The Promises, Challenges, and Futures of Media Literacy

Monica Bulger and Patrick Davison

February 2018

Data&Society

CONTENTS

EXECUTIVE SUMMARY

Media literacy has become a center of gravity for countering "fake news."

Media literacy has become a center of gravity for countering "fake news," and a diverse array of stakeholders – from educators to legislators, philanthropists to technologists – have pushed significant resources toward media literacy programs. Media literacy, however, cannot be treated as a panacea. This paper provides a foundation for evaluating media literacy efforts and contextualizing them relative to the current media landscape.

Media literacy is traditionally conceived as a process or set of skills based on critical thinking. It has a long history of development according to different values, swinging between protection and participation. Contemporary media literacy tends to organize around five main themes: youth participation, teacher training and curricular resources, parental support, policy initiatives, and evidence base construction. Programs like these have demonstrated positive outcomes, particularly in the case of rapid responses to breaking news events, connecting critical thinking with behavior change, and evaluating partisan content.

However, media literacy programs also have their challenges. In general, there is a lack of comprehensive evaluation data of media literacy efforts. Some research shows that media literacy efforts can have little-to-no impact for certain materials, or even produce harmful conditions of overconfidence. The longitudinal nature of both assessing and updating media literacy programs

makes this a perennial struggle. Because of these challenges, we make the five following recommendations for the future of media literacy work:

- **Develop a coherent understanding of the media environment.** With new technologies and new rhetorical techniques, existing programs should be updated.
- **Improve cross-disciplinary collaboration.** Media literacy is often seen as a narrow, pedagogical field. But work from other disciplines – social psychology, political science, sociology – is producing new research and findings that could greatly benefit media literacy.
- **Leverage the current media crisis to consolidate stakeholders.** The new attention on "fake news" could allow for new cross-disciplinary collaboration and therefore greater coherence within the field.
- **Prioritize the creation of a national media literacy evidence base.** A centralized and stable base of evaluation data would make more accurate assessment possible. Though there are many potential political challenges to such an evidence base.
- **Develop curricula for addressing action in addition to interpretation.** With the increased use of social media, literacy efforts need to be able to address user behavior in addition to interpretation.

INTRODUCTION

Like many presidential elections, the election of 2016 was controversial. Unlike any preceding it, however, the primary reason for this controversy was a shift in how Americans received the information that informed their votes. For the first time in history, two-thirds of Americans relied on social media for their news (Shearer and Gottfried, 2017). The news that circulates on social media differs in significant ways from the communal experience of traditional media, shared on a public network or news outlet. The opacity of news experiences on social media platforms and the fracturing of individual experiences created a fertile ground for media manipulation and "fake news." Following the 2016 election, "fake news" was used to describe various forms of propaganda and disinformation that circulated by social media and so-called alternative news sites (Marwick & Lewis, 2017). The degree to which such "fake news" shaped the results of the election is still unknown, but the amount and character of this disinformation has spawned a crisis in American media culture.

While the election results were surprising for many, most jarring was a feeling that the trusted norms of public information had failed, and that traditional assumptions about the role of news media could no longer be taken for granted. Further, social media's role in amplifying and circulating disinformation contradicted long-held beliefs in the promise of the internet (boyd, 2017a). Democratizing access to information had been regularly framed as a way to solve the world's problems, but it now seemed this "democratizing" produced new problems of its own. As Sam Wineburg and Sarah McGrew (2017), researchers of information credibility at Stanford, observe: "the Internet has democratized access to information but in doing so has opened the floodgates to misinformation, fake news, and rank propaganda masquerading as dispassionate analysis." How does one engage online after discovering that a once-trusted space can be a site for manipulation and disinformation? Similarly disquieting was the sense that the processes we use to evaluate information were faulty or, even worse, had been gamed (boyd, 2017b). There remains a belief that good information is out there, that with the right set of skills, individuals can sort through and find something useful. If bad actors intentionally dump disinformation online with an aim to distract and overwhelm, is it possible to safeguard against media manipulation? These questions and their high-stakes answers have focused renewed attention on the field of media literacy.

Media literacy has become a center of gravity for countering "fake news," and a diverse array of stakeholders – from educators to legislators, philanthropists to technologists – have pushed significant resources toward media literacy programs. 2017 saw a steady stream of announcements about media literacy. The National Association for Media Literacy Education (NAMLE) held its third annual US Media

Literacy Week.[1] The American Library Association announced a new partnership with Stony Brook University to create "Media Literacy @ Your Library" to "train library workers to better equip their adult patrons to be discerning news consumers."[2] Facebook announced its Journalism Project aimed at, among other things, improving the media literacy of its users.[3] California lawmakers introduced two different bills (AB 155 and SB 135) to require teachers and education boards to create curricula and frameworks for media literacy (Mason, 2017). And the John S. and James L. Knight Foundation awarded $1 million in grants to 20 media literacy programs in the US.[4]

Media literacy, however, cannot be treated as a panacea. Media literacy is just one frame in a complex media and information environment. At issue is not simply an individual's responsibility for vetting information but how state-sponsored disinformation efforts (Jack, 2017) and our everyday technologies (Caplan, 2016) influence the information we see and how we interact with it. The extent to which media literacy can combat the problematic news environment is an open question. Is denying the existence of climate change a media literacy problem? Is believing that a presidential candidate was running a sex-trafficking ring out of a pizza shop a media literacy problem? Can media literacy combat the intentionally opaque systems of serving news on social media platforms? Or intentional campaigns of disinformation? It is crucial to examine the promises and limits of media literacy before embracing it as a counter to disinformation and media manipulation.

This paper provides a foundation for evaluating media literacy efforts and contextualizing them relative to the current media landscape. We begin with a description of media literacy as a field, moving from historical values to contemporary examples. We then address the clearest strengths of media literacy, as well as the ways it can fail, with reference to past examples. Finally, we propose a series of recommendations for how stakeholders invested in media literacy can most productively think about employing it in a contemporary media landscape. While media literacy as a field covers media messages broadly, in fiction, advertising, film, etc., this paper focuses primarily on media literacy approaches to news consumption and evaluation.

WHAT IS MEDIA LITERACY?

Media literacy was expected to struggle with vast and complicated social issues. The media were perceived to be the cause of both society's and children's troubles, with education for media literacy as the solution. Teachers were expected to be able to place themselves outside of these processes of media influence and so be able to provide pupils with skills for critical viewing that empowered them, too.

–Dafna Lemish, Children and Media: A Global Perspective, 2015

Most trainings focus on individual responsibility, rather than the roles of institutions and tech platforms.

Media literacy is most commonly described as a skill set that promotes critical engagement with messages produced by the media. At its most basic, media literacy is the "active inquiry and critical thinking about the messages we receive and create," (Hobbs & Jensen, 2009), and most proponents emphasize this connection to critical thinking. The U.S. National Association for Media Literacy Education (NAMLE) defines media literacy as "the ability to access, analyze, evaluate, create, and act using all forms of communication." What is notable about these definitions, and what we will see often forms the basis of media literacy curricula, is a focus on the interpretive responsibilities of the individual. As O'Neill (2010) observes, children are expected "to negotiate the risks and opportunities of the online world with diminishing degrees of institutional support from trusted information sources." Most media literacy scholars advocate a rich vision for media literacy that includes communal sense-making and empowers people to think critically and engage meaningfully, ideally contributing positively to their communities (Hobbs, 2013) and engaging in meaningful behavioral change (Hobbs and McGee, 2014; Buckingham, 2017). However, most trainings focus on individual responsibility rather than the roles of the community, state, institutions, or developers of technologies. This also highlights the importance of different media literacies for different populations—media literacy curricula are often targeted toward children and youth, but media literacy for adults is equally important as impacts of the "diminishing degrees of institutional support" become evident across demographics.

Historically, there have been countless theories about the role of media in society; these theories have each hinged on different values. Centuries ago, Plato and other philosophers attempted to specify the difference between media that informed and that which persuaded.[5] As liberalism became a dominant political philosophy, dis-

cussions around media shifted to focus on balancing the protection of rights with positive contributions to society; in *Areopagitica,* published in 1644, John Milton argued against Parliamentary censorship of publications, upholding the benefits of diversity of opinions – even those ideas that prove to be wrong – as an essential part of civilized society. Milton advocated for education as the path to empowering individuals to engage in civil society—if one does not censor the incorrect communication of another, one has to gird oneself against its potential harms.[6] This theme of media literacy as a bulwark against harm was enshrined in modern doctrine in 1938, when the *Spens Report*, published in the UK, characterized media as a "corrupting influence," likening it to diseases such as polio that necessitated inoculation (Masterman, 2001). Media education as a form of inoculation translated to pedagogies focused on resistance against media that persisted until the early 1960s (Masterman, 2001; Anderson, 2008).

The field of media literacy in its current form took shape starting in the late 1970s, with systematic efforts toward curricular development and research (Arke, 2012). While definitions of media literacy remain fluid and contested (Anderson, 2008; Abreu, Mihailidis, Lee, Melki, & McDougall, 2017), media historian Edward Arke identifies the 1992 National Leadership Conference on Media Literacy as a moment when media literacy education scholars and practitioners agreed to the definition of media literacy as "the ability to access, analyze, evaluate and communicate messages in a variety of forms" (Aufderheide, 1993), which establishes key components of NAMLE's current definition. These definitions began a shift away from protection or inoculation and toward empowerment. Leading media literacy theorist Renee Hobbs, in a body of work spanning over three decades, describes media literacy as a fluid practice that is both individual and communal and not simply inoculation against negative messaging but empowerment to engage with media as citizens (Hobbs, 1998; Hobbs, 2010; Hobbs, 2017).

This view of media literacy as a multi-faceted, flexible, and empowering response is supported by Dafna Lemish's (2015) research on children's media use and David Buckingham's (2003) assertion that media literacy education must balance protectionism with preparation. Paul Mihailidis further supports that media literacy is a communal experience (2014) and a necessary competency for engaged citizenship (Mihailidis & Thevenin, 2013). In Livingstone's (2011) research on youth media practices globally, she finds that youth are not homogenous in their responses to media, but rather individuals with their own agency. These values are reflected in media literacy programs throughout the US across five thematic areas: youth participation, teacher training, parental support, policy initiatives, and evidence bases.

What follows is a description of promising programs, primarily targeted toward youth grades K-12, but also including teacher training initiatives and parental support. These programs include a variety of settings, actors, and rationales for media literacy that cannot be adequately addressed in this brief overview. The following description is not comprehensive, but meant to provide a snapshot of promising programs. There are many strong media literacy programs in countries other than the US, but their analysis is largely outside the scope of this report.

Youth participation: For the past ten years, several media literacy initiatives have engaged youth in the production of media as a means of empowering them to feel ownership as creators and providing dynamic experiences of how content is developed and disseminated.[7] These programs address a range of issues including misinformation, copyright, plagiarism, information credibility, and bullying. For example, PBS NewsHour Student Reporting Labs[8] paired high school students with local PBS stations to teach them technical and research skills for reporting on current issues (Hobbs, 2016). In a study of 283 students from 38 participating high schools, Hobbs (2016) found this experience significantly improved self-reported measures of intellectual curiosity (desire to learn about all sides of an issue, questioning of things read or heard, curiosity about ways to solve issues in their community) and comparing fact and opinion. Students also improved in showing respect for others' ideas, even when they disagreed.

Many youth participation initiatives also publish research highlighting youth voices, for instance: the Youth and Media project led by Urs Gasser and Sandra Cortesi at the Berkman Klein Center for Internet and Society, Harvard University; Connected Learning Research Network and Connected Learning Alliance programs led by Mimi Ito at the University of California, Irvine;[9] participatory culture work by Henry Jenkins at the USC Annenberg School for Communication and Journalism;[10] and the learning initiative at MIT Media Lab.[11]

The majority of media literacy efforts in the US focus on teacher training and curricular development.

Teacher training and curricular resources: The majority of media literacy efforts in the US focus on teacher training and curricular development. There is no standardized national curriculum or curricular guidance in the United States for media literacy, nor is there dedicated funding for supporting teacher professional development in this area (Lemish, 2015; Potter, 2013). Teacher training in media literacy is primarily a grassroots effort led by impassioned educators. Prominent teacher training programs focused on media literacy include the Media Education Lab at the University of Rhode Island, directed by media literacy scholars Renee Hobbs, Yonty Friesem, and Julie Coiro,[12] and Project Look Sharp at Ithaca

College.[13] Several national discipline-specific organizations provide support for media literacy education, including the National Writing Project, a network of university-based sites; the National Council of Teachers of English; National Council for Social Studies; American Library Association.[14] These programs develop networks of educators through training programs and conferences and incorporate a combination of best practice sharing and evidence-based approaches.

Media literacy curricula are also developed by corporations, non-profits, and news outlets. The Lamp provides the Media Breaker platform, which enables students to remix and talk back to commercials and news coverage.[15] News outlets such as the *New York Times* Learning Network and the *Washington Post*'s Newspapers in Education provide curricular resources around information credibility, use of evidence, and news production. The *New York Times* additionally runs contests[16] and offers educational courses led by editors and reporters.[17] WGBH and Media Power Youth highlight research findings about youth media use for educators and parents and provide educational materials.[18] Newseum hosts exhibits and events and provides curricular support for emerging media literacy issues.[19]

Parental support: Until recently, guidance for children's media use for parents focused mainly on protection from harmful media messages. In the 20th century, religious groups such as the United States Conference of Catholic Bishops[20] used ratings systems to determine decency and morality of film and television. In 1996, the US Congress established TV parental guidelines for age-appropriateness, as well as the presence of sexual content, violence, and profanity in films. In recent years, Common Sense Education[21] has provided a ratings system that includes skill levels needed for websites and video games. As research has shown a diversity of parental concerns around youth use of media (Dorr, 1986; Madden, et al., 2012; boyd & Hargittai, 2013; Livingstone & Blum, 2017), guidance for parents has advanced to recommend evidence-based approaches to foster development of media literacy skills. The Parenting for a Digital Future initiative, led by Sonia Livingstone and Alicia Blum-Ross at the London School of Economics and Political Science,[22] conducts research into issues such as parental monitoring of youth media use, privacy, equity, key parental concerns, and use of media in schools. The Joan Ganz Cooney Center[23] at the Sesame Workshop, led by Michael Levine, conducts research on children's media use and family responses, providing guidance for families and educators. In October 2017, NAMLE published a quick reference guide for parents, *Building Healthy Relationships with Media.*[24]

Since many media literacy initiatives do not have the resources or capacity to include parents in their audience, few resources are available to help parents support the development of their children's media literacy skills. KQED, Common Sense Education, ConnectSafely, the Center for Media Literacy, and Net Family

News [25] provide instructional materials for parents and educators on topics such as news literacy, media literacy, information literacy, and digital citizenship.

Media literacy policy initiatives: Since the 1970s, UNESCO has funded global research into media literacy, publishing research reports, curricula, and policy guidance.[26] For over ten years, the Office of Communications (Ofcom) in the UK has conducted surveys of adults' and children's media literacy, in response to the UK's Communications Act of 2003.[27] The longitudinal work enables testing of the relationship between media education and media literacy. Since the 1990s, MediaSmarts[28] in Canada has produced research and policy recommendations for safe media use. For ten years, the Australian Communication and Media Authority (ACMA) instituted a digital media literacy research program.[29] While the United States does not have national policy for media literacy education, organizations like Media Literacy Now advocate for state-level policies.[30]

Evidence base for media literacy: While Ofcom provides a strong example of a systematic national evidence base for media literacy, studies of youth media use, such as those conducted by Pew Internet Research, MediaSmarts, ACMA, EU Kids Online, Global Kids Online, Eurostat, and International Telecommunications Union (ITU),[31] provide both baseline measures of youth media use and the relationship to education, and comparative data over time and devices. Comparative data across devices, time, and demographic groups enables evidence-based policy decisions, a critical component when addressing media regulation and education to avoid knee-jerk responses (Lemish, 2015; Bulger, Burton, O'Neill, & Staksrud, 2017).

In addition to the youth-focused research programs mentioned above, university-based field-building research agendas can be found at: the Media Education Lab at University of Rhode Island; the Stanford History of Education Civic Online Reading Project, led by Sam Wineburg and Sarah McGrew;[32] and the Department of Media and Communications at London School of Economics and Political Science.[33]

Initiatives in media literacy across these five thematic areas reveal just how many diverse efforts fall under a single thematic umbrella. Worth noting is that these programs address media literacy in very different ways, which could indicate the vibrancy of the field or risk incoherence (Buckingham, 2003). This diversity can challenge those interested in collaboration or development in these fields, as educators may have different approaches and priorities from technologists, philanthropists, or lawmakers. Even among educators, the differences between student, teacher, and parent curricula can splinter efforts, as can the difference between youth and adult subjects. All of this is further complicated by the current changes in the field—as concerns over social media and "fake news" cause the methods and efficacy of media literacy initiatives to be examined.

HOW MEDIA LITERACY HELPS

Media literacy education makes visible what are often invisible structures, with a goal of creating watchful buyers, skeptical observers, and well-informed citizens. Current research has demonstrated positive outcomes of media literacy initiatives in a number of areas: as a flexible response for both teachers and students following current events, as a method of linking critical thinking and behavior change for youth, and as a foundation for accurately digesting partisan content.

In August 2017, a Charlottesville rally organized by prominent white supremacists devolved into violence.[34] The coverage of this event, both in mainstream news and on social media, offered a particular challenge to the media literacy of the public. The event created a number of shocking images of violence as one white supremacist ploughed his car into protestors. The event also foregrounded extreme partisan debate over the cause of violence, during which numerous actors circulated disinformation online about the perpetrators of violence. While tragic, this episode demonstrated the ability for media literacy curricula to address current events and breaking news (PBS, 2017). Shortly after the rally, the hashtag #Charlottesvillecurriculum went viral, with key organizations such as the Southern Poverty Law Center, the Anti-Defamation League, and National Council of Teachers of English providing curricula to teach about race, bias, and tolerance (National Council of Teachers of English, 2017). EdSurge hosted a discussion about facilitating difficult dialogues, to support teachers in discussing violence and racism, and finding tools to communicate despite differences in beliefs and perspective.[35] This technique could be of future use for teachers looking for resources in light of particularly challenging or dramatic news events.

Media literacy education makes visible what are often invisible structures.

Studies of media literacy education have shown improvements in critical thinking skills and, in some cases, behavior change. In a meta-analysis of media literacy interventions, Jeong, Cho, and Hwang (2012) found that media-related, critical thinking outcomes (awareness of messaging, bias, representation) were more likely than behavior-related outcomes (change in practice), but noted this may be because media literacy interventions typically focus on critical thinking rather than behavior change. A study of over 2,000 middle school students in Los Angeles found that media literacy training could increase critical approaches to media, an appreciation that people approach media differently, and a recognition of the effects of violence in media (Webb & Martin, 2012). While Webb and Martin's study focused on critical thinking outcomes, a German study examined the potential for media literacy training to reduce violent behaviors (Krahé &

Busching, 2015). The study tested 627 middle schoolers immediately following a 5-week media literacy course on the effects of media violence, and again at 7-, 18-, and 30-month intervals. Those who participated in the course reported that they were less likely to accept aggression in media or seek out violent programming. Interestingly, Krahé and Busching also found a reduction in self-reported physical aggression among the students who took the course. Further research to verify whether such self-reported outcomes match actual behaviors would yield insight into potential for media literacy interventions to achieve behavioral change.

Finally, education policy scholar Joseph Kahne and political scientist Benjamin Bowyer (2017) recently studied how 2,101 youth aged 15-27 evaluated partisan political posts. They found that those with higher levels of media literacy training were more likely to rate evidence-based posts as accurate than posts containing misinformation. Kahne and Bowyer found media literacy education a stronger indication than political knowledge for those who could adopt a critical stance when evaluating messaging, regardless of whether they agree or disagree with the position. Such studies represent a promising direction for media literacy education research: national studies that collect data over time and use random sampling techniques can provide an evidence base to inform policy, while smaller studies that examine the role of media literacy education in responding to media messages can pinpoint particular strengths of education and training.

The issue of data gathering on media literacy effectiveness is a crucial one and will be addressed further below. Given the difficulty of classroom research and the near impossibility of randomized control trials for curricular testing, studies that link media literacy to training or education are rare, and generally measure single courses with one-time measures (Lemish, 2015; Potter, 2013; Anderson, 2008). The UK's Ofcom annual media literacy surveys of adults and children are an exception to typical small-scale, one-off studies. Ofcom's surveys provide national baseline and longitudinal measures of media literacy levels of adults and children. In Ofcom's 2016 survey, they find an improvement in media literacy skills among youth aged 12-15, corresponding with media education training in schools, suggesting a relationship between media education and improved media literacy skills (Livingstone & Olafsson, 2017; Ofcom, 2016).

It should be noted that media literacy education has received extensive study in the area of health and medicine (Brown, J., 2006; Austin, Kallman, & Kistler, 2017). Studies show improvement in youth body image (Wade, Wilksch, Paxton, Byrne, & Austin, 2017; Halliwell, Easun, & Harcourt, 2011), smoking cessation (Gonzales, Glik, Davoudi, & Ang, 2004; Primack, Douglas, Land, Miller, & Fine, 2014), and engagement in healthy sexual relationships (Collins, Martino, & Shaw, 2011; Pinkleton, Austin, Chen, &

Cohen, 2013). While these findings are less directly relevant to the changing media environment around political news, they point to the value in pairing media literacy education efforts with careful data gathering and evaluation.

HOW MEDIA LITERACY CAN FAIL

The promise of media literacy is both burgeoned and burdened by centuries of expectation. On one hand, it might seem that all media education is a self-evident good and that the largest challenge is getting the funding and attention for more media literacy programs. However, this viewpoint can overlook the historic focuses of media literacy as a field and whether or not these open the possibility for new harms in the current media landscape. Media literacy has long focused on personal responsibility, which can not only imbue individuals with a false sense of confidence in their skills (Sanchez & Dunning, 2018; Kruger & Dunning, 1999) but also put the onus of monitoring media effects on the audience, rather than media creators, social media platforms, or regulators. In addition, assuming that benefits of media literacy education are obvious may contribute to a lack of a systematic evidence collection.

Is media literacy about instilling confidence, about prompting behavior change, or about creating new practices of media creation?

Jeong, Cho, and Hwang's (2012) meta-analysis shows that media literacy education is generally effective, and this effectiveness improves as the amount of instructional time increases. But as the media literacy umbrella grows, so too does the definition of "effectiveness." Is media literacy about instilling confidence, about prompting behavior change, or about creating new practices of media creation? Each possible goal implies a different method of evaluation (Bulger, 2012; Ashley, Maksl, Craft, 2013).

A study by Wineburg and McGrew (2016) of middle school students, high school students, and college students, found that while the majority felt confident in their evaluation skills, all age groups were more likely to select a false website than an accurate one. 80% of middle schoolers believed a native ad was a real news story. When determining credibility for a website, college students skipped the "About Us" pages, where they were most likely to find background information. Likewise, an annual survey of adult media literacy in the UK found that a majority of respondents (67%) report engaging in practices such as comparing information across websites, evaluating credibility, and checking the name of the website. Yet half of the cohort do not know how search engines are funded, and one in five believe the listing of a website in search results indicates accuracy (Ofcom, 2016). The study also found that less than half of respondents could distinguish advertisements in Google search results. These results comport with earlier studies that found adults are confident in their search skills, but unable to discern between commercial and non-commercial results (Fallows, 2005).

Wineburg and McGrew (2017) additionally compared how PhD historians, professional fact checkers, and Stanford university undergraduates evaluated online social and political information. They found that while historians and students used trust metrics that could be easily gamed or manipulated (e.g., look of a website, domain names, logos), professional fact checkers would leave the website to quickly research its validity. Professional fact checkers more correctly identified trustworthy political information in a fraction of the time of PhD historians and undergraduates. Wineburg and McGrew argue that checklists for evaluating websites, often used in media literacy education, are outdated and actually impair determinations of credibility and that they are time-consuming and can be easily gamed. Fact checkers initially spent minimal time on a page, instead leaving it to evaluate its credibility. They additionally had a strong understanding of the structures underlying how information is served online, including knowledge of how search results are optimized and presented.

In 2008, researchers used a hoax website for the endangered tree octopus to test students' information evaluation skills. 47 out of 53 of the 7th graders identified by their schools as "higher performing online readers," believed the hoax site (Leu, et al., 2008). After students were told the site was a hoax and given an explanation for why the information was unreliable, most still could not produce proof or an explanation for why the octopus site was false, and some continued to insist the information was accurate. In a national survey of youth aged 11-18, Metzger et al. (2015) found that students who reported discussing credibility evaluation with parents or teachers were more likely to believe a hoax website. Are the problems surfaced by Wineburg and McGrew's studies solely reflective of outdated training or something else? What was lacking for the students in Leu et al.'s and Metzger et al.'s studies to enable more accurate evaluation? A difficulty in answering these questions is the dearth of rigorous research pairing media literacy education with outcomes (Buckingham, 2003; Kuiper, Volman, Terwel, 2005; Lemish, 2015).[36] A further complication, evidenced most recently by Wineburg and McGrew's (2017) findings about fact checkers, is given that technologies and media systems evolve quickly and often in ways opaque to the public, it is difficult for researchers to develop quantitative methods for a timely response—measuring the efficacy of checklists in this case is occurring over a decade after they were first introduced, but this timeframe is what it's taken to identify the most successful strategies to respond to the technologies.

As a field, media literacy suffers from issues plaguing education generally; primarily, the longitudinal nature of media literacy creates difficulty in evaluating the success of particular training initiatives. Across education, a diversity of goals leads to incoherent expectations of outcomes, making decisions about what is measured, how, and why very important. The studies included in this paper provide examples of the breadth of expectations for media literacy: is it to discern accuracy, evaluate

bias, engage with information productively, be an informed voter? Each outcome has different measures, and how these are measured impacts results.

Further, what is excluded from these studies presents another hurdle. Research methods may not account for cultural or socio-economic differences underlying media use (Van Deursen, Helsper, & Eynon, 2014; boyd, 2014). Hargittai's (2010) findings that among students enrolled at the same college, differences in web skills relate to socioeconomic status and parents' level of education introduce an additional level of complexity for media literacy education. Education alone cannot level socioeconomic contexts of access and use.

Finally, media literacy research typically focuses on individual responsibility for discerning the truth or accuracy of messages. As platforms such as Facebook, Google, and Twitter increasingly personalize information access, individual responsibility becomes more challenging, especially when methods for serving information are not transparent. One challenge for research moving forward is determining expectations for how an individual can assess the reliability of information when the breadth of the corpus, e.g., what is included and excluded and why (and how it differs from information served to others), is neither visible nor accessible. It is necessary to rethink media literacy in the age of platforms.

FUTURE OF MEDIA LITERACY

The current political and media environment (both in the US and abroad) is one of high stakes for media literacy efforts. In many cases, there is a push for new media literacy initiatives. Raising awareness of media messages – how to create them, or critically engage them – would seem to be a good thing, but from an evidence perspective, there remains uncertainty around whether media literacy can be successful in preparing citizens to resist "fake news" and disinformation.

This report identifies five broad recommendations for those interested in developing the future of media literacy: a) develop a coherent understanding of the media environment, b) improve cross-disciplinary collaboration, c) leverage the current media crisis to consolidate stakeholders, d) prioritize the creation of a national media literacy evidence base, e) develop curricula for addressing action in addition to interpretation.

Develop a coherent understanding of the media environment: The task of troubleshooting what caused an influx of "fake news" and its continuing influence has been undertaken across disciplines and sectors. These efforts need to be brought together to create a coherent mapping of the issue (see, for example, Lazer et al., 2017 or Wardle & Derakhshan, 2017). Clearly, responsibility for accessing high-quality, reliable information does not rest solely with an individual, but with institutions, technology platforms, and nations, among other actors. Situating media literacy within this complex media and information environment can provide deeper insight into how education and training can be productively leveraged to improve responsible media engagement.

Improve cross-disciplinary collaboration: Fascinating, relevant work with critical implications for media literacy is happening outside of the media literacy field. In addition to mapping the media environment, there is a need to be proactive in bringing together findings from across disciplines. Social psychology provides valuable research in decision-making, particularly how we justify choices even when we are aware they are wrong, who is most likely to overestimate competence (Kruger & Dunning, 1999; Johansson, et al., 2005), and how our minds prefer intuitive "gut feelings" over analytic thinking (Schwarz & Newman, 2017). Political science work in how we justify partisan positions, motivated reasoning (Kahne & Bowyer, 2017), how our unconscious reactions to visual cues make us judgmental of those who hold different opinions (Dodd, Hibbing, & Smith, 2016), and how rumors spread and become part of our values and beliefs (Berinksky, 2015) offer insights into mechanisms driving choices and promising points of intervention. Sociological work studying how fear motivates our choices (Glassner, 2010; Bader,

Day, & Gordon, 2017) and the ways in which polarization (Hochschild, 2016; Vance, 2016) impacts our values can also inform approaches to media literacy, providing a focus on internal biases. Communication studies examining who is most susceptible to conspiracy theories (Pasek, Stark, Krosnick, & Tompson, 2015) offer recommendations for countering belief formation around misinformation (Pasek, Snood, & Krosnick, 2015).

Taken together, this work develops a holistic understanding of the structure of the media environment and how individuals navigate it. These findings can enrich current media literacy education initiatives by identifying whether and how training can best impact practice.

Leverage the current media crisis to consolidate stakeholders: The field of media literacy can capitalize on the ways in which the crisis of "fake news" has brought renewed focus to the field. There is an opportunity to build greater coherence within the field as well as be a driving force for multi-sectoral, cross-disciplinary collaboration. This is a time for identifying what is known and unknown about the field, and where the gaps lie. With a surge in research and discussion, there is momentum around understanding why media literacy might fail, and what the surrounding environment contributes to successful media literate practice. It is also the time to develop a rigorous evidence base to show the efficacy of media literacy education in preparing youth for the changing media environments. A robust evidence base is needed to demonstrate the value of media literacy education and to attract future resources and political support.

Prioritize the creation of a national media literacy evidence base: A major challenge facing US media literacy efforts is the decentralized nature of schooling and media literacy research. There is no main body responsible for conducting and disseminating studies of media literacy levels and media literacy education in the US. While members of both political parties support media literacy initiatives, they remain underfunded and lack national coherence. Lemish & Lemish (1997), when evaluating media literacy in Israel, reached a conclusion relevant to the current media environment in the US, that policymakers saw the media from their ideological perspective and advocated for media literacy education that would align with these ideologies. Challenges of ideology, funding, and national coherence limit the potential of media literacy initiatives in the US.

There is much that could be gained from the establishment and funding of a national body responsible for tracking media literacy efforts. Currently, the UK, Canada, and Australia lead the world in media literacy education, policy, and evidence gathering. The UK's Ofcom provides a productive example of the features of such a national media literacy authority with its annual surveys that systematically

measure changes in media use, education, and attitudes. Ofcom serves as a crucial evidence base for media literacy research, with longitudinal data that would be difficult to collect otherwise.

One caveat that should be mentioned is that the current US media crisis is complicated by extreme partisanship and a politically cultivated hostility toward media. Coupled with a new administration's broad defunding of research across numerous departments and its dubious practices around publishing research in the sciences, it is difficult to picture what a government body focused on media literacy would look like in the current moment. One alternative could be a collaborative effort from those major foundations already involved in this work. Their scale and institutional stability could provide the kind of evidence base the Kaiser Family Foundation (2010) began in the late 1990s.

Develop curricula for addressing action in addition to interpretation: The reliance of social media and other networked forms of communication on audience-generated content expands how individuals engage with media, presenting new challenges to traditional notions of media literacy. This new engagement includes more active participation by individuals, but also more influence from platforms and media creators, raising questions about responsibility and control. Susan Benesch (2017) considers these new relationships in light of hate speech, arguing that the single frame of deletion or "take down" of offensive content (so often prioritized in conversations with technologists) can eclipse the positive impact of seeking behavior change. This can include not only establishing efforts to prevent the posting of problematic media in the first place but also how people respond to, call out, moderate, or flag problematic content (Benesch, 2017). Other research by Chenhao Tan, et. al. (2016) on Reddit's ChangeMyView forum has shown how informal efforts to create this type of discursive behavior change have positive impacts—a finding which points to the value of educating on positive action in addition to accurate interpretation.

OPEN QUESTIONS

- Can media literacy even be successful in preparing citizens to deal with "fake news" and information?

- Which groups should be targeted for media literacy interventions? Who would most benefit from training, and where have efforts been shown to be most effective? Given the traditional use of age as a method of classification – different curricula for youth and adults – is there value in using other criteria, such as occupation?

- How can media literacy programs effectively address overconfidence in skills? This can manifest preemptively (individuals who feel they need no media literacy training) and reactively (individuals who overestimate the effectiveness of their media literacy training).

- Are traditional media literacy practices (e.g., verification and fact-checking) impractical in everyday media consumption? How can media literacy initiatives respond to the powerful systems of media il-literacy (e.g., clickbait, feed algorithms), which already condition individuals' media behaviors?

- How are groups committed to disinformation and propaganda able to harness the language of literacy and critical analysis to sow new distrust of media and establish adversarial political spaces? What is the political identity of media literacy in the US during a hyperpartisan moment?

- How will the overlapping efforts of media literacy stakeholders interact? Will new signals for trustworthiness aimed at limiting "fake news" backfire, producing new uncertainty around media messages?

ACKNOWLEDGMENTS

This report is a product of the Enabling Connected Learning project at Data & Society. The authors wish to thank our reviewers who so generously shared their time and expertise: David Buckingham, Michelle Ciulla Lipkin, Joan Donovan, Claire Fontaine, Sarah Hochstetler, Dafna Lemish, Paul Mihailidis, and Michael Robb-Grieco. A special thank you to danah boyd, whose initial questions about whether media literacy had backfired inspired this work, and to our colleagues on the Media Manipulation team for tirelessly interrogating the current media environment. We are grateful to the attendees of our May 2017 convening, *Media Literacy in Hostile Information Environments* for their candid and insightful dialogue.

Illustrations by Jim Cooke
Design by Jeff Ytell

ENDNOTES

1 National Media Literacy Week: https://medialiteracyweek.us.

2 Media Literacy @ Your Library: http://www.ala.org/news/member-news/2017/08/apply-now-media-literacy-your-library-opportunity-public-libraries.

3 Facebook Journalism Project: https://media.fb.com/2017/01/11/facebook-journalism-project.

4 Knight Prototype Fund to Improve the Flow of Accurate Information: https://www.knight-foundation.org/challenges/knight-prototype-fund; Winning projects: https://www.poynter.org/news/knight-foundation-awards-1-million-projects-aimed-fighting-misinformation.

5 Auerbach and Castronovo (2013) cite prohibitions in Exodus against spreading or attending to rumors as a biblical injunction against false messages (p. 1). In Phaedrus, Plato cautions against language interpreted apart from its speaker. Throughout history, moral sanctions against falsehoods intertwine with social concerns about influences of media. In the 18th and 19th centuries, concerns about media messages occur in the seemingly conflicting domains of religious propagation along with the penny presses (early journalism and fiction that critics would say consisted mostly of advertising and scandal) (Auerbach and Castronovo, 2013).

6 The freedom to communicate opinions and protection against harassment for these opinions were designated as a human right in The Declaration of the Rights of Man and of the Citizen,

published in France in 1789 and as an amendment to the US constitution in 1791. Up to the 19th century, key debates about media focused on freedom of expression and threats to morality, locating these concerns within ideals of an empowered and engaged citizenry.

7 For example, Free Spirit Media, Chicago (https://freespiritmedia.org/), and SpyHop Youth Digital Media Center in Salt Lake City (https://spyhop.org).

8 PBS NewsHour Student Reporting Labs: https://studentreportinglabs.org.

9 Youth and Media project at the Berkman Klein Center for Internet and Society at Harvard University: http://youthandmedia.org/; Connected Learning Research Network at University of California, Irvine: https://clrn.dmlhub.net/; Connected Learning Alliance https://clalliance.org.

10 Henry Jenkins, Annenberg School for Communication and Journalism: http://annenberg.usc.edu/faculty/communication-journalism/henry-jenkins.

11 MIT Media Lab: http://learn.media.mit.edu.

12 Media Education Lab at University of Rhode Island: http://mediaeducationlab.com/; Summer Institute in Digital Literacy: http://mediaeducationlab.com/summer-institute-digital-literacy-0.

13 Project Look Sharp: https://www.projectlooksharp.org.

14 National Writing Project: https://www.nwp.org/; invitational summer institutes: https://www.nwp.org/cs/public/print/doc/nwpsites/summer_institute.csp; National Council of Teachers of English: http://www.ncte.org/lessons/media-literacy; National Council for Social Studies: https://www.socialstudies.org/publications/socialeducation/may-june2016/media-literacy; American Library Association: http://www.ala.org/tools/programming/media-literacy-your-library.

15 The Lamp MediaBreaker Critical Remix Tools: http://thelamp.org/portfolio/media-breaker.

16 Current contests sponsored by the *New York Times*: https://www.nytimes.com/section/learning.

17 The School of the New York Times: https://www.nytedu.com/; NYC Summer Academy: https://www.nytedu.com/pre-college/nyc-summer-academy.

18 WGBH: http://www.wgbh.org/about/education.cfm; Media Power Youth: http://mediapoweryouth.org.

19 Newseum: http://www.newseum.org/tag/media-literacy.

ENDNOTES

20 Catholic News Service movie reviews: http://www.catholicnews.com/about-cns-movie-reviews.cfm.

21 Common Sense Media movie reviews: https://www.commonsensemedia.org/movie-reviews.

22 *Parenting for a Digital Future*: http://blogs.lse.ac.uk/parenting4digitalfuture.

23 Joan Ganz Cooney Center at Sesame Workshop: http://joanganzcooneycenter.org.

24 NAMLE's *Building Healthy Relationships with Media: A Parents' Guide to Media Literacy*: https://namle.net/a-parents-guide.

25 KQED: https://ww2.kqed.org/education/media-literacy/; Common Sense Media: https://www.commonsensemedia.org/; ConnectSafely: http://connectsafely.org/; Center for Media Literacy: http://www.medialit.org/educator-resources; Net Family News: https://www.netfamilynews.org.

26 UNESCO Media and Information Literacy program: https://en.unesco.org/themes/media-and-information-literacy.

27 UK Office of Communication (Ofcom) media literacy reports: https://www.ofcom.org.uk/research-and-data/media-literacy-research.

28 Canada MediaSmarts: http://mediasmarts.ca.

29 Australia digital media literacy research program: https://www.acma.gov.au/theACMA/the-acma-digital-media-literacy-research-program.

30 Media Literacy Now: https://medialiteracynow.org.

31 Pew Research Center Internet & Technology: http://www.pewinternet.org/; MediaSmarts, Canada: http://mediasmarts.ca/; Australian Communications and Media Authority: https://www.acma.gov.au/theACMA/the-acma-digital-media-literacy-research-program; EU Kids Online: http://eukidsonline.net/; Global Kids Online: http://www.globalkidsonline.net; Eurostat database: http://ec.europa.eu/eurostat/data/database; International Telecommunications Union, Geneva: http://www.itu.int.

32 Stanford History of Education Group: https://sheg.stanford.edu.

33 Department of Media and Communications, London School of Economics: http://www.lse.ac.uk/media@lse/Home.aspx.

ENDNOTES

34 "A Guide to the Charlottesville Aftermath": https://www.nytimes.com/2017/08/13/us/charlottesville-virginia-overview.html.

35 EdSurge Engaging in Difficult Dialogues Twitter discussion: https://storify.com/EdSurge/edsurgechat-9-5-17.

36 As Dafna Lemish (2015) describes, in the US and globally media literacy is caught in a "vicious circle: only the development of a systematic and cumulative body of research regarding the teaching and learning of media literacy can help clarify goals, define clear policies, identify effective teaching practices and teacher education and explain the educational process that pupils undergo when they study media, yet to create such a body of research requires a sophisticated media education program" (p. 205).

REFERENCES

Abreu, B.S., Mihailidis, P., Lee, A.Y.L., Melki, J., & McDougall, J. (2017). Arc of research and central issues in media literacy education. In Abreu, B.S., Mihailidis, P., Lee, A.Y.L., Melki, J., McDougall, J. (Eds.) *International Handbook of Media Literacy Education*. New York: Routledge. (1-16).

Anderson, J. (2008). Media literacy, the first 100 years: A cultural analysis. In Asamen, J.K., Ellis, M.L., & Berry, G.L. (Eds.) *Sage Handbook of Child Development, Multiculturalism*, and Media. Thousand Oaks: Sage.

Arke, E.T. (2012). Media literacy: History, progress, and future hopes. In Dill, K.E. (Ed.) *The Oxford Handbook of Media Psychology*. Oxford: Oxford University Press. (96-108).

Ashley, S., Maksl, A., & Craft, S. (2013). Developing a news media literacy scale. *Journalism and Mass Communication Educator*, 68(1), 7-21. doi:10.1177/1077695812469802

Auerbach, J. & Castronovo, R. (2013). Introduction: Thirteen propositions about propaganda. In Auerbach, J. & Castronovo, R. (Eds.) *The Oxford Handbook of Propaganda Studies*. Oxford: Oxford University Press. 1-13.

Aufderheide, P. (1993). Media literacy: A Report of the National Leadership Conference on Media Literacy. Aspen, CO: Aspen Institute.

Austin, E. W., Kallman, D., & Kistler, M. (2017). Media literacy approaches for improving youth and family health. In Abreu, B.S., Mihailidis, P., Lee, A.Y.L., Melki, J., McDougall, J. (Eds.) *International Handbook of Media Literacy Education*. New York: Routledge. 65-82.

Bader, C., Day, E. & Gordon, A. (2017). Chapman University survey of American fears, 2017. Orange, California: Earl Babbie Research Center, Chapman University. Retrieved from https://www.chapman.edu/wilkinson/research-centers/babbie-center/survey-american-fears.aspx

Benesch, S. (2017). Civil society puts a hand on the wheel: Diverse responses to harmful speech. In Reventlow, N. J., Penney, J., Johnson, A., Junco, R., Tilton, C., … Gasser, U. (Contributors). *Perspectives on Harmful Speech Online* [Collected Essays]. Boston: Berkman Klein Center for Internet & Society, Harvard University. Retrieved from https://cyber.harvard.edu/publications/2017/08/harmfulspeech

REFERENCES

Berinsky, A. (2015). Rumors and health care reform: Experiments in misinformation. *British Journal of Political Science*, 47(2), 241-262. Retrieved from https://pdfs.semanticscholar.org/ffc0/b67d6e3773cb071316779d6ca7fc7bc6b338.pdf

boyd, d., & Hargittai, E. (2013). Connected and concerned: Variation in parents' online safety concerns. *Policy & Internet*, 5(3), 245-269. doi:10.1002/1944-2866.POI332

boyd, d. (2017a). Learning all the wrong things. Keynote presented at the annual Digital Media and Learning Conference, Irvine, California. Retrieved from https://dml2017.dmlhub.net/

boyd, d. (2017b, January 12). Did media literacy backfire? [Blog]. Retrieved from https://points.datasociety.net/did-media-literacy-backfire-7418c084d88d

boyd, d. (2014). It's complicated. New Haven: Yale University Press.

Brown, J.D. (2006). Media literacy has potential to improve adolescents' health. *Journal of Adolescent Health*, 39(4), 459-460. doi:10.1016/j.jadohealth.2006.07.014

Buckingham, D. (2017, January 12). Fake news: Is media literacy the answer? [Blog]. Retrieved from https://davidbuckingham.net/2017/01/12/fake-news-is-media-literacy-the-answer/

Buckingham, D. (2003). Media Education: Literacy, learning, and contemporary culture. Cambridge: Polity Press.

Bulger, M. (2012). Measuring media literacy in a national context: Challenges of definition, method and implementation. *Media Studies*, 3(6), 83-104. Retrieved from http://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=141857&lang=en

Bulger, M., O'Neill, B., Burton, P., & Staksrud, E. (2017). Where policy and practice collide: Comparing United States, South Africa and European Union approaches to protecting children online. *New Media & Society* 19(5), 750-764.

REFERENCES

Caplan, R. (2016, November 22). Facebook must acknowledge and change its financial incentives. The New York Times. Retrieved from https://www.nytimes.com/roomfordebate/2016/11/22/how-to-stop-the-spread-of-fake-news/facebook-must-acknowledge-and-change-its-financial-incentives

Collins, R.L., Martino, S., & Shaw, R. (2011). Influence of new media on adolescent sexual health: Evidence and opportunities. Commissioned by US Department of Health & Human Services. California: RAND. Retrieved from https://aspe.hhs.gov/basic-report/influence-new-media-adolescent-sexual-health-evidence-and-opportunities

Dodd, M.D., Hibbing, J.R., & Smith, K.B. (2016). Chapter Eight: The politics of attention: differences in visual cognition between Liberals and Conservatives. *Psychology of Learning and Motivation*, 66, 277-309. https://doi.org/10.1016/bs.plm.2016.04.003

Dorr, A. (1986). Television and children: A special medium for a special audience. California: Sage Publications.

Fallows, D. (2005). Search engine users. Pew/Internet & American Life Project. Washington, DC: Pew Internet Research. Retrieved from http://www.pewinternet.org/PPF/r/146/report_display.asp

Glassner, B. (2010). The Culture of Fear: Why Americans Are Afraid of the Wrong Things. New York: Basic Books.

Gonzales, R., Glik, D., Davoudi, M., & Ang, A. (2004). Media literacy and public health: Integrating theory, research, and practice for tobacco control. *American Behavioral Scientist*, 48(2), 189-201. doi:10.1177/0002764204267263

Halliwell, E., Easun, A., & Harcourt, D. (2011). Body dissatisfaction: Can a short media literacy message reduce negative media exposure effects among adolescent girls? *British Journal of Health Psychology, 16*, 396-403. Retrieved from http://adolescenceandsocialmedia.wiki.westga.edu/file/view/7465_Group6_A5_Article11_BodyDissatisfaction.pdf/407406122/7465_Group6_A5_Article11_BodyDissatisfaction.pdf

Hobbs, R. (1998). Building citizenship skills through media literacy education. In Salvador, M. and Sias, P. (Eds.), *The Public Voice in a Democracy at Risk*. Connecticut: Greenwood Publishing Group. 57-76.

REFERENCES

Hobbs, R. (2010). Digital and media literacy: A plan of action. Washington, DC: Aspen Institute and Knight Foundation. Retrieved from https://www.knightfoundation.org/media/uploads/publication_pdfs/Digital_and_Media_Literacy_A_Plan_of_Action.pdf

Hobbs, R. (2017). Teaching and learning in a post-truth world. *Educational Leadership* 75(3), 26-31. Retrieved from http://www.ascd.org/publications/educational_leadership/nov17/vol75/num03/Teaching_and_Learning_in_a_Post-Truth_World.aspx

Hobbs, R. (2016). When teens create the news: Examining the impact of *PBS News Hour* Student Reporting Labs. *Journalism Education, 5*(1), 61-73. Retrieved from http://mediaeducationlab.com/sites/default/files/Hobbs%20-%20When%20teens%20create.pdf

Hobbs, R. (2013). The blurring of art, journalism, and advocacy: Confronting 21st century propaganda in a world of online journalism. *Journal of Law and Policy*, 8(3), 625-637.

Hobbs, R. & McGee, S. (2014). Teaching about propaganda: An examination of the historical roots of media literacy. *Journal of Media Literacy, 6*(2), 56-67.

Hochschild, A. (2016). Strangers in Their Own Land: Anger and Mourning on the American Right. New York: The New Press.

Jack, C. (2017). Lexicon of lies. New York: Data & Society Research Institute. Retrieved from https://datasociety.net/output/lexicon-of-lies/

Jeong, S. H., Cho, H., & Hwang, Y. (2012). Media literacy interventions: A meta-analytic review. *Journal of Communication*, 62, 454–472.

Kahne, J., & Boywer, B. (2017). Educating for democracy in a partisan age: Confronting challenges of motivated reasoning and misinformation. *American Educational Research Journal*, 54, 3-34. doi:10.3102/0002831216679817

Kaiser Family Foundation. (2010). Generation M2: Media in the Lives of 8- to 18-Year-Olds. Retrived from https://www.kff.org/other/event/generation-m2-media-in-the-lives-of/

Krahé, B., & Busching, R. (2015). Breaking the vicious cycle of media violence use and aggression: A test of intervention effects over 30 months. *Psychology of Violence*, 5(2), 217-226. doi:10.1037/a0036627

REFERENCES

Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology, 77*(6), 1121-1134. Retrieved from https://www.avaresearch.com/files/UnskilledAndUnawareOfIt.pdf

Kuiper, E., Volman, M., & Terwel, J. (2005). The Web as an information resource in K-12 education: Strategies for supporting students in searching and processing information. *Review of Educational Research, 75*(3), 285-328.

Lazer, D., Baum, M., Grinberg, N., Friedland, L., Joseph, K., Hobbs, W., Mattson, C. (2017, May 2). Combating Fake News: An Agenda for Research and Action. Retrieved from https://shorensteincenter.org/combating-fake-news-agenda-for-research/

Lemish, D. (2015). Children and Media: A Global perspective. Oxford: John Wiley & Sons. 195-207.

Leu, D. J., Kinzer, C. K., Coiro, J., Castek, J., Henry, L. A. (2013). New literacies: A dual level theory of the changing nature of literacy, instruction, and assessment. In Alvermann, D.E., Unrau, N.J., & Ruddell, R.B. (Eds.). Theoretical Models and Processes of Reading (6th ed.), 1150-1181). Newark, DE: International Reading Association.

Livingstone, S. (2011). Digital learning and participation among youth: Critical reflections on future research priorities. *International Journal of Learning and Media*, 2, 1-13.

Livingstone, S., & Blum, A. (2017, August 2). Screen time for kids: Getting the Balance Right [Blog]. Retrieved from http://blogs.lse.ac.uk/parenting4digitalfuture/2017/08/02/screen-time-for-kids/

Livingstone, S., & Olafsson, K. (2017, January 26). Children's commercial media literacy: New evidence relevant to UK policy decisions regarding the GDPR [Blog]. Retrieved from http://blogs.lse.ac.uk/mediapolicyproject/2017/01/26/childrens-commercial-media-literacy-new-evidence-relevant-to-uk-policy-decisions-regarding-the-gdpr/

Madden, M., Cortesi, S., Gasser, U., Lenhart, A., & Duggan, M. (2012). Parents, Teens, and Online Privacy. Washington, DC: Pew Internet Research Center. Retrieved from http://www.pewinternet.org/2012/11/20/main-report-10/

REFERENCES

Mason, M. (2017, January 11). Fake news 101? Lawmakers want California schools to teach students how to evaluate what they read on the web. *Los Angeles Times*. Retrieved from http://www.latimes.com/politics/essential/la-pol-ca-essential-politics-updates-los-angeles-assemblyman-proposes-bill-1484182108-html-story.html

Masterman, L. (2001). Teaching the media. New York: Routledge.

Metzger, M.J., Flanagin, A.J., Markhov, A., Grossman, R., & Bulger, M. (2015). Believing the unbelievable: Understanding young people's information literacy beliefs and practices in the United States. *Journal of Children and Media, 9*(3), 325-348. Retrieved from http://www.tandfonline.com/doi/pdf/10.1080/17482798.2015.1056817

Mihailidis, P. (2014). The civic-social media disconnect: Exploring perceptions of social media for engagement in daily life of college students. Information, *Communication & Society 17*(9), 1059-1071.

Mihailidis, P. & Thevenin, B. (2013). Media literacy as a core competency for engaged citizenship in a participatory democracy. *American Behavioral Scientist* 57(11), 1611-1622.

National Council of Teachers of English (2017, August 15). There is no apolitical classroom: Resources for teaching in these times [Blog]. Retrieved from http://www2.ncte.org/blog/2017/08/there-is-no-apolitical-classroom-resources-for-teaching-in-these-times/

Ofcom. (2016). Children and parents: media use and attitudes report 2016. London: Ofcom. Retrieved from https://www.ofcom.org.uk/research-and-data/media-literacy-research/childrens/children-parents-nov16

O'Neill, B. (2010). Media literacy and communication rights. *International Communication Gazette, 72*(4-5), 323-338.

Pasek, J., Snood, G., and Krosnick, J.A. (2015). Misinformed about the Affordable Care Act? Leveraging certainty to assess the prevalence of misconceptions. *Journal of Communication, 65,* 660-673. Retrieved from https://deepblue.lib.umich.edu/bitstream/handle/2027.42/112231/jcom12165.pdf

REFERENCES

Pasek, J., Stark, T.H., Krosnick, J.A., and Tompson, T. (2015). What motivates a conspiracy theory? Birther beliefs, partisanship, liberal-conservative ideology, and anti-Black attitudes. *Electoral Studies* 40, 482-489. Retrieved from https://pprg.stanford.edu/wp-content/uploads/2015-What-motivates-a-conspiracy-theory.pdf

PBS (2017, August 17). The role of media literacy in teaching your students about Charlottesville. *PBS NewsHour Extra*. Retrieved from http://www.pbs.org/newshour/extra/daily-videos/media-literacys-role-in-teaching-your-students-about-charlottesville/

Pinkleton, B.E., Austin, E.W., Chen, Y., Cohen, M. (2013). Assessing effects of a media literacy-based intervention on US adolescents' responses to and interpretations of sexual media messages. *Journal of Children and Media*, 13(4), 463-479.

Potter, J. (2013). Review of literature on media literacy. *Sociology Compass* 7/6, 417-435.

Reich, J. and Ito, M. (2017). From Good Intentions to Real Outcomes. Irvine: Digital Media and Learning Research Hub. Retrieved from https://clalliance.org/publications/good-intentions-real-outcomes-equity-design-learning-technologies/

Sanchez, C. and Dunning, D. (2018). Overconfidence among beginners: Is a little learning a dangerous thing? *Journal of Personality and Social Psychology*, 114(1), 10-28.

Schwarz, N. and Newman, E.J. (2017). How does the gut know truth? The psychology of "truthiness." *Psychological Science Agenda*, Retrieved from http://www.apa.org/science/about/psa/2017/08/gut-truth.aspx

Shearer, E. and Gottfried, J. (2017). News Use Across Social Media Platforms 2017. Washington, DC: Pew Research. Retrieved from http://assets.pewresearch.org/wp-content/uploads/sites/13/2017/09/13163032/PJ_17.08.23_socialMediaUpdate_FINAL.pdf

Strauss, V. (2017, August 13). The first thing teachers should do when school starts is talk about hatred in America. Here's help. *Washington Post*. Retrieved from https://www.washingtonpost.com/news/answer-sheet/wp/2017/08/13/the-first-thing-teachers-should-do-when-school-starts-is-talk-about-hatred-in-america-heres-help

Tan, C., Niculae, V., Danescu-Niculescu-Mizil, C., Lillian, L. (2016). Winning Arguments: Interaction Dynamics and Persuasion Strategies in Good-faith Online Discussions. International World Wide Web Conference Committee [Conference Paper]. doi:10.1145/2872427.2883081

van Deursen, A.J.A.M., Helsper, E.J., & Eynon, R. (2014). Measuring Digital Skills: From Digital Skills to Tangible Outcomes Project Report. Retrieved from https://www.oii.ox.ac.uk/archive/downloads/publications/Measuring_Digital_Skills.pdf

Vance, J.D. (2016). Hillbilly elegy. New York: Harper Press.

Wade, T.D., Wilksch, S.M., Paxton, S.J., Byrne, S.M., & Austin, S.B. (2017). Do universal media literacy programs have an effect on weight and shape concern by influencing media internalization? *Eating Disorders 50*(7), 731-738. doi:10.1002/eat.22689

Wardle, C. and Derakhshan, H. (2017). Information disorder: Toward an interdisciplinary framework for research and policymaking. Council of Europe. Retrieved from https://firstdraftnews.com/wp-content/uploads/2017/11/PREMS-162317-GBR-2018-Report-de%CC%81sinformation-1.pdf?x56713

Webb, T. and Martin, K. (2012). Evaluation of a US school-based media literacy violence prevention curriculum on changes in knowledge and critical thinking among adolescents. *Journal of Children and Media*, 6(4), 430-449.

Wineburg, S. and McGrew, S. (2016, November 1). Why students can't Google their way to the truth. *Education Week*. Retrieved from https://www.edweek.org/ew/articles/2016/11/02/why-students-cant-google-their-way-to.html

Wineburg, S. and McGrew, S. (2017). Lateral reading: Reading less and learning more when evaluating digital information. Working Paper No. 2017.A1. Palo Alto: Stanford History Education Group, Stanford University. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3048994