed by Owls4Justice on Instagram

The content of students' social media artifacts also reflected their efforts to find and share credible information on their civic issue. For example, all nine of the Instagram posts to the Owls4Justice account in fall 2020 contained pithy quotes on the chosen topic, and six of the people or organizations quoted were widely recognized as authorities on the subjects of the posts. For example, the Instagram post below (Figure 17) from October 6, 2020, quotes the Kaiser Family Foundation, a credible source of medical information, sharing a statistic related to health insurance.



Figure 17. Screenshot. Owls4Justice post quoting Kaiser Family Foundation On the other hand, sometimes the source quoted is not well-identified, as in another Instagram post from the same date, quoting an opinion from "Flint Water Study" (Figure 18). The Flint water crisis has been the subject of numerous government reports, academic research publications and investigative journalism stories over the past six years. It is unclear from this social media artifact which study the student post is quoting.

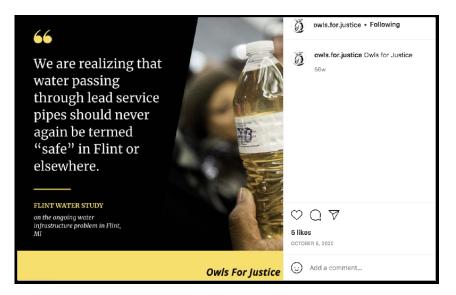


Figure 18. Screenshot. Owls4Justice Instagram post quoting unspecified study

As shown in Figure 19, a third Owls4Justice Instagram post from October 6, 2020, quotes United States Representative, Hank Johnson, a Democrat from Georgia, without including his title, an omission that might cause some readers to wonder who Johnson is and why his opinion on student debt is worth considering.

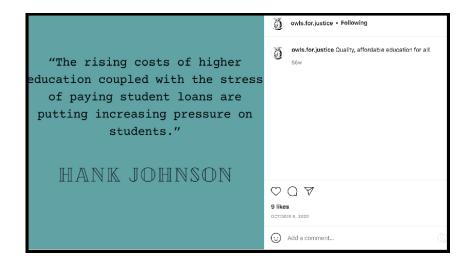


Figure 19. Screenshot. Owls4Justice Instagram post quoting Hank Johnson

Seeking Diverse Perspectives

A second theme related to students' learning about civic engagement in the process of using social media was that students learned to seek diverse perspectives on civic issues. Three of the four students indicated that participating in civic discussions with people from diverse perspectives was a key affordance of social media, which they learned through their class project. Ariana, for example, said she was pleased to learn that social media can be a place where "everyone gets to share their perspectives and you can figure out other people's views, and topics are discussed that usually, people would shy away from." That sentiment was echoed by Marie, who reported that, prompted by her school-based learning about civics and social media, she changed the way she uses her personal social media accounts. As she started using her personal social media accounts to follow more civic-oriented conversations, she noticed that she and her friends began to engage more with civic issues as part of their out-of-school social media interactions. Marie explained that seeking information from more people helped her stay informed, which was important to "be able to vote" and "make...decisions" as citizens:

I can get news without necessarily having to look it up on my own. I can see it when I'm scrolling through my Instagram feed, and I might like it or repost it because it's important and it needs to be shared...I think that's good because we're becoming adults. We need to focus on this stuff and soon we'll be able to vote to make these decisions on what our government's going to do and how to benefit us and others. If we don't talk about it now and learn about it now, when it's time for us to vote, we aren't going to know what to do.

A third student, Jordan, also learned to seek diverse perspectives on civic issues. Jordan stated that one of the most surprising things he learned from his school project in using social media in civic ways was that other users, beyond his class or friend group, were using social media to discuss community concerns, such as social justice issues. Prior to participating in the Owls4Justice project, Jordan had used social media to communicate with a close circle of friends. For him, it was a revelation that social media "can be used to spread awareness and inspire others to do the same."

Although the students spoke of seeking or encountering diverse perspectives on social media, in looking again at the social media accounts that the Owls4Justice class *followed*, I did not see a great diversity of perspectives represented. In terms of political perspectives, the students' Instagram account followed mainly Democratic politicians, perhaps reflecting the politics of the Democrat-leaning community in which the school was located. The accounts followed Democrats such as Michigan Governor Gretchen Whitmer, one of the state's Democratic senators, the Democrat representing Flint in the U.S. House of Representatives, as well as Flint's Democratic mayor. Only one followed social media account was a Republican: former Michigan governor, Republican Rick Snyder, who in February 2021 was criminally charged for negligent homicide in connection with the Flint water crisis. As of November 2021, the case was working its way through the court system.

Furthermore, the class Instagram account also followed several nonprofits that promote causes often associated with liberal or Democratic politicians, including the National Association for the Advancement of Colored People, Black Lives Matter and the National Organization for Women. In contrast, the class account followed

only one organization that aligned with more conservative political views (i.e., Americans United For Life which apparently opposed abortion).

A challenge to using social media for civic engagement in such class projects is that it takes time to build influence and draw in various perspectives; consistent posting on the same civic topic may help, but cultivating participation beyond the class, school, or students' family and friend networks is a challenge. "Just getting people, people outside of our little circle world, to look at us - that's what I think is going to be our biggest challenge," Jordan remarked in considering the long-term prospects of the project. He explained:

Because this takes time. And often it takes people years to get where we want to go. This little project might not end, the goal might not end with us, or our freshman of this year, or even the next year...We have to work at this for maybe a good couple of years just to see the results, or even a partial result of what we've strived for.

Jordan sees opportunity for the class's social media accounts to grow their followers and deepen their community influence related to civic issues over a longer time horizon, such as the remaining career of the teacher.

In summary, in the process of using social media in the Owls4Justice project, students reported learning ways to seek credible information. The student posts sometimes show that students thought critically about the sources of information in the posts, identifying quotes from authoritative sources, while sometimes the evidence of critical thinking is spotty, as when they fail to identify the people they are quoting. The Owls4Justice class social media accounts *followed* a range of authoritative sources, and students' actual social media posts revealed both correctly sourced and omitted source information. Students also reported learning to

seek out diverse perspectives on civic issues in the context of the Owls4Justice, although in examining the political perspectives represented in whom they followed, there was little diversity, and most were left leaning.

RQ3. Students Learning about Digital Citizenship while Using Social Media

In answering the third research question: what are students learning about digital citizenship in the process of using social media in their class, I found three themes: (1) students' definitions of digital citizenship varied, but all associated it with community membership, online or off; (2) in the process of using social media in their class project students learned they have power and identities or affiliations that can be wielded on social media for public influence; and (3) students shared insights about using social media in schools as tools for teaching digital citizenship.

Definitions of Digital Citizenship

First, students defined digital citizenship in various ways, but three of the four students coalesced around the idea that <u>digital citizenship involves membership or a</u> <u>sense of belonging to some community, either online or off</u>. For instance, Marie defined digital citizenship as "like showing your citizenship through technology and showing that you're <u>proud to be a citizen of wherever you're a citizen</u> of through technology, through the <u>power you have in social media</u>." Jordan also defined "digital citizenship" as using digital technology, such as social media, in a collective way, as part of a group: "You are part of that group, and you are part of that family and community. Yeah, that's what I would think of digital citizenship." One student, Peyman, defined digital citizenship in a generational way, referencing the fact that

people who are in high school now belong to a generation that grew up at a time when personal information communication technology and social media were widely accessible in the United States: "I was kind of born with the internet and digital things on top of my finger."

Furthermore, all students emphasized that digital citizens, in their view, are intentional in their use of social media as a "tool" or "power" or "use it in an impactful way" for civic participation: "talk about a certain issue" (Ariana) or "communicate to a broader audience" (Peyman) or "find...people...connections" (Jordan). However, only one student, Marie, discussed the responsibilities of digital citizens on social media to be credible and evaluative: "Make sure your facts are straight...your sources are credible. Then once you do that, once you know that it's true, repost it, like it and share it to your friends and family, get them to repost it.

Digital Citizenship: Power and Identity

Second, students reported learning two things about digital citizenship in the process of using social media in their class project: (1) that they have power, theoretically, to use social media to influence civic issues; and (2) that their connection to their local community (Flint) colors how people perceive them on social media; they might choose to claim that identity as something positive. For all four students, the notion that they might have the ability to use social media to change the course of civic conversations in their communities was a revelation. All four said that, prior to this teaching intervention, they used and perceived social media platforms as places to communicate with friends only. Jordan recalled his surprise when his teacher "really started to explain this medium and how it can be

used." He explained:

That's what really opened my eyes to social media as a tool.... A year before, I would've said, 'Oh Instagram is just that thing I find memes on.' But now I understand that it can be that, but it can also be a tool to find those people and those connections. That's digital citizenship.

Peyman said that his classroom experience with this project convinced him that everyone "can and should" use social media to impact the world, "because we all have voices, and all our voices are desired to be heard." According to Marie, her school social media project "helped show me that it's a great idea to use social media for change, for something better." Ariana expressed appreciation for her teacher taking a risk to try teaching with social media instead of teaching the same way she had in the past: "I mean we're in 2020,... and we have a lot of different forms of communication," Ariana said, adding that the social media learning project "was showing that we can utilize technology and the internet in a way to express our ideas and how we feel and try to get change through social media."

Similarly, in social media posts, students showed evidence of trying to influence the civic issues they cared about (e.g., failing state infrastructure, high cost of health care, student loan debt, and more). For example, Figure 20 shows an Owls4Justice tweet from October 6, 2020, of students asking Michigan Governor Gretchen Whitmer for help fixing Flint's aging water pipes:



 OwlsForJustice @OwlsJustice · Oct 6, 2020
 ····

 We must fight the battle for new pipes and clean water! @GovWhitmer We need your help. #flintwater #tuesdaythoughts #JusticeForOwls
 ○

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Figure 20. Screenshot. Owls4Justice student tweet tagging a politician

In another example: an October 6, 2020, post from the class Instagram account (Figure 21), we see the Owls4Justice students attempting to provoke public conversation about people who are driven into bankruptcy by high medical bills:



Figure 21. Screenshot. Owls4Justice Instagram post quoting a CNBC reporter

On the other hand, while students learned that as digital citizens, they have power to use social media to participate in civic issues (i.e.., "talk" or "communicate to a broader audience" or "find...people...connection"), they did not always enact that power most impactfully on social media. As just one example, a November 12, 2020, tweet on the class account about student debt (Figure 22), demonstrates students' quoting former Labor Secretary Robert Reich, but failing to identify him as the source of the quotation or tag him, which might have generated more audience attention to the issue or conversation they were trying to provoke. Reich (@RBReich) had 1.4 million followers on Twitter in early 2022.



Figure 22. Screenshot. Owls4Justice tweet quoting Robert Reich

Furthermore, related to their developing notions of digital citizenship in the process of using social media for the Owls4Justice project, some students reported learning that their connection to their geographic community (Flint, Michigan) or their connection to a racial identity (as young Black people) plays a role in how their posts are perceived on social media. The summer of 2020, which immediately preceded this teaching intervention, saw numerous anti-racism protests across the United States and around the world (Buchanan, Bui & Patel, 2020). These protests of historic and current racism and inequalities were triggered by the May 25, 2020, death of George Floyd Jr., a 46-year-old black man and laid-off restaurant worker who was killed on the streets of Minneapolis by a police officer apparently seeking to

question Floyd in relation to a potential robbery (Bennett, Lee & Cahlan, 2020). The

officer knelt on Floyd's neck for eight minutes and 46 seconds, suffocating him; a

17-year-old witness videoed the incident, then posted the video on the social media

platform, Facebook (Cooper, 2021).

In this context of heightened public conversation about race, enabled by a

high-school aged girl's social media post, the students spoke about how the

Owls4Justice school project encouraged them to think more deeply about racism

and the role they might play addressing it on social media. Ariana explained:

We've seen with the Black Lives Matter movement, it starts with one little seed, but then it definitely branches out and it branches out fast. So, I feel like if you could get people to share your post, then it would just keep branching out and branching out until it would bring awareness to it and people would actually be able to make changes.... I mean you can only do so much when it's you as an individual, but if you can use social media to. get a bunch of people to support your cause, you can actually make change.

Peyman spoke about how the anti-racism protests of 2020, followed closely on social media by the Owls4Justice project, <u>helped him identify and talk about racial stereotypes that he</u>, as a young Black man, had internalized. "I'm fighting against that" stereotype that "since I'm an African American male, that I'm a gangster, I sell drugs or I'm a criminal. I know I'm not smart. I'm not intelligent. I'm not going to be nowhere in life. Things like that are stereotypes I have on myself." Peyman further recognized that his school's location in Flint, Michigan — a city associated in the news with lead poisoning — and <u>stereotypes of Flint (and by extension, its students)</u> may be invoked when people encounter the students' social media posts. Peyman described this as a potential opportunity for him and his classmates to surprise their

audience and fight stereotypical views of Flint as a downtrodden city of young people burdened with lead poisoning and bad publicity. He explained:

Just because we are from Flint, where we probably had less opportunities than other cities, then we also were able to change people's minds...If you see an African American male from Flint do this nice social media awareness thing, from Flint, it might inspire other people who look just like me or where I'm from to do the same thing and spread awareness of topics that we are all proud of.

Marie agreed that her school's location in Flint was an advantage now; because of the notoriety of the Flint water crisis, people outside the city might have an interest in seeing social media posts from young people like her and her classmates, who grew up in the context of that crisis. "Flint is more prominent, people know about Flint now," she said. "Attention is coming back to Flint." As a young Black person, Marie identified the continuing effects of the Flint water crisis and growing racial tensions as two key topics that her community is discussing, in social media and in other spaces. "Racial injustice... is being seen more and more as we see more hate crimes against Asian people, black people, and other races," she wrote in her presurvey. Jordan, who also is Black, differed from Marie and Peyman in his assessment of whether his school's location in Flint might possibly increase interest in the Owls4Justice posts. "I think it's neither a positive or a negative," he said, "unless we're talking about personal experiences with the Flint water crisis," which some Owls4Justice posts did, though many did not. Jordan identified poverty and racial injustice as the two key problems in his community, but he did not speak of these topics much in his December 2020 interview about the Owls4Justice project. Figure 23 shows one example of students' embracing their affiliation with Flint and trying

to influence important responses to the public health crisis in their community, which was widely identified as an environmental injustice that disproportionately impacted lowincome people and people of color who live or work in Flint (Flint Water Advisory Task Force, 2016). A TikTok video, posted on Nov 11, 2020, addresses the Flint water crisis, with students literally using their own voices to declare: "Everyone thinks the Flint water crisis is over because it's not on the news anymore. Not true!" Figure 23 is an image from that video:

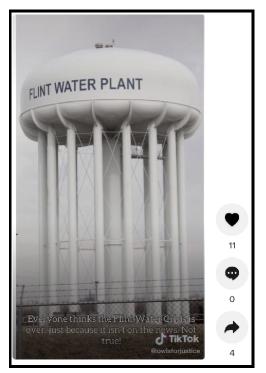


Figure 23. Screenshot. Owls4Justice TikTok video about the Flint water crisis

Teaching Digital Citizens to Use Social Media

All four students shared insights about what schools and teachers should emphasize in preparing digital citizens to use social media. According to Ariana, digital citizens should understand that social media can be both beneficial and harmful for engaging with civic issues:

[Social media] has its positives. You can communicate with a lot of people; you can express your ideas. But, at the same time, I think it's very important to be cautious about it; it's very easy to get caught up into stuff and let it affect you negatively, whether that's mental health or relationships, however it comes. That, and it's easy to spread false information. So, I think that a citizen should definitely know that, yes, you should use it.. and it's a good thing, but also is a bad thing.

In Marie's opinion, for digital citizens, "it's important to know that not everything you

see on social media is always true or unbiased." Peyman said he thinks digital

citizens should feel an obligation to use social media platforms to inform fellow

citizens, for good:

You are reaching a broad audience. Everybody can see your social media account...I think they should know that social media is not just all fun and games, and also can be a way to communicate to a broader audience, which you can use in an impactful way that can help a lot of people around the world.

According to Jordan, digital citizens should understand social media's underlying

structure and how to use it as a "tool" for brokering "different connections:"

...how the [social media] algorithm works and how to stay consistent and relevant.... I want them [digital citizens] to understand that social media is beyond that thing that you just go to just to look at funny posts and all that. Social media is a tool. And whether you use that tool or not is up to you. But understand...it can be very, very helpful in having different connections to people that you probably never knew existed.

Taken together, the students emphasized teaching about social media's affordances

for "expressing your ideas," communication "to a broad audience...in an impactful

way" and networking, or "having different connections to people you never knew

existed," but also teaching about its potential misuse in spreading false or biased

information and its underlying structure: "how the algorithm works."

In summary, reflecting on their learning about digital citizenship through the Owls4Justice project, students offered varied definitions of that term. Yet all four students associated digital citizenship with connection to a community, in virtual and digital spaces. Further, three of the four students found that their identification with some communities could potentially be a source of power and connection on social media. Finally, through their civic work with social media, all four students developed ideas about how other teachers and schools might use social media to teach digital citizenship.

DISCUSSION

In this study, I address a gap in the literature related to what and how K-12 students learn about civic engagement when they use social media to draw attention to civic issues *as part of their formal learning*. In this section, I will discuss my findings considering prior research and theory that helped frame this study.

Becoming Part of the Fifth Estate

While Torphy and Drake (2019) examined teacher training through the lens of the Fifth Estate theory (Dutton, 2009), and Torphy et al (2020) looked at entrepreneurial K-12 teachers as practitioners of the Fifth Estate, this study is one of the first to examine how high school students learn to behave as members of the Fifth Estate. As stated by Dutton and Dubois (2015, p. 51), "the concept of a Fifth Estate is based on findings that show how citizens are enabled by the Internet to hold institutions like the government and the press more accountable." Fifth Estate theory discusses the role of the digital crowd -- the sum of millions of people on social media and in other digital spaces -- in monitoring the powerful and helping to make democracy function. Now, as Dutton posits, everyone with access to digital information technology is a potential participant in the Fifth Estate.

This study suggests that high school students can be taught a key element of Fifth Estate participation: how to draw attention to civic expression in digital spaces such as social media. Moreover, Dutton (2019, slide 45) suggests five key strategies for individuals seeking to participate in the Fifth Estate: *searching, creating, distributing, networking,* and *collecting distributed intelligence* (such as through

aggregation tools or sites or databases).

Students in the Owls4Justice project were guided by their teacher to use the first four of the key strategies Dutton outlines. They started their project by using social media and other sources (i.e., Internet search engines) to *search* for information on civic topics such as education and infrastructure problems. The students then moved on to *create* social media posts on those and other civic topics and *distribute* those posts via the class social media accounts on Twitter, Instagram and TikTok. The students attempted to generate attention for their posts by using color, images, original music, hashtagging and other forms of audience signaling. For example, students experimented with different combinations of words to create hashtags, then checked social media platforms to see if those hashtags were already being used by others.

Then students attempted to *network* by tagging and following the social media accounts of people and institutions that the students perceived to have power to influence institutional change around the civic topics of student interest. The students did not gather information into a public database or list of any kind, so they did not employ the fifth strategy of the Fifth Estate identified by Dutton, *collecting distributed intelligence*.

On the other hand, students' ability to enact the Fifth Estate mission of effectively serving as a watchdog on the government and other powerful institutions was seemingly challenged in the Owls4Justice project, as students encountered difficulty attracting attention to their posts. The students' most successful post on TikTok during the fall of 2020 drew 13 likes, meaning that the post provoked other

social media users to click on an affirmation signal 13 times. While some students viewed this as a small number, social media marketing experts would disagree. The social media management tool used by the teacher, Hootsuite, publishes a blog with metrics-driven advice for clients about how to attract engagement, provoking viewers to take actions related to a social media post. These actions may include liking, commenting on or sharing the post. According to this blog (Hootsuite, 2021):

Most social media marketing experts agree that a good engagement rate is between 1% to 5% [of followers]. The more followers you have, the harder it is to achieve. Hootsuite's own social media team reported an average Instagram engagement rate of 4.59% in 2020.

This approach to thinking about how to measure the success of a social media account is echoed in academic literature about marketing via social media (Ferreira, Robertson & Reyneke, 2021). Reconsidering the Owls4Justice TikTok account, which has 24 followers, through this social media marketing lens, reveals that 13 likes is an extraordinarily high response rate of 54% on that most popular post, which was about the on-going impact of the Flint water crisis.

Thus, the Owls4Justice project demonstrated high school students participating in and becoming part of the Fifth Estate by attracting attention for civic conversations on social media. The project also demonstrated the challenges the students encountered. Small social media engagement numbers can be viewed as victories, and as steps towards a goal of increasing students' community engagement with powerful institutions, leading to possible changes. Furthermore, students' experiences in the Owls4Justice project, which was studied for 13 weeks, highlights that building an audience and engaging community members as part of

their formal class-based learning is not quick or easy. Achieving these learning goals related to the Fifth Estate theory takes time and consistent activity on social media.

Learning Civic Skills by Creating Civic Posts on Social Media

Historically, scholars have measured civic engagement by concrete actions such as voting; affiliating with political parties or other civic organizations; and participating in charitable community actions. State standards related to *civic education* have emphasized students' knowledge of historic documents such as the Constitution; understanding of timely political discussions; and "developing *civic skills* (specifically, communication, deliberation, collective decision-making, critical analysis of information" (Godsay, Henderson, Levine & Littenberg-Tobias, 2012, p. 3). When I began this study, I argued that social media offers students platforms for practicing key civic engagement skills such as critical, informed communication and interaction around local, state, national or global issues.

In analyzing the Owls4Justice project, I found that my prediction largely was upheld. Students did strengthen their understanding of ways to seek credible information on civic issues. Yet, their execution of those strategies was imperfect. Class social media accounts followed a range of authoritative sources, yet students did not always correctly identify the sources of the information in their social media posts.

Further, while students expressed an intention of gathering diverse perspectives on civic issues via social media, most of the social media accounts they followed leaned politically liberal.

In these ways, student experiences in the Owls4Justice project highlighted the high level of difficulty associated with constantly vetting and identifying sources of information in an information-rich digital society, as Haste (2010, p. 176) asserted: "access to such rich information does not of course guarantee its productive use. One of the goals of future education must be to *structure critical selection and effective deployment of materials and these rich resources* [emphasis added]." This may be particularly true on social media, which is designed to encourage short, fast, informal interactions - a culture that the teacher in the Owls4Justice project tried to change, by asking students to take a slow, deliberate approach to creating their posts.

The Owls4Justice project also provides proof of the concept that, indeed, social media can be a tool used in formal educational contexts for teaching students to communicate and deliberate about civic issues, to collectively assemble credible information from sources outside their school, and, to some extent, to critically analyze sources of information about those issues, as suggested by Godsay, Henderson, Levine, and Littenberg-Tobias (2012). Cognitive flexibility theory (Spiro et al., 1991) advocates open-ended, student-driven experiential projects to help students understand ill-structured domains, such as participating in civic issues on social media. In this study, students constructed some understanding of how to use social media to participate in civic issues (e.g., through audience-signaling, networking, seeking credible information, and trying to gather diverse perspectives on their civic issue) though their actions were inconsistent. Furthermore, students never reached the level of promoting innovative solutions to civic problems. Their

posts mainly organized existing information and invoked networks of people who potentially cared about the problem. These results underscore the tension between "structure"-ing students' "effective" and "productive" applications of social media resources (Haste, 2010, p. 176) and facilitating their independent navigation of the ill-structured domain (Spiro et al., 1991).

Expanding Notions of Digital Citizenship to Include Active Participation

As mentioned earlier, scholars typically define digital citizenship as civic engagement in digital spaces such as social media (James, Weinstein & Mendoza, 2019). Yet, civic engagement can be interpreted in various ways, including merely consuming civic information such as news. Certainly, media literacy (Hobbs, 2021) seems like a prerequisite to more active forms of civic engagement, such as trying to hold public institutions accountable, as followers of the Fifth Estate theory might do. However, the Owls4Justice project demonstrates that some secondary students are ready to embrace a more active definition of digital citizenship. They equated digital citizenship with community membership and spoke of their attempts to spark social media conversations about community issues as a form of citizenship, despite their perception that their social media posts did not attract much attention.

Taking a more action-oriented approach to defining - and teaching - digital citizenship has been promoted by several scholars. Krutka and Carpenter (2017) called for teaching students to *create positive change for community good*, as opposed to focusing digital citizenship lessons on protecting one's online reputation and developing one's own understanding of how information spreads in digital

spaces. Nearly two decades ago, and pre-dating the mainstream prominence of social media, Westheimer and Kahne (2004) advocated for teaching citizenship with the goal of promoting in students 1) a *sense of personal responsibility for community*, 2) *participation in civic conversations* and 3) a *justice orientation*. Extending these ideas, Durham (2019) argues that teachers today must teach students *critical citizenship*, or investigating "what is wrong with the world, why that may be, what is their role in maintaining this difference, and what they can do to eliminate the gap" (2019, n.p.). Thus, critical citizenship involves "a willingness and ability to take effective individual and collective action" (Durham, 2019, n.p.). He argues that (critical) citizenship and social media offer a "powerful nexus" that opens for investigation how…the young contribute to the projects of citizenship, equality, and social justice" (Durham, 2019, n.p.).

Like the students in the Owls4Justice project who shared insights about what teachers should emphasize in preparing digital citizens to use social media for civic participation and impact, Durham recommends teaching not only *with* social media but *about* social media as part of social justice-oriented projects. For instance, he advocates teaching students about: (1) *voice,* or engaging in courageous, reflective discourse on social media about issues that matter to them; (2) *echo chambers,* or analyzing their news-gathering on social media to identify views silent to them and taking action to ensure a diversity of views help diminish the echo chamber; and (3) *hashtag activism,* or bringing awareness to a social justice issue using a common hashtag while maintaining awareness of algorithmic bias, reinforcing echo chambers and other abuses of power (Durham, 2019). Chapman and Greenhow (2021) argued

that existing, traditional approaches to teaching citizenship can actually perpetuate power imbalances; the authors call for increased teaching of (critical) citizenship with social media, as a step toward empowering students. These action-orientations to teaching digital citizenship align with earlier calls for teaching civics in ways that create more student agency and sense of responsibility, even in non-digital contexts. The Owls4Justice project reached for similar goals, with promising results, based on my analysis of data collected from student interviews, surveys and social media artifacts

IMPLICATIONS

Implications for Research

This study suggests potentially fruitful new directions of study for education researchers interested in how students might learn to use social media in civic ways, as emerging members of the Fifth Estate. These new directions for research can be elucidated by considering the limitations of this study.

First, the Owls4Justice project's focus on collaborative group work complicated analysis of individual students' contributions, successes and opportunities for improvement. Recognizing that few adults work in solitude, and group work is a component of most careers, organizing students into groups to work on the Owls4Justice project added to the authenticity and practicality of the student's experience. Moreover, in a year when people around the world were suffering mental and sometimes physical consequences of the global pandemic, it made sense to create groups that could move forward with the project, even if one member was temporarily unable to participate. Yet, in the future, a more robust research project could be created by asking students to individually create posts and make suggestions about follows, likes or shares on the class social media accounts. Perhaps a student's initials or an identifying number could be added to posts. The teacher or researcher could create a spreadsheet to track each student's recommendations for follows, likes and shares. This would enable the researcher to more closely assess the amount of attention attracted by each students' work. Perhaps some of the group aspect of the project could be maintained by having students consult with a small group of classmates, while still creating individual

posts.

Second, the complexity of teaching during a pandemic, in multiple, shifting formats -- hybrid to fully online back to hybrid -- added an atypical context to this study. Further research is needed looking at similar projects taking place during more typical school years, when learning is not impacted by a global pandemic. Such research would add insights into how teaching and learning with social media might become integrated into "normal" K-12 teaching circumstances. Further, a more normalized teaching context might enhance opportunities for action-research collaboration between researchers and teachers. During the 2020-2021 school year, when this study was conducted, teaching protocols for digital learning were new and rapidly improvised. This created barriers for the researcher to conduct real-time "classroom" observation and teaching support. The barriers were both bureaucratic and practical. Although the researcher had consent to conduct the study, gaining access to the school's online portal would have required assistance from the school's already overworked technology support workers. In addition, the teacher was working so hard to assist students under emotional, financial and technologyinduced stress that the teacher chose not to complicate her extraordinarily challenging teaching environment by inviting a researcher into her digital teaching space. The entire study period for this project occurred before COVID-19 vaccines were available, so adding an extra person to the physical classroom during hybrid teaching periods also was deemed inadvisable, as every additional person in the room was an additional potential vector for spreading the deadly virus. Flint, where the school is located, is about an hour's drive north of Detroit, which was a national

hotspot for COVID-19 cases and fatalities during the early months of the pandemic (spring 2020). Under these circumstances, it is understandable that school officials near Detroit chose not to invite a researcher to observe in one of their classrooms. In future studies, such classroom-based observation would add rich details and deeper understanding to analyses of teaching in K-12 formal learning environments with social media.

Third, the length of the study period (i.e., 13 weeks) was dictated by the researcher's need to limit the amount of data collected and complete the study by an externally imposed deadline. Longitudinal follow-up studies are needed, ideally lasting a year or longer, following teaching and learning efforts with civic uses of social media in formal K-12 class settings. Further, it would be interesting to interview students and teachers involved in this kind of project a year or two after its completion, to see what impact if any the project had on their long-term use of social media.

Finally, the location of this study in Flint, Michigan - a city traumatized by a civic crisis of international notoriety - may have made the student-participants more open to using social media in civic ways. These students have grown up with their hometown in the public eye, with national-level journalists and politicians showing up in their neighborhoods, promising action. Many discussions about civic issues in Flint already were happening on social media, before the class accounts attempted to enter those social media conversations or generate new conversations on similar topics. Therefore, research is needed into how this kind of teaching/learning project with social media unfolds in other geographic locations, including school districts

with more financially secure students and families. Would those students also be motivated to discuss civic issues publicly on social media, and would their families also consent to such a project?

Implications for Teaching

This study has several implications for teachers interested in using social media to prepare high schoolers to become members of the Fifth Estate. First, the creation of "class" social media accounts under the control of the teacher proved useful for multiple reasons. The class accounts allowed students to create posts for public viewing beyond the school walls, without associating those posts with the students' permanent digital footprints. This level of anonymity was helpful in gaining approval for the project from school administrators, students and parents/guardians. The existence of class social media accounts also allows future cohorts of students to build on the followers and attention that their predecessors gathered in previous school years.

Second, the fact that the teacher needed to approve and manage all activity on the class accounts suggests that teachers may need mentorship in tools and techniques for gathering attention for civic issues on social media. We cannot assume that teachers who are themselves active on personal social media accounts have the same knowledge, skills, and digital tools as someone who manages social media accounts professionally. For example, one digital tool that the teacher in this study started using partway through the study period was the social mediascheduling tool, Hootsuite. This tool, which has a free trial period followed by a

monthly fee, allowed the teacher to upload multiple future social media posts in one work session, and schedule the posts to "go live" at different times, on different days, when research shows that the potential audience for the posts is largest. Further, the teacher in this study learned to refine her students' use of hashtags and images from one journalist who visited a class meeting and another journalist who met privately with the teacher to offer some tips. In the future, it might be helpful for teachers to reach out to journalists to request mentoring in how to help students engage effectively with civic issues via social media.

Third, teachers might consider encouraging students to partner with local groups already trying to address a civic issue of interest. Such a partnership between a student group and a civic "client" would follow a common tradition in U.S. schools that have long promoted development of empathy as part of character education initiatives. These initiatives often involve raising money for a chosen local charity, through bake sales or penny collections or direct donation of needed goods such as canned food or socks or holiday gifts for "adopted" needy families. Building on this tradition of community engagement in U.S. K-12 schools, it might be ideal for students to practice using social media in civic ways by partnering with an organization that needs not just money or items but also news attention to bring some kind of change. An organization seeking some kind of action by, or monitoring of, the government or some other institution could be an interesting partner for a student group. By tagging the organization and using related hashtags, students could join a civic conversation that likely already is happening on social media. The organization and its followers might naturally be inclined to engage with the student

posts. Any concerns about a school account supporting community group agendas could be mitigated by asking several student groups to choose a range of community organizations as partners for this learning project.

Fourth, teachers might experiment with encouraging students to behave like journalists and interview people in their communities about the civic issues that the students have chosen to highlight on social media. Knight, the teacher in the Owls4Justice project, used the project to help meet state-level curricular standards related to critical thinking about credible sources of information, and developing rhetorical arguments. Therefore, Knight emphasized the collection of quotes from recognized authorities on the civic topics of interest. This approach was useful for many reasons, including the fact that it situated the Owls4Justice project within the rest of the students' English Language Arts learning. By also teaching students about how to use visual and audio elements and word choice as part of their posts, Knight affirmed use of social media as a new kind of literacy that should be taught in schools - a notion that is supported in academic literature (Greenhow & Gleason, 2012). Yet, the practice of elevating quotes from authority figures sometimes made the student posts seem distant from their community, especially when they quoted national experts or organizations.

One affordance of social media is its ability to allow users who do not hold the megaphones of power to speak their truths, their eye-witness experiences, to a potentially wide audience (e.g., through hashtag activism) (Durham, 2019). In addition, posts offering new, authentically local perspectives on problems might tend to attract more engagement on social media than posts repeating the words of a distant authority.

Indeed, the most popular post of the Owls4Justice project in fall 2020 was about the Flint water crisis. Further, posts featuring local people would encourage students to make their own photos to accompany the posts, as opposed to relying on stock images created elsewhere.

For all these reasons, in the future, it might be useful for social media learning projects to encourage a mixture of posts, with some highlighting the words of powerful people widely recognized as authorities, and other posts highlighting the words of local people, or "voices" that have been silenced (Durham, 2019), who are authorities by virtue of their first-person experiences with the issues.

The ideas here for teaching civics with social media build on and extend the advice offered by Durham (2019) and Gleason and Von Gillern (2018), which describes how secondary students have used social media to share public service ads, communicate with politicians and participate in peer conversations on Twitter. The Owls4Justice project suggests that teaching and learning civics with social media in K-12 classrooms can be normalized as part of on-going school practice, extending over an entire term, or a school year, or multiple school years. This kind of teaching and learning might be most successful if it is not project-oriented, but rather integrated into existing curricula, as an important tool for information-sharing in today's society.

CONCLUSION

This case study examined how students in a formal K-12 setting attempted to gather an audience for civic issues on social media and what, if anything, they learned about civic engagement and digital citizenship in the process. The research questions addressed in this study are: How do students use social media to draw attention to civic issues in the context of their class? What are students learning about civic engagement in the process of using social media in their class? What are students learning about digital citizenship in the process of using social media in their class?

This study was grounded in prior research on several related topics: civics education; particularly the teaching of digital citizenship; and learning with social media. Building on increasing attention to digital citizenship by researchers and educational policymakers, this study addresses a gap in the research literature, which documents very few examples of K-12 teaching that takes advantage of the inherent affordances of social media to connect formal learning to an audience in the world outside of school.

Further, this study responds to calls to expand traditional approaches to teaching digital citizenship, which often focus on managing one's own digital footprint. This study points the way toward using social media to teach digital citizenship in a way that also helps students focus on civic issues greater than themselves. This study is among the first to analyze an attempt to teach secondary students to become active members of the Fifth Estate, which might be conceived of as a civic-oriented, digital network of people trying to create public accountability for

powerful institutions such as the government. The teaching project analyzed in this study was developed collaboratively by the researcher and an experienced Language Arts teacher at an Early College in Flint, Michigan, a city known for its polluted drinking water. Data collected for this study include student artifacts such as social media posts and related reflections; student survey results; and semistructured interviews with students.

Based on analysis of this data via constant comparative coding, I found that students reported two main strategies in using social media to draw attention to civic issues as part of their class: (1) audience-signaling, through nonverbal communication, and (2) networking. In addition, students expressed frustration with some challenges with using TikTok, Instagram, and Twitter to draw attention to civic issues. Further, students described strategies they developed to seek credible information. They also discussed their flawed attempts to seek out diverse perspectives on civic issues on social media. Based on this experience, students offered varied definitions of the term "digital citizenship," which they anchored in various notions of community. Some students found that their identification with some communities (geographic and racial) could potentially be a source of power and connection on social media. Finally, students shared thoughts about how other teachers and schools might use social media to teach digital citizenship.

These findings are discussed in the context of prior research calling for more action-oriented teaching of civic issues, including with social media. Implications are drawn for future researchers and practitioners interested in preparing students to be digital citizens of the 21st century. Suggestions on how teachers might create similar

projects in other schools are offered.

APPENDICES

Appendix One: Teacher Screening Survey

- 1. Are you a civics teacher or is civics or citizenship part of what you teach?
- 2. How long have you been teaching?
- 3. Do students have access to reliable, high-speed internet in your classroom? Do they have their own internet-connected devices like each student has an iPad or laptop or something like that?
- 4. Are you teaching students to engage with community issues? How would you describe what you are doing in your classroom to engage students with community issues?
- 5. Have you ever used social media to help teach civics or citizenship?
- 6. How long have you been using social media in your teaching? For what purposes?
- 7. What are your students doing with social media in your class? E.g., are your students following civic issues on social media? Are your students following civic leaders on social media? Are your students creating content about civic issues to post on social media?
- 8. What are some examples of civic issues that have been the subject of your students' activity on social media?
- 9. If your students are creating content for social media, are your students' civic posts viewable by the public?
- 10. Do you track engagement with any content your students may create on social media (clicks, likes, shares, comments)? If so, how?
- 11. Do you teach students techniques for using social media to gather an audience for civic issues? If so, how?

- 12. Do you teach about the concept of "going viral" on social media? If so, how?
- 13. Do you teach about the use of visual elements on social media? If so, how?
- 14. If your students post on social media as part of a civics-related assignment, which social media platform do they use? Why do you use this platform?
- 15. Do you teach about news on social media? If so, how do you teach about news on social media?

Teacher Interviews Following up on Screening Surveys

- You indicated that you teach students how to use social media to gather an audience for civic issues? How?
- 2. You indicated that you teach about the concept of "going viral" on social media. How do you teach about "going viral" on social media?
- 3. You indicated that you know about the use of visual elements on social media? How?
- 4. You indicated that you teach about news on social media. How do you teach about news on social media?
- 5. How do you feel about asking your students and their families for permission to participate in this research?
- 6. What concerns, if any, do you anticipate administrators may have regarding your students' participation in this research?

Appendix Two: Consent Forms

For Students

Information about Social Media Activity and Research Study

As a member of Ms./Mr. Xxxx's class, your student is being asked to participate in a research study about what and how students learn when they do a digital citizenship learning activity on social media. The purpose of this study is to analyze the development skills and attitudes identified by experts as key to positive, civic behavior on social media.

If you choose to participate in this research study, I would like to interview you via videoconference before and after the social media activity. I also hope to spend time observing how your teacher presents the social media activity, and how you and your classmates respond. I would like to collect copies of any social media posts made as part of this activity, along with the associated analytics such as number of likes and shares. Further, I would like to collect copies of any homework or reflections that you create as part of this assignment.

When I analyze your work on this activity, I will remove your name. You will not be identified in any of the academic papers I write about this activity. It is the custom in academic research not to name students.

Participation in this research project is completely voluntary. You have the right to say no. You may choose not to answer specific questions or to stop participating at any time. Whether you choose to participate or not will have no effect on your grade.

If you do not want to participate in my research study, you can simply do the

social media activity without speaking with me or sharing information about your work on the activity.

Contact Information for Questions and Concerns:

If you have concerns or questions about my study, please don't hesitate to contact me, Emilia Askari, at 248-229-2990, <u>askariem@msu.edu</u>. MSU Professor Christine Greenhow (Principle Investigator) also will have access to the information collected in this study.

Your signature below means that you voluntarily agree to participate in this research study.

Date

Signature

Printed Name

For Teachers

Information about Social Media Activity and Research Study

As we have discussed, I'm inviting you to collaborate with me in a research study about what and how students learn when they do a digital citizenship learning activity on social media. The purpose of this study is to analyze the development skills and attitudes identified by experts as key to positive, civic behavior on social media.

If you choose to collaborate with me in this research study, I would like to interview you via videoconference before and after the social media activity. I also hope to spend time observing how you present the social media activity, and how students respond. If you like, I can join you in presenting the activity. I would like to collect copies of any student social media posts made as part of this activity, along with the associated analytics such as number of likes and shares. Further, I would like to collect copies of any homework or reflections that students create as part of this assignment.

When I analyze this activity, I will remove your students' names as well as your own. Your students will not be identified in any of the academic papers I write about this activity. Neither will you, unless you decide that you would like to be named, perhaps as a co-presenter at a conference. It is the custom in academic research not to name students.

You and your students have the right to say no. You and your students may

change your mind at any time and withdraw. You and your students may choose not to answer specific questions or to stop participating at any time.

If your student does not want to participate in the research study, your student can simply do the activity without being interviewed.

Contact Information for Questions and Concerns:

If you have concerns or questions about my study please contact me, Emilia Askari, at 248-229-2990, <u>askariem@msu.edu</u>. MSU Professor Christine Greenhow (Principle Investigator) also will have access to the information collected in this study.

Your signature below means that you voluntarily agree to collaborate in this research study.

Date

Signature

Name of teacher

For Parents/Guardians

Information about Social Media Activity and Research Study

As a member of Ms./Mr. Xxxx's class, your student is being asked to participate in a research study about what and how students learn when they do a digital citizenship learning activity on social media. The purpose of this study is to analyze the development skills and attitudes identified by experts as key to positive, civic behavior on social media.

If your student chooses to participate in this research study, I would like to interview them via videoconference before and after the social media activity. I also hope to spend time observing how your student's teacher presents the social media activity, and how your student and their classmates respond. I would like to collect copies of any social media posts made as part of this activity, along with the associated analytics such as number of likes and shares. Further, I would like to collect copies of any homework or reflections that your student creates as part of this assignment.

When I analyze your student's work on this activity, I will remove your student's name. Your student will not be identified in any of the academic papers I write about this activity. It is the custom in academic research not to name students.

Participation in this research project is completely voluntary. You have the right to say no. Your student may choose not to answer specific questions or to stop participating at any time. Whether you choose to participate or not will have no effect on your student's grade.

If you do not want your student to participate in my research study, you can simply do the social media activity without speaking with me or sharing information about your work on the activity.

Contact Information for Questions and Concerns:

If you have concerns or questions about my study, please don't hesitate to contact me, Emilia Askari, at 248-229-2990, <u>askariem@msu.edu</u>. MSU Professor Christine Greenhow (Principle Investigator) also will have access to the information collected in this study.

Your signature below means that you voluntarily agree to participate in this research study.

Date

Signature

Printed Name

Appendix Three: Student Interview Questions

- 1. What do you understand as the goal of this assignment? (RQ1)
- 2. Tell me about using social media in this assignment. How did you use social media? What were you trying to accomplish? How did you go about doing that on social media? Do you think you were successful? Why or why not? What would "success" look like? (RQ1)
- 3. What did you learn from your teacher about using social media in this assignment, if anything? (RQ3)
- 4. What do you think a citizen today needs to know about how to use social media? (RQ3)
- 5. What does digital citizenship mean to you? (RQ3)
- 6. How do you think social media can impact what people know about problems and solutions in their community? (RQ3)
- 7. What do you think are the most important problems in your community today? In your state? In your country? In the world? (RQ2)
- 8. How do you learn about those problems? (RQ2)
- 9. Do you ever learn about those problems from social media? (RQ2)
- 10. If you learn about those problems on social media, what draws your attention to posts about those problems? (RQ2)
- 11. What do you think a citizen today needs to know about how to use social media? (RQ3)
- 12. What does digital citizenship mean to you? (RQ3)
- 13. How did this activity or lesson change your ideas about digital citizenship, if at all? (RQ3)
- 14. Did this activity change the way you connect on social media with news stories about government or community concerns, if at all? (RQ1)
- 15. Did this activity change the way you try to attract attention for your posts on social media, if you do that? If so, how did the activity change the way you try to attract attention for your posts? (RQ1)
- 16. Did this activity change your interest in attracting attention for posts on social media about news stories or other information connected to government or community concerns? If so, how? (RQ1)
- 17. How do you think social media can impact what people know about problems and solutions in their community? (RQ2)
- 18. Describe the problem that you decided to talk about on social media. Why did you choose it? (RQ1)
- 19. What was the main message you wanted to convey about the problem? (RQ1)
- 20. Were other people on social media already talking about this problem, or were you trying to start a conversation about it? If other people were already talking about this problem, who were they and what were some key things they were saying about the problem? (RQ1)
- 21. How did you try to draw attention to a civic-related problem or solution in your community? (RQ1)
- 22. Did you try to use images? If so, what were the biggest challenges you had using images in social media posts? (RQ1)

- 23. How successful do you think your posts were, and what evidence do you have to support your thoughts on this? (RQ1)
- 24. What would you do differently if you were asked to do this assignment or lesson again? (RQ1)
- 25. What was the best thing about this lesson/exercise? (RQ3)
- 26. What was the least good thing about this lesson/exercise? (RQ3)
- 27. How do you think you might use anything you learned from this lesson or exercise in the future? (RQ3)
- 28. Would you be interested in a follow-up exercise or lesson, taking this one step further? (Likert scale). Why or why not? (RQ3)
- 29. How do you know what to trust on social media? (RQ2)
- 30. How many news outlets do you follow on social media? (Likert scale) (RQ2)
- 31. Where on social media do you get news about civic issues? (RQ2)
- 32. Do you use social media outside of school? If so, which social media platforms do you use? How many followers do you have on those platforms? (RQ2)
- 33. What do you typically do on social media? How often do you typically check social media? (Likert scale) How often do you typically post on social media? (Likert scale) (RQ2)
- 34. What did you learn about using social media from your friends, if anything? (RQ3)
- 35. What did you learn about using social media from your family or people who share your home, if anything? (RQ3)
- 36. What did you learn on your own about using social media, if anything? (RQ2)
- 37. Is there anywhere else that you learn about using social media? If so, what was that source, and what did you learn from it about using social media? (RQ2)

Appendix Four: Codebook, A Sampling of Key Codes

RQ theme	Code name	Emic/tic	Code definition
	Create	Etic	Creating content for posting on social media
	Words	Emic	Word choice & how that attracts attention
	Graphics	Emic	Images, charts for social media posts
	Music	Emic	Role of music in attracting attention
RQ1 - networking	Network	Etic	Strategies for networking on social media
	Hashtags	Emic	When and why hashtags were used - or not
	Tagging	Emic	Choices regarding who was tagged - or not
	Follow	Emic	Considering whom to follow - or not
	lssues	Etic	Which issues are of community concern & why
RQ1 - challenges	Success	Emic	Defining success for Owls4Justice posts, project
	Pandemic	Emic	Role of pandemic in this project/student lives
RQ2 - credible	Credible	Etic	Thinking about which info is credible
	2nd source	Emic	Trying to verify credibility by seeing if a 2nd authoritative source agrees with info
	Search	Etic	Strategies for seeking credible info
RQ2 - diverse	Change	Emic	Discussing the kinds of changes sought by people of different perspectives
	Define	Etic	Defining digital citizenship
	Citizen	Etic	Describing digital behavior impacting civic issues
	Watch	Etic	Watching government behavior re civic issues

RQ3 - ID	Flint	Etic	Discussing impact of affiliation with Flint
	Race		Discussing race-related perspectives on issues
RQ3 - school	Know	Emic	What digital citizens should know, be taught

Appendix Five: Accounts that Followed Owls4Justice

Below is the list of 15 accounts that followed the students' class account on Twitter during the 2020-2021 school year:

Elena Pacheco @elena_pacheco Just a music and dance nerd trying to find my way Genesee Early College 2022

LaCresia @LacresiaBrown Dream Big

Gabrionkle Donkle @GabrionkleD I consume toes

Bill Dutton @BillDutton #FifthEstate #political #communication #Internet #studies #ICT #social #dynamics #reinforcement #politics #reconfiguring #access #cybersecurity #mindset

Keirah_25 @25Keirah Deuteronomy 31:6 God 1st Live life the way YOU want too, because YOU'RE the one in it.

kaya @rowe_kaya unapologetically be you | she/her | blm |

Elle/Nihil @aroacemace Agenderflux | She/He/They | Oriented Aro Ace | MOGAI Baby | 15 | ISFP-T | Capricorn | Writer, Artist | A colorful mess, but I'm funny. | T1D - 10 YRS |

Justin Brown @JustinB35603677

Not Andrew @NotAndr56241326 Not Andrew

Pixel @Pixel_ow YEP

bry @bigbry27 YEP

Mike O'Connorn @oconnormj I did not say this. I am not here.

Emilia Askari @easkari journalist, educator, social researcher, gamer, UX designer, digital archivist -- creating and curating the future of news. scribbler goes tech.

Gabrionkle Donkle @gabrionkle An artist w/ ADHD, autism and (probably)selective mutism. Don't mind me as I cuddle my cat and draw game characters thx

Angie @AngieMom5

Below is the list of the 60 accounts that followed the students' class account on Instagram: Emilia_askari Emilia Askari

fruitloops604 fruitloops604

sagemorefuck Technet Sage

kime.mp4 Andrew Kime

hyppolite.mayckol Hyppolite

maïckol

cjprodz COACH CELESTIN LTC

८ ■ ■ ● **\$** → small_funzises Elle

fallou_ndiaye4 fallou

gatesvcm Carly Gates-

Vickery

kappahoodie rnbresearch R&B Research Center

serenityrodriguez11 serenity rodriguez

pilgrimlutheranchurch_burton Pilgrim Lutheran

Church ielts.australia lelts worldwide

im.just.dj DJ ⊌

jbking_2346 Jb

livrossman olivia

skyyyecloud

sky

kyndell.marie Kyndell Barnett-Eason responsibilitycrimson Kalani Francie alejandita_p Alejandra

siliakusiyukunda yukunda siliakusi

kaya_908 Kaya Leigh Rowe

atlantic.vibxs WAn Unkown

Vibe₩ jaydenmanning16 JAY!!!

rogueknight04

eliiiii4now eli (: aidenhenry14 Aiden Henry

gec.003680 Amyr

dontpresssendcampaign Don't Press Send

Campaign kimelori Lori Kime

eleazerhenry Stephanie Eleazer-Henry

idoniteaches Taylor Idoni

Tmhrowe Tanya

Marie Amyyharrod

amy harrod

Genel.brown *LaCresia* lindzzzeeeee Lindsey Wagner

daltondubiel Dalton Dubiel

casey_manns Casey Manns

jmarkmaloney Mark Maloney

solo_cobra1 TyQuise Moore

kathycarrick Kathy Carrick carolinealtgelthogan1968 Caroline Hogan mmelosh21 McKenzie Simplyjiquanda verified Jiquanda Johnson solo_bobby9981 Essays_services Martin Juma Mackenzie_kelley_ mackenzie punch that chicken John dogmom10276Dogmom1027 Alegria.alegria_alegriaaaa.__ sheila_ruth_m Reclaimedbywhaley Reclaimed by Whale Playtreks_app Playtreks Music distribution Alah mohammadd Alah Jbking_234 Jb Youngrobtheg.o.a.t1400 youngrob Nerlinedupuy Requested _kingzjournee Kingz %

Ebooks_for_success InvestInYou

A total of 24 accounts followed the students' account on TikTok. The list of those followers is not publicly visible.

Appendix Six: Accounts Followed by Owls4Justice

Below is the list of 34 accounts that the students' class account was following on Twitter during the 2020-2021 school year.

National NOW @NationalNOW National Organization for Women – Official Twitter of the National NOW Action Center in Washington, D.C. Follows & RTs ≠ endorsements.

Engineering, Social Justice, and Peace @ESJPeace A network of academics, practitioners, and students in a range of disciplines related to engineering, social justice, and peace. Tweets by @ccmccomb.

The Institute @institute4wpeq Assists federal contractor community with compliance challenges through nat'l. training programs addressing latest OFCCP developments. Not affiliated w/ OFCCP.

<u>NCMEC</u> @MissingKids In 1984, John Walsh, Revé Walsh & other child advocates founded the National Center for Missing & Exploited Children (NCMEC) as a private, non-profit org.

Bill Dutton @BiIIDutton #FifthEstate #political #communication #Internet #studies_ #ICT #social #dynamics #reinforcement #politics #reconfiguring #access #cybersecurity #mindset

Talia Buford @TaliaBuford Talent Development Director @ProPublica. She/Her. Imported from Flint, planted in BK. Let's talk: talent@propublica.org

ProPublica @propublica Pursuing stories with moral force. Send us things: http://propub.li/3ewuUKH. Newsletter: http://propub.li/2Opjiys.

AMA @AmerMedicalAssn American Medical Association: Physicians' powerful ally in patient care. [RT ≠ Endorsement] #MembersMoveMedicine @AMAmedstudents

Michigan HHS Dept @MichiganHHS Michigan's Department of Health and Human Services

World Health Organization (WHO) @WHO We are the #UnitedNations' health agency -#HealthForAll. Always check our latest tweets on #COVID19 for updated advice/information. **Healthcare Advocate** @State_of_CT_OHA Need help accessing care or protecting your rights? Real time, free help! There is only one OHA. Advocacy is our name. OHA--the first and best choice for you!

50CAN @FiftyCAN We're a team of local leaders and advocates working toward a highquality education for all kids, regardless of their address.

EdSurge @EdSurge EdSurge covers and connects the people, ideas and tools shaping the future of learning.

Make Meds Affordable @affordabledrugs Medicine equality does not exist - the patent system is broken. Help to fix it - #FightToSurvive #AbolishTRIPS #MedicineEqualityNow

Bernie Sanders @BernieSanders U.S. Senator for Vermont. Not me, us.

<u>Gates Foundation</u> @gatesfoundation We are impatient optimists working to reduce inequity.

Steven W. Anderson @web20classroom Educator, Speaker, Blogger, #Edchat Creator, Author, Learning Evangelist, Dad, Twitterer Of The Year, ASCD Emerging Leader, Top 50 Innovators in Edu #AEKDB

<u>Educators in Solidarity @EdsInSolidarity</u> Educators in Solidarity is a non-profit organization working to build our collective capacity as anti-racist educators through activism, advocacy, and outreach.

<u>Tiffany Jones</u> @TiffanyJonesPhD Scholar, Activist, Educator...<u>#HigherEd nerd...Deputy</u> Director<u>@gatesfoundation</u>...Formerly<u>@EdTrust</u>...Tweets are my own!

Coalition to Abolish Slavery and Trafficking @CASTLA Ending human trafficking through education, advocacy and empowering survivors.

Jonathan Kozol @Jonathan_Kozol This is the official Twitter account for author and education activist Jonathan Kozol.

University of Michigan School of Public Health @umichsphThe University of Michigan School of Public Health is pursuing a healthier, more equitable world through education, research and action. #GoBlue

Rick Snyder @onetoughnerd Former Governor of Michigan. Proud Nerd.

Launch Michigan @launchmich Launch Michigan is an unprecedented partnership of businesses, labor, education, and philanthropic, all of whom care deeply about education.

Flint Schools @FlintSchools It is the mission of the Flint Community Schools to develop a community of learners who are prepared to live, work, and contribute to an ever-changing society.

Michigan Medicine @umichmedicine Creating the future of health care through scientific discovery and innovations in education while providing the most effective and compassionate care.

Mari Copeny @LittleMissFlint Flint Kid Founder #DearFlintKids & #WednesdaysForWater. Cheerleader. Future President. Watch Me Change the World. Account Administrated By Mom LL

The Michigan Times @MTimes Student-run newspaper on the campus of The University of Michigan-Flint. Office: 381 UCEN. Email: michigantimes@gmail.com

Genesee ISD @GeneseeISD The Genesee Intermediate School District serves over 67,000 students and nearly 8,500 educators in Genesee County, Michigan.

University of Michigan-Flint @UMFlint The University of Michigan-Flint is a comprehensive regional campus of the University of Michigan located in the heart of downtown Flint. #umflint

Flintside @FlintsideNews Flintside is an award-winning online news magazine, focused entirely on our community, our people, and our stories. Subscribe to our newsletter: http://goo.gl/gfTYDM

Rep. Dan Kildee @RepDanKildee Honored to represent Michigan's Fifth Congressional District. Born & raised in Flint. @HouseDemocrats Chief Deputy Whip. Proud husband, father & grandfather. **Mayor Sheldon A. Neeley** @mayorneeley Official Twitter account for Mayor Sheldon A. Neeley. #TeamNeeley #ThePeoplesChamp #FlintMayor

Governor Gretchen Whitmer @GovWhitmer 49th Governor of Michigan. Proud mom.

On Instagram, the student account was following 39 accounts: Gretathunberg Greta

Thunberg timesupnow

TIME'S UP flintsidenews

Flintside

cwlaofficial CWLA Child Welfare League of

America nilc National Immigration Law Ctr

leagueofwomenvoters League of Women

Voters nationalnow National Org. for Women

flintwaterfestival Flint Water Festival

mentalhealthamerica Mental Health America

neatoday National Education Association

debtcrisisorg Student Debt Crisis Center

thefoodbankofeasternmichigan Food Bank of Eastern

Michigan umichmedicine Michigan Medicine

military1source Military OneSource real_social_justice Real Social Justice

kelloggfoundation W.K. Kellogg Foundation

senatordebbiestabenow Senator Debbie Stabenow

antibullyingalliance Anti-Bullying Alliance

unitedagainsthumantrafficking UnitedAgainst HumanTrafficking collegeboard The College Board americanredcross American Red Cross mi house republicans Michigan House Republicans who World Health Organization ijm International Justice Mission americansunitedforlife Americans United for Life nationalwomenslawcenter National Women's Law Center greenpeace Greenpeace International 🜍 amdiabetesstl American Diabetes Assoc. - STL propublica ProPublica sexist.ads Gender Equality & Anti Sexism mihousedems Michigan House Democrats onetoughnerd Governor Rick Snyder's Office usedgov U.S. Department of Education blklivesmatter Black Lives Matter amermedicalassn American Medical Association repdankildee Congressman Dan Kildee joebiden Joe Biden

potus President Joe

Biden mlivenews MLive

sengarypeters Senator Gary Peters

amdiabetesassn American Diabetes

Association gewhitmer Gretchen Whitmer

cdcgov Centers for Disease

Control unwomen UN Women

deptvetaffairs Department of Veterans Affairs

communities against hate Communities Against Hate

Internationalmedicalcorps International Medical

Corps naacp NAACP

Nokidhungry No Kid Hungry

Here are the 8 hashtags that the Owls4Justice project followed on Instagram in the 2020-2021 school year:



#flintwatercrisis 73,542 posts



#sheldonneeley 241 posts



#stjudeschildrensresearchhospital 19,309 posts



#thenationalinstituteofhealth 5 posts



#nationalcollegeattainmentnetwork 16 posts



#michigandepartmentofeducation 47 posts



#geneseeintermediateschooldistrict 9 posts



#universityofmichiganflint 1,363 posts

The Owls4Justice TikTok account was following 0 other TikTok accounts during the 2020-2021 school year.

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%2BEarly%2BCollege%2B&City=Flint&State=26&County=Genesee%2B&DistrictName= Carman-

Ainsworth%2BCommunity%2BSchools&SchoolType=1&SchoolType=4&SpecificSchlType=all&IncGrade=-1&LoGrade=10&HiGrade=13&ID=260789007793

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