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## The Multidimensional Media Literacy & Engagement Framework:

# A Tool for Fostering Informed Civic Participation

## Brett L. M. Levy, Julie E. Learned, and Cornelia B. Harris

Recent events have highlighted the ways that misinformation can threaten public health and even the sustainability of democracy. But even before false claims about COVID-19 and election fraud swept the nation, researchers had already documented a frightening proliferation of misinformation. Indeed, one large-scale study found that on Twitter, false information spreads several times faster than factual information.1

Although many adults perceive young "digital natives" as savvy about our new media landscape, youth are regularly fooled by inaccurate stories and online scams.<sup>2</sup> Furthermore, beyond the threat of outright false information, young people encounter confusing half-truths, misleading arguments, and disguised efforts to collect their personal data. On the bright side, studies have shown that media literacy education can improve students' ability to accurately interpret media messages.3 We argue that we must expand our efforts in this domain in order to support informed civic participation and healthy democratic engagement.

Civic leaders and educators know that productive public discourse and healthy civic life require us to prepare youth to assess media messages carefully. These days, though, educators' work

must go a step further because today's youth are not only media consumers, they are media creators. Young people are developing videos, music, digital art, and text-based pieces, with potentially wide audiences at their fingertips.4 In this complex, interactive media landscape, how should teachers help young people navigate these challenges and opportunities?

This article presents a new framework for conceptualizing how youth can become wise media consumers, producers, and distributors in the digital age. We believe that employing this framework during the development of curriculum and instruction at various levels will strengthen educators' capacity to foster students' informed civic participation.

## The Multidimensional Media Literacy & **Engagement Framework**

The National Association for Media Literacy Education (NAMLE) argues that media education should prepare individuals to "develop the habits of inquiry and skills of expression that they need to be critical thinkers, effective communicators and active citizens in today's world."<sup>5</sup> Reflecting these priorities, our Multidimensional Media Literacy & Engagement (MMLE) framework

Table 1. The Multidimensional Media Literacy & Engagement Framework: Dimensions and Student Learning Goals\*

MMLE Dimensions	Related Student Learning Goals for Each Dimension (Across MMLE Categories)
Conceptual Knowledge (Big Ideas & Concepts)	Consumption: Understanding filter bubbles, advertising, and media regulations Production: Understanding how engaging stories are structured in various media Distribution: Understanding different categories of media and their target audience
Procedural Knowledge (Skills & Competencies)	Consumption: Ability to identify credible sources and assess bias Production: Ability to develop engaging media for an intended audience Distribution: Ability to use appropriate media outlets to share media creations
Metacognitive Knowledge (Thinking about One's Own Thinking)	Consumption: Reflection on and analysis of one's own confirmation biases and motivated reasoning  Production: Reflection on and analysis of one's own media design and development processes  Distribution: Reflection on and analysis of one's own concerns about audience responses and audience size
Attitudes (Emotions & Beliefs)	Interest in Topics, Openness to Different Ideas, Self-Efficacy for MMLE Task, Integrity

<sup>\*</sup>Note: This table includes major dimensions, categories, and learning goals. The examples listed are intended to be helpful but are not an exhaustive list.

suggests numerous ways that youth can thoughtfully and actively interpret, create, and engage with media, identifying several key categories and dimensions of this work. Table 1 presents key elements of this framework and identifies learning goals for students that can enhance their ability to critically consume media, to thoughtfully produce media, and to wisely distribute the media that they and others have designed.

Our framework includes key categories of knowledge, attitudes, and resources that teachers should consider in their instruction on media. Drawing on research by cognitive scientists, 6 we consider three major knowledge types: conceptual knowledge, procedural knowledge, and metacognitive knowledge. In addition, we draw on the work of political scientists and educational researchers, who have outlined the impact of attitudes and resources on fostering informed civic engagement.<sup>7</sup>

The MMLE framework can help educators leverage young people's regular engagement with media to strengthen their critical thinking skills, protect their own personal information, and contribute meaningfully to civic life.

## **Conceptual Knowledge in MMLE**

First, understanding major concepts about our media landscape is crucial for engaging responsibly with media. For example, the concepts of paid content and online privacy are ideas that can shape young people's decision-making online, and these concepts often need to be explicitly taught. As obvious as these concepts are to many adults, youth may not understand that some content that appears to be a news story has been sponsored by advertisers aiming to sell a product or elicit a specific response (e.g., clicking on an ad, sharing with a peer).

Examining these concepts and various examples can help shape young people's responses to these messages. Similarly, students may falsely assume that their online activities are as private as reading a book. Clarifying the challenges of online privacy, including attempts to violate that privacy (e.g., phishing), are important to expose. There are numerous resources available to help teachers educate students about these issues (see Table 2).

To help students understand their online media environments, teachers should also teach students about "filter bubbles," their effects, and how to

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Table 2. Organizations and Resources that Support Students' Media Literacy and Engagement

Organization and Website	Practical Resources
National Association for Media Literacy Education https://namle.net	The website provides a set of resources that are generally stand-alone activities, like "Analyze and Deconstruct an Election 2016 Magazine Cover." It provides connections between media literacy standards and the Common Core Standards.
Project Look Sharp https://www.projectlooksharp.org	Project Look Sharp has numerous teacher-tested curricula available on their website, such as "Media Construction of Presidential Campaigns 2016" and "Media Construction of Global Warming".
Better News www.betternews.org	Includes a resource called "Fact-checking", which has information and a primer on how to talk about and identify fake news. This resource is aimed at professionals but may be useful to educators as well.
The Lamp www.Thelamp.org	There are several resources for educators here, such as an article titled "What is News and Who Pays for News" which can be used as seeds for discussion in classrooms. They also have resources like the "Break-A-Thon," where participants are encouraged to dissect popular media like the Super Bowl ads or political ads.
Stanford History Education Group https://sheg.stanford.edu/ civic-online-reasoning	The Civic Online Reasoning portion of this site provides assessments that can be used with online content or other types of content. (Lesson plans are available)
Digital Resource Center https://digitalresource.center	Students and both K-12 and college teachers can access resources for news literacy. There are lessons on items from recent headlines, and a "DIY" template if you'd like to build your own lessons. Examples are shared from other teachers as well.

Table 3. Definitions of Key MMLE Terms\*

Term	Definition
Filter Bubble	A state of intellectual isolation that occurs when an Internet user encounters only information and opinions that conform to and reinforce their own beliefs, caused by algorithms that personalize an individual's online experience.
Deep Fakes	Artificially manipulated media in which a person in an existing image or video has been replaced with someone else's likeness.
Lateral Reading	A strategy for investigating who's behind an unfamiliar online source by leaving the webpage and opening a new browser tab to see what trusted websites say about the unknown source.
Confirmation Bias	The tendency to seek , interpret, favor, and/or recall information that confirms one's existing beliefs, hypotheses, or theories.
Motivated Reasoning	A form of reasoning in which people access, construct, and evaluate arguments in a biased way to arrive at or endorse a preferred conclusion, rather than use evidence appropriately and in ways that might cause cognitive dissonance.

<sup>\*</sup> Definitions have been adapted from the following sources. Filter Bubble (https://www.lexico.com/en/definition/filter\_bubble); Deep Fakes (https://www.eqengineered.com/insights/what-is-a-deepfake);

Lateral Reading (https://cor.stanford.edu/curriculum/lessons/intro-to-lateral-reading?cuid=teaching-lateral-reading); Confirmation Bias (https://www.simplypsychology.org/confirmation-bias.html#:~:text=Confirmation%20bias%20is%20the%20 tendency, evidence % 20 that % 20 could % 20 disprove % 20 it.);

Motivated Reasoning (http://psychology.iresearchnet.com/social-psychology/attitudes/motivated-reasoning/)

## **Examples of Instruction about Media** Consumption across Key MMLE Dimensions\*

## Conceptual Knowledge

Sub-topic: Filter Bubbles

Teachers can begin by framing instruction around key questions like these: "What are filter bubbles? How do they affect civil discourse in a democratic society, and what can we do about this problem?" After briefly assessing any prior knowledge students may have on the topic, the teacher can define what a filter bubble is, briefly explain how exposure to fewer perspectives affects political discourse, and share media to further explain this phenomenon, such as Eli Pariser's TED talk on the topic. To conclude this lesson, students can discuss and/or write about their understanding of the topic, including steps they can take to counteract filter bubbles, such as intentionally seeking diverse viewpoints.

#### Procedural Knowledge

Sub-topic: Lateral Reading

Many students are familiar with the phenomenon of "fake news" and misinformation, so teachers can begin by inviting students to share their experiences and then providing further examples, such as those listed on the News Literacy Project's Viral Rumor Rundown. Then the teacher can pose this framing question: "How can we assess the credibility of our news sources?" From there, the teacher can describe and demonstrate lateral reading, ideally on a screen that students can see. This demonstration could involve the teacher briefly reading a source, opening another browser tab to conduct a search about that source, and exploring information about the credibility of the source. (More lessons on lateral reading can be found on Stanford's Civic Online Reasoning site.) Then students can practice the process themselves, beginning with a "fake news" story provided by the teacher. Afterwards, they can discuss how they read laterally and how they plan to use the strategy in the future.

### Metacognitive Knowledge

Sub-topic: Confirmation Bias

Teachers can help students understand confirmation bias inductively by asking them to first jot down their own opinion on an issue of interest (e.g., vaccine mandates, standardized tests) and then explore opinion pieces on different sides of that issue (many featured on procon.org and allsides.com). Students should note what points they find most persuasive and then share which arguments they found most compelling and why. This can then shift into a discussion of a metacognitive question: "What about my background, experiences, or prior opinions leads me to find certain evidence more compelling than other evidence?" Finally, teachers can take a step back and help students understand what confirmation bias is, with certain media to provide details (e.g., the related video by Facing History and Ourselves), and then lead a discussion about metacognition around this guiding question: "How do our own confirmation biases affect our (mis-)understanding of information?" To conclude, teachers should note that bias is not always bad but that understanding our own biases can lead us to a more complete understanding.

\* Resources noted in this sidebar can be found at these links: Eli Pariser's TED talk on filter bubbles: https://tinyurl.com/filter-bubbles-eli; News Literacy Project's Viral Rumor Rundown: https://rumors.newslit.org/; Stanford Civic Online Reasoning Site's Lessons on Lateral Reading site: https://tinyurl.com/lateral-reading; Facing History & Ourselves, Video on Confirmation Bias: https://tinyurl.com/confirmation-bias-vid.

seek perspectives beyond them. Our history of searches and clicks creates electronic "filters" that lead search engines and social media platforms to present us with information that cater to our apparent preferences.8 If two people conduct a Google search for "BP," one may get results related to investment news while another might see links related to the Deepwater Horizon oil spill. Likewise, our selections of specific newsfeeds and apps can reinforce certain partisan "bubbles" (see Table 3 on page 265). The cumulative impact of filter bubbles can lead to greater political polarization and a rejection or misunderstanding of alternative views.9

Another key concept is artificially manipulated mediasuch as "deep fakes" (realistic videos containing manipulated images). Millions have now seen the satirical PSA video by comedian Jordan Peele, in which Peele demonstrates the dangers of deep fakes by having his manipulated voice emerge from Barack Obama's mouth. In the video, Obama appears to make various surprising remarks, including some offensive words, when in fact Peele has used artificial intelligence (AI) technologies just to make it appear so. Educators should raise students' awareness about this Al-enabled deep fake phenomenon, discussing their characteristics and potential dangers. There are also interactive sites where students can analyze various examples of manipulated media and learn to spot them.<sup>10</sup>

There is also vital conceptual knowledge that can enable youth to effectively produce messages through media. For example, understanding the variety of information resource types, such as professional media and personal websites, can facilitate students' ability to identify credible information that can enable them to create their own summaries and arguments. If they want to distribute media-sharing what they or others have produced-students should understand which media outlets, such as Facebook or a local newspaper, would best help them reach their intended audience. Knowing where to distribute information can be guite empowering for those who are concerned about their communities or broader public issues.

## Procedural Knowledge in MMLE

Procedural knowledge is also vital for wisely navigating media. Often referred to as media literacy skills, procedural knowledge for Multidimensional Media Literacy and Engagement includes competencies that individuals use when they encounter media, not just how they conceptualize media. For example, students may be aware of paid content in principle, but can they easily identify the indicators of such content? What are the specific cues? Likewise, students may know that authors can be biased, but how well can students assess the strengths, weaknesses, or implicit stances embedded in an editorial's argument?

These media skills align with those needed in various school subjects and national standards. In history classes, for example, analyzing authors' biases and corroborating evidence are central skills for navigating historical questions using primary documents.<sup>11</sup> And the Common Core Standards for English Language Arts suggest that students learn to "distinguish among fact, opinion, and reasoned judgment in a text" (grades 6-8) and "evaluate an author's premises, claims, and evidence" (grades 11-12).12 These skills are vital for a well-informed populace.

To help students assess authors' biases and corroborate evidence, teachers can ask the following: Who authored this? How credible is this source, and why? What evidence is presented to support its claims? Do other sources support these claims or ideas? What biases might the author(s)

have? Studies indicate that such scaffolding can strengthen young people's ability to be more critical consumers of information.<sup>13</sup>

Another key skill is "lateral reading." Stanford researchers have found that skilled evaluators of web sources, such as professional fact-checkers, tend to read *laterally* rather than vertically.<sup>14</sup> This means that instead of exploring a source by clicking on its internal links (e.g., the "about" page), fact-checkers assess a site's quality by opening up new browser tabs and conducting searches on the source's reputation. (For example, a Washington Post article or Wikipedia entry about Breitbart News or Mother Jones magazine will tell readers if the source is conservative or liberal.)

Modeling and scaffolding such strategies can help to prepare youth to assess the credibility of sources on the web. A teacher might show students a news story about an unusual event (e.g., a heroic act or a political scandal) and then demonstrate (on a projected computer screen, if available) how to assess the quality of the source through lateral reading and how to corroborate the story's accuracy by conducting searches for other credible information. Then the teacher might ask students to engage independently in such strategies, requiring them to record and discuss how they assessed a story's accuracy.

Today, many young people are adept at producing, sharing, and remixing content on social media and elsewhere.<sup>15</sup> Creating and distributing provocative videos, music, posters, memes, 'zines, and other media enables students to organize, raise awareness, and demand change. This can be a core element of civic and social learning,16 and new media-based projects can be integrated into the curriculum for various courses.

Teachers can help youth develop the skills needed for persuasive multimedia presentations or art, such as selecting appropriate information sources, using multimedia tools (e.g., website design software, Google sites), and editing for a specific target audience. For example, in a government class, students can explore their understanding of ongoing current challenges, such as public health, school funding, or renewable energy, and then develop media-websites, infographics, podcasts, Twitter posts, or videos-to share their learning and ideas.

To engage effectively in distribution, they need the skills to reach the appropriate audience, whether online or in person. Communicating with members of the school community, for example, might involve creating pamphlets to distribute in the cafeteria or posting an announcement to the school Facebook page. But to reach a statewide audience, leveraging relationships with peers and adults on social media may be the best strategy. Teachers can play an important role in helping students develop these and other media literacy and engagement skills.

### **Metacognition in MMLE**

Metacognition is the ability to examine one's own cognitive processes and regulate one's own thinking. In the simplest terms, it is thinking about one's own thinking, and scholars of education consider it vital for deep learning.<sup>17</sup>

Interacting with mass media can generate strong emotions, which can affect our perceptions of certain issues and our subsequent actions. Analyzing and questioning our own conceptions of and experiences with media through metacognition can shape how we perceive the messages we consume, produce, and distribute. Acknowledging the importance of this issue, NCSS's College, Career & Civic Life (C3) Framework for Social Studies State Standards notes that students should learn to "identify the beliefs, experiences, perspectives and values that underlie their own and others' points of view about civic issues" (D2.Civ.10.3-5, emphasis added).<sup>18</sup> To do this effectively, students must first be aware of their own biases and tendencies.

Our confirmation biases lead us to accept information that supports our existing beliefs and to disregard facts that may challenge those beliefs. 19 Awareness of this tendency can prompt us to explore alternative viewpoints, question faulty reasoning, and seek credible corroborating evidence. To foster this, teachers can have students ask: Did I look for a source that makes a different argument? Why or why not? How willing am I to consider a viewpoint that challenges my own?

Related to confirmation biases is *motivated* reasoning. Driven by our inclination to reduce cognitive dissonance, motivated reasoning leads us to stick to a particular perspective despite

overwhelming evidence that supports an opposing perspective.<sup>20</sup> Those who have long believed that vaccines cause autism may have difficulty accepting the strong evidence indicating the minimal risks of most government-approved vaccines. On the other hand, when people understand that their own perspectives can limit their acceptance of valid conclusions, they may be more willing to question and challenge their own reasoning.

To help students grapple with their own confirmation biases and motivated reasoning, teachers—after sharing multiple perspectives on a controversial issue—could ask students to journal or discuss self-reflective questions like the following: What is my opinion of this issue, and what has shaped this opinion? Is there anything that keeps me from considering another point of view? How do my own experiences and background affect the arguments that I am willing to accept? What information sources do I usually explore, and what has led me to rely on these sources? Do I ever reject an idea just because of who said it (and before considering it), and if so, why?

In addition to confirmation bias and motivated reasoning, social factors, such as trust and local culture (e.g., belonging to a certain religious group, political party, or other group affiliation), can play a large role in shaping our beliefs and limiting our perspectives.<sup>21</sup> Recognizing and grappling with such tendencies and the factors that support them can enable us and our students to bring a nuanced, more self-reflective lens to media engagement.

Consider how different individuals might react to learning about a famous politician's suspected tax evasion. One reader who views politicians as corrupt might quickly assume guilt; another news consumer (who considers interparty tension) might suspect that the individual in question is being framed by political opponents. Both of these perspectives may be rooted in valid truths, but readers will be better able to reach evidence-based conclusions if they can recognize their own biases and at least temporarily put them aside.

In addition to asking questions like those listed above, some educators have designed perspective-broadening experiences to enhance metacognition. For example, teachers can ask students to approach a text or media message

with a "resistant" perspective-requiring students to interpret materials from the viewpoint of individuals that have a different political party, race, ethnicity, gender, or class.<sup>22</sup> Teachers can then build on such activities by encouraging students to reconsider the limitations of their own typical reactions in light of this fresh perspective. Examining divergent perspectives and the logic behind them can be enlightening when consuming media related to a variety of topics, such as immigration, tax cuts, policing, and shelter-in-place orders.

Such experiences could also sharpen assessments of one's own media production and distribution.<sup>23</sup> Indeed, awareness of one's own biases and inherently limited perspective can affect what an individual creates. For example, if a young advocate is making a video about how nuclear power is the best way to reduce climate change, awareness of her own motivated reasoning (e.g., her family's income from the nuclear industry) could make her more likely to include other possible emission reduction strategies and perhaps a disclaimer in the video about her own vested interest in the industry. Given the rapid flow of misleading information and half-truths today, it is important to help students assess how their own perspectives can shape their media consumption, production, and distribution.

### Attitudes and Resources for MMLE

Developing conceptual, procedural, and metacognitive knowledge in Multidimensional Media Literacy and Engagement can be challenging, but research suggests that certain attitudes and resources can facilitate their development. Studies show that certain civic attitudes, such as being interested in public issues, can strengthen an individual's willingness to spend time examining diverse perspectives on these issues. Likewise, an open-minded attitude can enhance one's willingness to consider new viewpoints.

Certain classroom experiences, such as discussions about public issues that explicitly welcome and invite diverse perspectives, can boost both political interest and political open-mindedness and may thus contribute to students' willingness to engage in thoughtful media literacy

practices.<sup>24</sup> To facilitate this, teachers can help establish a classroom climate in which students regularly engage in civil discourse, supporting students' capacities to interact respectfully during disagreements and share various viewpoints.

In addition, certain resources can generate more opportunities for the development of Multidimensional Media Literacy and Engagement. Most importantly, high-speed internet and computer access offer individuals the chance to consume, produce, and distribute various media on a regular basis, providing spaces for practicing procedural knowledge. While some school buildings and residences have excellent Internet access, many youth still lack adequate access, especially those in low-income areas.<sup>25</sup> When youth lack such access, they have fewer chances to develop MMLE (and other) practices. Expanding access to these resources should be a high priority of policymakers.

Related to this is the often-overlooked resource of time. We know that the flexibility of teachers' instructional time varies widely, but many teachers can choose how to shape a portion of their students' time. Given the benefits of improving media literacy and engagement, such as empowering youth and improving civil society, integrating MMLE practices into the curriculum is well worth that time.

## **Building Media Literacy & Engagement to** Strengthen Democracy

Healthy democracies require a well-informed public to choose leaders and shape policies that best reflect collective needs and values. For this reason, the architects of democratic systems around the world established norms and regulations to encourage the free flow of information. In these contexts, there have long been misinformation campaigns and more devious efforts to manipulate the public's thinking,26 but today's Internet, social media, and other communication tools present a unique set of challenges and opportunities.

Educators can play a vital role in preparing young people to navigate and contribute to our complex media landscape-and to become informed civic participants. We believe that if teachers attend to the categories and dimensions in the Multidimensional Media Literacy & Engagement framework during their instruction, they can strengthen the next generation's capacity to build a stronger democratic society.

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