

Teaching Intellectual Virtues in Public Schools

A Policy Brief

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Table of Contents

MISINFORMATION AND INTELLECTUAL VIRTUES	3
ANALYSIS AND ALTERNATIVES	4
HOW INTELLECTUAL VIRTUES CAN HELP	6
RECOMMENDATIONS	9
LIMITATIONS AND COUNTER-ARGUMENTS	9
MEETING THE SCHOOL DISTRICT OF PHILADELPHIA’S GOALS	12
INTELLECTUAL VIRTUES AND MISINFORMATION	12

MISINFORMATION AND INTELLECTUAL VIRTUES

Information seeking in the 21st century becomes more challenging as technology evolves and changes the way information is presented. Finding faulty or misleading information on social media and other online platforms is oftentimes easier than finding sound, extensively researched information, which is causing our society to lose its sense of shared reality. John Samples (2019), while debating the regulation of social media content, described the implications of a lost shared reality: “If diverse groups are seeing and hearing quite different points of view or focusing on quite different topics, mutual understanding might be difficult and it might be increasingly hard for people to solve problems that society faces together.” Civil debate about important public issues cannot take place when arguers on both sides are blindly convinced that they are right and everybody else is wrong -- even crazy or stupid.

Children and young adults who frequently use social media might be especially prone to seeing and spreading misinformation. Websites and apps such as Google and Facebook are useful tools for connecting with peers, but they are also hubs for quick, easily absorbed informational content that often contains little or no basis in reality. Memes are usually categorized as harmless jokes but some researchers suggest that memes can actually be quite harmful depending on their context and meaning (Schick, 2020). The presidential elections of 2016 and 2020 in particular raised growing concerns about the ways in which websites like Facebook can manipulate how information is displayed, “favoring some competitors over others” (Rahman, 2018), or how online “echo chambers” can encourage tribalism, which all but quashes any chance of respectful conversations about important issues.

Critical thinking and information literacy are already taught in schools and widely believed to be excellent combatants of misinformation, the general claim being that if students are taught the skills needed to locate reliable sources of information, then they will automatically exercise a healthy dose of skepticism when browsing the Internet (American Library Association, 2012). But less frequently do we see the deliberate cultivation of personal characteristics that build the *desire* to seek out reliable sources -- qualities like **curiosity, perseverance, and open-mindedness**. Sometimes called intellectual humility or intellectual courageousness, these traits are critical for students to actually use the skills and knowledge they’ve acquired in school, and grow into adults who are ready to critically examine the evidence for their beliefs (Gorichanaz, 2021). As stated by Shari Tishman (2000), who has written extensively on what she calls “**habits of mind**”: “Many people know how to pose problems and ask questions, but frequently they don’t see the purpose in it.” Habits of mind, hereafter equated to intellectual virtues, are the necessary characteristics that provide a sense of purpose in seeking and understanding new information.

I submit that students who are intellectually virtuous are less likely to be persuaded by misinformation, and that Philadelphia’s public schools should introduce the concepts of intellectual virtues into their curricula, encourage an overall culture of intellectually virtuous behavior among faculty and students, and develop methods to track the success of these endeavors.

“ ... blind certainty, a close-mindedness that amounts to an imprisonment so total that the prisoner doesn't even know he's locked up.” - David Foster Wallace (2005)

ANALYSIS AND ALTERNATIVES

As earlier stated, the rapid spread of misinformation on social media poses a threat to the civil debates necessary in addressing societal problems, specifically among younger individuals who often interact with peers on the Internet. The COVID-19 pandemic provides an example of how the spread of misinformation and subsequent loss of a shared reality makes rational decision-making more difficult and has real consequences. Conspiracy theories claiming that the virus was manufactured in a Chinese lab promote racism, and anti-vaccine rhetoric casts doubt on a historically effective means to halt the virus's spread, leading to higher infection- and death rates (Schick, 2020). In order to fully understand why teaching intellectual virtues is a viable solution, we will first address some of the alternative suggestions (which rely heavily on technology) for mitigating harm associated with misinformation on the Internet.

The first method to consider is advocating for Facebook and other social media platforms to be more proactive in removing misinformation, or at least making it somehow less visible. While it is completely within the rights of a website owner to decide what content is or is not appropriate for viewing, critics argue that large-scale social media platforms are essentially public forums and that any kind of content manipulation would be in violation of First Amendment rights. John Samples (2019) compared social media platforms to traditional publishing agencies to make a compelling argument that in fact the opposite is true:

Publishers have a right to editorial discretion over what to publish. Like publishers, platform managers choose what will appear on their platform; after all, not everything sent to the platform stays on it. Besides removing content, platform managers also rank content, thereby affecting the likelihood it will be seen by users. Both activities are similar to a publisher's editorial choices and deserve First Amendment protection.

Social media sites already curate what content is visible to their users, but completely removing content deemed false causes problems which can be summed up by Don Fallis's (2007) reference to British philosopher John Stuart Mill, who stated that “since human beings are fallible, we are sure to censor some true information if we censor (even if we try to only censor false information).” Fallis took this idea further by asserting that even if we succeed in only censoring false information, doing so turns our beliefs into “dead dogmas” and eliminates our ability to defend our beliefs against logical opposition.

Facebook appears to have taken a less controversial approach to combating misinformation. One example is Facebook's practice of employing third-party fact-checkers, then flagging content that has been "disputed." Studies have suggested that the practice is helpful in reducing the likelihood that false information will be spread to others (Hutchinson, 2019), but Facebook more recently halted the flagging technique and now instead displays alternative news articles alongside questionable content, for which the company has received some criticism. Part of Facebook's decision to remove its fact-checking practice was due to the sheer volume of information to be verified by Full Fact, the company tasked with the process: "But Full Fact notes that one of its biggest concerns with the program was scale, and being able to counter enough fake news reports to have any significant impact." With over 2.4 billion users on Facebook, the question is whether the amount of labor required for such an undertaking is worth the relatively small payoff.

The volume of content on Facebook posed another problem for fact-checkers: Not every news article was being run through the filters, and so many misleading or false articles were still getting by without being flagged. An MIT-published research study claimed that Facebook users were more likely to believe false stories that hadn't received any label because of something called the "implied truth effect" (Wilson, 2020). Once the practice of labeling content is made known to users, then the assumption becomes that any article without a label must be true. With these flaws in mind, perhaps Facebook made the right choice to switch from simply flagging disputed content to presenting it alongside more trustworthy information. However, there is still a problem associated with this practice, which is that inundating people with "factual" information does not always lead them to trust the information. Deborah Stone (2012), in her book *Policy Paradox*, provided an example of how correcting erroneous information doesn't always motivate readers to change their beliefs:

In some studies, corrections to erroneous information do change people's beliefs, but many studies find no discernible impact. In one recent study, subjects were given a mock news story with an error, then shown another story with a detailed correction of the error. To the dismay of the researchers, the corrections didn't change people's minds most of the time, and in many cases the corrections backfired. After receiving a correction, more people believed the original incorrect information. (ch. 14, pp. 311-330)

Labeling information on social media as "disputed" or placing evidence-based information alongside that which is considered false might help to slow the spread of misinformation on the Internet, but the challenges and flaws currently associated with these options require us to come up with other solutions until the technology improves.

Another possible solution is to more aggressively police social media websites and to punish those who intentionally post false or dangerous information. Unfortunately, websites like Google generally appear reticent to police their users, even when shifting from misinformation to real, horrific content such as child sex abuse media (Keller & Gabriel, 2019). Google employees are required to report the malicious content if they see it but they are not required to go looking for it, which some argue makes employees more likely to look the other way rather than raise alarms. Government agencies aimed at catching producers of child sex abuse media are overwhelmed by the volume of content, and constantly advancing technologies provide new ways for perpetrators to hide their identities and thus elude

prosecution. A serious question is whether tech companies like Google should more aggressively seek and report malicious activity.

But here a new question arises: Do we want tech companies to share user data with police in an attempt to catch more criminals? Growing concerns around data management and online privacy suggest just the opposite -- that most social media users do not want their photos or other personal information to be shared with other agencies (Solon, 2019). Facial recognition technology is an especially controversial topic. Even companies like Microsoft are wary of the use of this technology, though they are usually optimistic that it will mostly be used for public good. For example, a shopper may walk into a store where cameras are installed. The cameras recognize the shopper's face, link the facial identity to the shopper's cellphone or other devices, and can curate online advertisements based on previous shopping habits. Online shoppers generally accept the practice of targeted advertising in a digital environment, but trusting artificial intelligence to recognize individual faces creates new privacy concerns. Social bias is another issue to consider: "Recent research has demonstrated, for example, that some facial recognition technologies have encountered higher error rates when seeking to determine the gender of women and people of color" (Smith, 2018). The takeaway is that using technology to police Internet users could be helpful but is far from perfected; More time is needed before the widespread adoption of these technologies.

To conclude this section, we've addressed several options for reducing the spread of misinformation on the Internet: Removing false content altogether, explicitly labeling information as "disputed," presenting articles from reliable news sources alongside false information, or pushing websites and social media platforms to more aggressively seek and punish users who spread harmful information. While there is proof that some of these methods work, especially in the practice of labeling, these methods all suffer from the same flaw: They are overwhelmed by the volume of content being spread on the Internet. Perhaps a combination of these efforts will have a noticeable impact on the rapid spread of misinformation, but more can be done as we wait for these technologies to catch up with the problem. The next section will discuss why a different approach is needed, and how introducing intellectual virtues to the public school system can mitigate harm caused by misinformation.

HOW INTELLECTUAL VIRTUES CAN HELP

We've seen from the previous section that efforts to stop the spread of misinformation are sometimes promising but ultimately unable to keep up with the tidal wave of data on the Internet. Perhaps we need to address the problem from a different angle: Instead of seeking to find and remove or dispute all misinformation, we should try to reduce the negative effects caused by regular exposure to misinformation. A similar approach already exists in the practice of teaching information literacy and encouraging students to be lifelong learners, but I believe we should take this a step further by not only equipping students with the skills needed for good information-seeking, but to cultivate a deeper sense of **curiosity, perseverance, and open-mindedness** that will allow students to grow into intellectually

strong adults who can recognize real-life opportunities to understand all sides of a situation and find the truth.

With information expansion continuing at increasing speed, access to trustworthy resources is still fundamental to ensuring an equitable society and providing equal opportunities to all citizens. But access itself is slightly less of a concern thanks to the Internet and the continued support for public libraries, which have successfully evolved to include digital services and free Internet access in many locations. But such easy access poses new problems: James Parrish (2010), in his article about ethically sharing information on social media, claimed that “individuals that are illiterate about the qualities of information may be more vulnerable to information exploitation rather than information deprivation.” Instead of worrying about how to access information, more concern now rests in locating reliable information and then deciding what to do with it, especially for children and young adults who are commonly exposed to misinformation on the Internet. In response, teachers and librarians have long advocated to include information literacy in education programs and the practice has been widely adopted.

As far back as 1989, the American Library Association (ALA) described the challenges posed in the Information Age and the importance of not only providing unfettered access to a wide array of information, but also providing the tools and education needed to find the *right* information from a trustworthy source (American Library Association, 1989). But studies have shown even students who possess the skills necessary for finding accurate information might lack the motivation to do so. This is where intellectual virtues come in: Intellectual virtues consist of character traits and behaviors that promote not just the *ability* to learn new skills and find sound information, but the ***desire to partake in these activities*** without being prompted by a specific context, such as a classroom. Jason Baehr (2013), a professor of philosophy who has written extensively on the subject, explained intellectual virtues as follows:

To be a lifelong learner, one must possess a reasonably broad base of practical and theoretical knowledge. But possessing even a great deal of knowledge is not sufficient. Being a lifelong learner also requires being curious and inquisitive. It requires a firm and powerful commitment to learning. It demands attentiveness and reflectiveness. And given the various ways in which a commitment to lifelong learning might get derailed, it also requires intellectual determination, perseverance, and courage. In other words, being a lifelong learner is largely constituted by the possession of various intellectual virtues.

The personal attributes described by Baehr are crucial for navigating debates about complex topics; Deborah Stone (2012) confirmed that “policy disputes entail some disputes over facts, but the deeper and more important conflicts are over values.” In other words, debating over established facts is certainly part of the equation, but equally important is the ability to understand and appeal to diverse sets of values which can only be accomplished through exercising empathy and restraint when a debate becomes heated. Disputing merely over facts assumes the existence of a neutral set of data that does not serve any particular interest or promote specific values, but are published merely for their pure correctness (Stone, 2012). Assuming the existence of unbiased truths in the world ignores the emotions and values associated with an individual’s construction of meaning from information and experience.

Consider author David Foster Wallace's famous commencement speech given at Kenyon College in 2005, in which Wallace describes the "liberal arts cliché" of teaching students **how to think** rather than simply filling their heads with knowledge:

The point here is that I think this is one part of what teaching me how to think is really supposed to mean. To be just a little less arrogant. To have just a little **critical awareness** about myself and my certainties. Because a huge percentage of the stuff that I tend to be automatically certain of is, it turns out, totally wrong and deluded.

The speech goes on to explain the life-or-death importance of being able to step outside of one's own personal narrative when experiencing boring, frustrating situations in everyday adult life, and how the ability to do so is often described as being "**well-adjusted.**" Mounting evidence supports that qualities like critical awareness, which for simplicity we will include with intellectual virtues, is necessary when exploring information and interacting with diverse groups of people on the Internet and in person. In addition to being aware of one's own personal beliefs and values, a person who is **curious, perseverant, and open-minded** will genuinely seek the truth even when faced with a trove of conflicting information, and will engage in meaningful discussions rather than angry tirades about why only one viewpoint is correct. Conversely, dismissing intellectual virtues as unnecessary or automatic is a misguided approach and risks allowing students to fall into what Wallace (2005) refers to as the "default setting," or the automatic assumption that one's own immediate needs are the most pressing and therefore the only needs worth fulfilling. Baehr (2016) makes a similar statement: "If we form beliefs in ways that are narrow-minded, biased, intellectually lazy or dogmatic, then the moral quality of the actions based on these beliefs is likely to suffer. We might be led to act in ways that are negligent, disrespectful or cruel." If we refuse to acknowledge that intellectual virtues are habits that can be learned and exercised, then we resign ourselves to accept automatic, potentially negative responses to uncertainty or frustration.

We now understand why intellectual virtues are crucial for navigating today's information landscape, but where exactly would intellectual virtues fit into a public education system? The next section provides a practical approach to merging intellectual virtues into a school's regular activities.

“ *Intellectual conscience exists in a deep concern for being as true as possible to reality and an equally deep discomfort with intellectual shoddiness and dishonesty. Without intellectual conscience, intelligence is blind.” - Shari Tishman (2000)*

RECOMMENDATIONS

Researchers believe that intellectual virtues can be taught and that a solid school curriculum would not only include explicit lessons in these virtues, but would foster an academic culture of **curiosity, perseverance, and open-mindedness** among faculty as well as students. The proposed recommendations are as follows:



Provide training opportunities in which teachers are introduced to intellectual virtues and provided strong evidence of the importance of teaching these virtues in the classroom.



Update course materials and curricula to include intellectual virtues, both explicitly and implicitly. Meaning, suggest lessons that teach students the foundations and vocabularies associated with intellectual virtues, but also provide activities in which students will be invited to partake in intellectually virtuous behaviors without clear direction.



Encourage teachers to model intellectual virtues in their daily teaching activities. For example, a teacher may pause during a lesson to reflect aloud on the process of thinking through a specific problem from various perspectives.



Develop methods for measuring the success or failure of students to engage in intellectually virtuous behaviors. Such metrics are necessary for gathering evidence of the practice's importance and to determine if chosen methods should be continued or altered.

LIMITATIONS AND COUNTER-ARGUMENTS

This section will address the limitations and counter-arguments to teaching intellectual virtues and explain why the proposed action is still worthwhile despite these drawbacks.

The first challenge is receiving substantial teacher and stakeholder buy-in for adding yet another subject to a school's packed curriculum, as effectively training teachers to use new concepts and techniques is costly and time-consuming. Most schools already struggle to allocate funding to their various departments and many teachers already feel the fatigue of trying to cram all required lessons into a regular school day. However, public education has already made strides in the direction of teaching the comprehension of **broad concepts** rather than memorizing information -- as seen in programs like the Common Core State Standards Initiative -- so adjusting to new instructional methods is to be

expected by most teachers at this point. To ease the stress of introducing new learning techniques to teachers and students, early attempts at folding intellectual virtues into a school's curriculum can be at a relatively small scale and can perhaps be expanded when time and resources allow (Baehr, 2016). For this reason, intellectual virtues can be gradually introduced by combining them with lessons on information literacy and fluency, which leads to the next challenge.

Many educators might believe that intellectual virtues are already addressed when they teach things like critical thinking or information literacy. While teaching these subjects is crucial to developing certain skills and presents the opportunity for students to engage in intellectually virtuous behavior, it does not guarantee that students will **automatically recognize** that opportunity in other contexts. In the book titled *Teaching Thinking Dispositions: From Transmission to Enculturation*, we're given the example of a student who knows how to play the piano but doesn't necessarily feel inclined to do so, or the fact that many people can easily describe the opposing side of an argument but usually only do so if they have been asked (Tishman, Jay, & Perkins, 1992). The people in these examples do not lack adequate skill or knowledge; they lack the **passion** or **sensitivity** to recognize opportunities to use the skills and knowledge in meaningful ways.

Still, critics of the new instructional method might continue to insist that a "good" education using traditional methods will automatically make students more curious, perseverant, open-minded, etc., and that teaching intellectual virtues might be redundant or even detrimental to students: "Indeed, it might be argued that by making this goal explicit, or by allowing virtue concepts or language to pervade the learning process, educators are likely to trivialise or otherwise undermine the willingness or ability of students to pursue the very goal at issue" (Baehr, 2013). The ALA agrees that repeatedly commanding students to exercise intellectual virtues will not guarantee that students will take on these attributes themselves. A better suggestion is for teachers to **lead by example** and create a classroom environment that invites questioning and self-reflection. This can be achieved if teachers practice the intellectual virtues themselves and perhaps occasionally pause in class to acknowledge when a particular virtue would be especially useful.

But even if teachers are successful in introducing intellectual virtues in the classroom, is this something that all parents will want for their children? Some evidence suggests that lessons in critical thinking, which is closely related to intellectual virtues, are biased toward a democratic society and ignore nonwestern ideals of learning. Shari Tishman (2000) emphasized this notion: "Behaviors such as **flexibility, persistence, and reasonableness** may be well and good for students who live in families and communities that value them, but what about students who don't? We can't escape the fact that virtually any list of educational goals will reflect cultural ideals." Tishman also advised that students who are not accustomed to engaging in critical thinking and questioning tradition at home may be distressed by being asked to do so in a classroom. But she went on to summarize Robert Ennis, who has examined the question of cultural bias in critical thinking lessons; Ennis claimed that thinking critically can be applied to any culture and does not take a stand on "whether the culture's goals are correct or incorrect, morally right or morally wrong." In fact, Ennis maintained that teaching such skills empowers students to make decisions within their own cultures. In addition, educational approaches are constantly evolving, and embracing new methods of instruction is itself an act of tolerance and willingness to view things from

different perspectives. Of course, teachers should always take great care to ensure that students feel safe and accepted in the classroom, and they should provide plenty of opportunities for parents to express concerns about their children's needs.

Assuming the copacetic introduction of intellectual virtues into a classroom, the final challenge is how to determine whether the implementation has been successful. Personality traits are difficult to measure when compared with more familiar educational goals, like high scores on standardized tests (Baehr, 2016). Though test scores are easy to measure, critics argue that scores hardly indicate true academic success and far from guarantee that any knowledge gained while studying for a test will be remembered long after. Nonetheless, most school systems require some kind of metric to determine academic success and secure funding, so this obstacle cannot be ignored. Attempts to measure intellectual humility using self-assessment have not been promising: "for instance, a person boasting about their humility may not truly be humble" (Gorichanaz, 2021). Heckman and Kautz (2012) provided research that compared testing abilities with "soft skills," which are similar to intellectual virtues in that they are more deeply connected to **individual characteristics**. Proponents of tests (in this case, IQ tests) argue that "high performance reflects maximal effort," suggesting that tests might actually be indicative of a student's **desire to succeed** as opposed to mere fact memorization. With this in mind, determining a way to measure the impact of intellectual virtues may not be as difficult as initially thought.

Baehr (2016) has written extensively on potential ways to test and measure intellectual virtues. An extended discussion on the results of his studies is beyond the purview of this proposal, but below is a summary of his ideas:



Scope and expectations are important. Determine a set of expected actions that demonstrate the use of intellectual virtues -- things like reasoning, interpreting, analyzing, judging, and evaluating.



Provide opportunities for students to engage in the actions listed above; Ask them to be creative or to argue against their usual standpoints on a given topic.



Note the frequency in which students engage in intellectually virtuous behaviors on their own and whether these behaviors are exercised across contexts.

For a much deeper analysis of testing for intellectual virtues, see Baehr's article titled "Is Intellectual Character Growth a Realistic Educational Aim?"

While all of the above concerns are valid, enough evidence has been provided to show that the challenges are surmountable. The next section will explain why meeting these challenges is worthwhile for the School District of Philadelphia.

MEETING THE SCHOOL DISTRICT OF PHILADELPHIA'S GOALS

The School District is “committed to educating and graduating generations of thought leaders, entrepreneurs, artists, government officials and change makers” (School District of Philadelphia, 2019). Intellectual virtues are highly regarded in today’s job market as we face uncertainty around exactly what technical skills will continue to be relevant by the time a student graduates. Stated by Baehr (2016), “Given the centrality of technology to the global economy and to many domestic economies, together with the rapid rate at which technology evolves, employers today tend to be less concerned with what their employees learned in school and more with how well they can think and learn.” This means that simply bestowing knowledge and skills upon students is not enough to prepare them for adulthood; Students need a foundation of intellectual virtues that provides the **will to learn and succeed in life**.

INTELLECTUAL VIRTUES AND MISINFORMATION

This proposal concludes by returning to the original topic: misinformation and its effects on children and young adults. Misinformation has the power to remove a sense of reality from the world and divide groups of people who can’t find any common ground on which to discuss complicated issues. Children and young adults might be especially prone to this kind of division because they frequently use social media and other Internet platforms to seek information and connect with peers. While myriad options exist for reining in the technology itself, like labeling or removing harmful content, or surveilling and punishing content creators, these solutions cannot keep up with the rapid expansion of online information.

A more practical solution is to instill in students a **desire to seek the truth** when faced with uncertainty, and the **will to practice tolerance** when met with opposition. We refer to these qualities and others, like **curiosity, perseverance, and open-mindedness**, as intellectual virtues. Evidence suggests that possessing these qualities can lead to morally responsible actions such as “thinking carefully and thoroughly, evaluating options in an open and honest way, and maintaining the courage of one’s convictions” (Baehr, 2013). Teaching moral qualities and personal characteristics might sound vague or costly to those who are accustomed to traditional instructional methods, but I remain confident that the research presented here is sufficient proof that building intellectually virtuous behavior in students is an achievable goal, and one that will benefit The School District of Philadelphia and, more importantly, the students who will graduate from these schools to become the next leaders of a just and moral society.

RESOURCES

- American Library Association. [Logo] Retrieved March 15, 2021, from <http://www.ala.org/>
- American Library Association. (2012). *Presidential committee on Information Literacy: Final report*. Retrieved March 15, 2021, from <http://www.ala.org/acrl/publications/whitepapers/presidential>
- Baehr, J. (2013). Educating for intellectual virtues: From theory to practice: educating for intellectual virtues. *Journal of Philosophy of Education*, 47(2), 248–262. <https://doi.org/10.1111/1467-9752.12023>
- Baehr, J. (2016). Is intellectual character growth a realistic educational aim? *Journal of Moral Education*, 45(2), 117–131. <https://doi-org.ezproxy2.library.drexel.edu/10.1080/03057240.2016.1174676>
- Fallis, D. (2007). Information ethics for twenty-first century library professionals. *Library Hi Tech*, 25(1), 23–36.
- Gorichanaz, T. (2021). *How the intellectually humble seek and use information*. Paper presented at iConference 2021, Beijing, China.
- Heckman, J. & Kautz, T. (2012). Hard evidence on soft skills. *Labour Economics, Elsevier*, 19(4), pages 451–464. <https://www.nber.org/papers/w18121>
- Hutchinson, A. (2019, August 1). New study finds that flagging false reports on facebook may indeed reduce their distribution. *Social Media Today*. <https://www.socialmediatoday.com/news/new-study-finds-that-flagging-false-reports-on-facebook-may-indeed-reduce-t/559968/>
- Keller, M., & Dance, G. (2019, September 29). The internet is overrun with images of child sexual abuse. What went wrong? *New York Times*. <https://www.nytimes.com/interactive/2019/09/28/us/child-sex-abuse.html>
- Rahman, K. Sabeel. (2018). Regulating informational infrastructure: Internet platforms as the new public utilities. *Georgetown Law and Technology Review*, 2(2), 234–251.
- Samples, John. (2019, April 9). Why the government should not regulate content moderation on social media. *Cato Institute*. <https://www.cato.org/policy-analysis/why-government-should-not-regulate-content-moderation-social-media?queryID=6d4451167eb49f6ee04f9bc45d87caa4>
- Schick, Nina. (2020). *Deepfakes: The coming infocalypse*. Twelve Books.
- School District of Philadelphia. (2019, August 22). *About us*. The School District of Philadelphia. <https://www.philasd.org/about/>
- Smith, Brad. (2018, December 6). Facial recognition: It's time for action. *Microsoft on the Issues*. <https://blogs.microsoft.com/on-the-issues/2018/12/06/facial-recognition-its-time-for-action/>
- Solon, Olivia. (2019, March 12). Facial recognition's "dirty little secret": Millions of online photos scraped without consent. *NBC News*. <https://www.nbcnews.com/tech/internet/facial-recognition-s-dirty-little-secret-millions-online-photos-scraped-n981921>
- Stone, D. (2012). Facts. In *Policy paradox: The art of political decision making* (ch. 14, pp. 311–330). Norton.
- Tishman, S., Jay, E., & Perkins, D. (1993). Teaching Thinking Dispositions: From Transmission to Enculturation. *Theory Into Practice*, 32(3), 147–153. <http://www.jstor.org/stable/1476695>
- Tishman, S. (2000). Why teach habits of mind? In *Discovering and exploring habits of mind* (pp. 41–52). Association for Supervision and Curriculum Development.

https://www.ivalongbeach.org/images/documents/resource_library/Why_Teach_Habits_Tishman.pdf

Wallace, D.F. (2005, May 21). *This is water* [Speech transcript]. Purdue University.

<https://web.ics.purdue.edu/~drkelly/DFWKenyonAddress2005.pdf>

Wilson, M. (2020, March 4). Study: Facebook's fake news labels have a fatal flaw. *Fast Company*.

<https://www.fastcompany.com/90471349/study-facebooks-fake-news-labels-have-a-fatal-flaw>