

Article

A mindfulness-based information literacy framework for the current information environment

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Abstract

This paper proposes a new information literacy (IL) framework, based around mindfulness, that is suited for the contemporary informational environment. This framework results from a weeklong interdisciplinary dialogue among scholars, theorising and incorporating mindfulness as a significant aspect of healthy information seeking and interpretation. Our framework builds on existing IL frameworks but encourages information consumers to recognise their emotional responses and political biases while providing reminders that information always contains political components. By doing so, this framework updates existing IL guidelines to better reflect the current era of rising polarisation and affective media consumption. We present a mindfulness framework for IL that combines mindfulness practices with critical thinking in addressing the emotional impact of mis/disinformation and conspiracy theories on the current information society.

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Keywords

conspiracy theories; disinformation; information literacy; media literacy; mindfulness; misinformation

1. Introduction

The current information environment presents unique obstacles to the possibility of an informed citizenry. While individuals in contemporary Western societies have greater access to information than any generation before them, these information consumers are also more susceptible to the spread of mis/disinformation as well as conspiracy theories (van der Linden, 2022). This is especially problematic in major democracies where such information challenges directly impact the health of social and political processes surrounding elections and parliamentary traditions (McIntyre, 2023).

Citizens are increasingly using social media as their primary source of news (Newman et al., 2023), largely due to its convenience and speed (Wang & Forman-Katz, 2024), but this type of information use is not without consequences. For instance, growing evidence suggests that social media plays an important role in the spread of misinformation (Del Vicario et al., 2016) even in globally important instances, such as during the COVID-19 pandemic (Joseph et al., 2022 for a scoping review). Accordingly, the increase in social media use for news and information is correlated with heightened concerns about inaccuracies or even deception in content found on social media (Wang & Forman-Katz, 2024) as well as rising interest in having the government restrict the spread of false information online (Mitchell & Walker, 2021).

Despite this, information consumers lack clear and systematic strategies for identifying and understanding inaccurate or false information. Though some recent initiatives suggest that tech companies may start taking a more active role in reducing election-related AI misinformation through technological interventions (Field, 2024), these companies' general role thus far has been unsuccessful in mitigating the spread of false and misleading information (European Commission, 2023). Indeed, technological solutions have proven inadequate in many cases due to the complexity, scale, and speed of the problem. As has been widely reported, technological interventions, such as deplatforming conspiracy theorists, are both problematic from a free-speech point of view and unlikely to prevent conspiracism in the long term (Honigberg, 2021; Horta Ribeiro, 2023). Moreover, large technology companies have a rather problematic history when it comes to managing information in ways that promulgate a healthy engagement with such information, including prominent scandals such as Cambridge Analytica, which revealed the scope and scale of the problem (Wylie, 2019). Rather than relying on "Big Tech" to prevent the spread of bad information, which is both challenging and may be hampered by their financial incentives, we argue that information consumers must also become more aware of the impact of their information use. Without information literacy (IL), consumers may be unable to effectively engage in democratic political processes. Thus, inculcating healthier information practices is essential.

Individual citizens need better IL tools that take the current online information environment into account. Calls for an update to existing IL guidelines, such as Barbara Fister's (2021) provocation in the *Atlantic*, illustrate the importance of scholars engaging in this work. The need for a new framework of IL is especially important given that principles espoused by the

Association of College and Research Libraries (ACRL, 2016) can be co-opted by conspiracist groups that maintain the same underlying ethos. Conspiracy theorists understand the fundamental principles advocated in that framework: that authority is constructed and contextual, that information has value, that information creation is a process, that searching for information is strategic, and that research is a form of inquiry and a conversation (Hannah, 2023). While such possibilities for misuse of IL frameworks should not undermine the importance of IL per se, the acceptance of major IL principles within conspiracist movements suggests that conspiracy theorists may not be as susceptible to such approaches because they believe themselves to be more information literate than others. Indeed, this has become so prominent in the conspiracy theory community that many will joke about the absurdity of being lectured to by someone who has not “done the research” (Carroll, 2024; BK, 2024). Such vulnerabilities in the ACRL framework suggests that such approaches to IL may also be potentially ineffective for inculcating healthy information practices among citizens who engage such conspiracist content. As Greer and Beene (2024) demonstrate in an important new book on this topic, the conspiracism is particularly problematic as it provides significant challenges for literacy efforts and requires new tactics.

In response to the limitations of traditional IL frameworks, we assembled an interdisciplinary group of scholars working with information in various domains—from the fields of information studies, communication, computer science, political science, and psychological sciences—to theorise and design a new IL framework, which we present in this paper. Rather than further emphasising critical thinking within the context of information landscapes, we focus on the *affective* dimension of information consumption and interpretation as a neglected yet important aspect of the current information society. Importantly, this new framework centres mindfulness as an essential feature of IL, placing emphasis on how information retrieval and assessment triggers, and is triggered by, certain emotional registers, such as anger or fear. Such emotional states are deliberately sparked through the rhetorical devices used in fake news, mis-/disinformation, and conspiracy theories and risk encouraging violence and social discord (Frissen et al., 2021). And while many information consumers may seek information that makes them angry because such negative emotions feel temporarily good, we argue that mindfulness can reduce negative emotions generally and thus may be salutary in lowering the overall political temperature. This new IL framework includes ten principles, each of which has theoretical and practical applications to the teaching and study of IL. In the subsequent sections, we will detail how each of these principles was developed. Our new IL framework is presented in its entirety in the Appendix, using an easily accessible format that is intended for both scholarly and public use.

2. Background: The current information environment

In 2024, the World Economic Forum (2024) named misinformation and disinformation the top risk globally during the next two years, citing its likelihood of further widen societal and political divides. Specific to the United States, Americans rated “made-up” news and information among the most pressing problems in the country (Mitchell et al., 2019). This same Pew Research Center survey found that such false news and information was of concern to Americans due to its ability to negatively impact citizens’ confidence in government, citizens’ confidence in each other, and their perceptions of political leaders’ abilities to do their jobs. A study conducted by Newsworks found that 80% of people living in the United Kingdom have encountered fake news regularly, with over half reporting they have been fooled by such information (Boulton, 2022). According to the United Nations, 85% of people surveyed in a global poll worry about the impact

of online disinformation in advance of elections and other important events (Henley, 2023). Clearly, traditional IL frameworks may be ill equipped to intervene in such an “infodemic” (Naeem & Bhatti, 2020).

The spread of misinformation, disinformation, and conspiracy theories has proliferated as online information consumption has increased, with scholars calling social media’s dissemination of misinformation “a severe threat to public interests” (Muhammed & Mathew, 2022). Far-right political operatives labelling inaccurate information as “alternative facts” (Jaffe, 2017) and the proliferation of AI deepfakes—recent advances in generative AI platforms, such as ChatGPT, reduced the barrier to entry significantly—have ensured ever more AI content on the web (Philmlee, 2023). Simultaneously, concerns about the future potential of a unitary, collective reality are growing (Zuckerman, 2021). This problem has so impacted the social fabric that some have begun theorising the “post-truth” society as a functional experience (McIntyre, 2018). Moreover, the spread of online conspiracy theories has had a profound impact on political extremism, resulting in several instances of mass violence offline (Rose, 2022; Jensen & Kane, 2023). Nor is the post-truth problem restricted to the political right, with left-wing political narratives about former U.S. president Donald Trump’s alleged role as a “Manchurian candidate” rife on social and mainstream media opinion pages (Boot, 2017). The political and social impact of bad information is incalculable and serves as a stark reminder of the fragility of the current information infrastructure.

2.1 Low levels of trust

An ever-decreasing lack of trust in mainstream media—print, radio, TV, and online—has also played a role in the current information environment. In 2023, 39% of Americans said their trust and confidence in newspapers, TV news, and radio news was “none at all,” and only 32% of Americans said they had a fair amount of trust or more (Brenan, 2023). Meanwhile, 57% of Americans expect to see inaccurate information on social media (Shearer & Matsa, 2018). Similar patterns are found globally, with many nations experiencing sharp declines in trust in news and increases in the use of social media to find information (Newman et al., 2023). Importantly, news consumers may conflate their perceptions in trust of particular news sources with these sources’ production of like-minded information (see Hoewe et al., 2023a). People also enjoy getting news and information from those who agree with them (Fioroni, 2023). Choosing information outlets in an increasingly pluralistic media landscape may lead to selective exposure which, together with a preferential treatment of evidence supporting already held beliefs, can easily turn into confirmation bias, or a “favoring of attitude-consistent messages” (Knobloch-Westerwick et al., 2020, p. 105). This confirmation bias might then be further strengthened by motivated reasoning, where citizens’ accuracy and partisan goals may conflict (Taber & Lodge, 2006). Taken together, the increasing partisanship in the consumption of information has produced a media environment in which outrage and fear are drivers of engagement within a saturated information economy (Pedersen et al., 2021).

Trust levels hold partisan implications as well, where liberal/left political ideologies tend to be more trusting of mainstream media than far-right political orientations (Jurkowitz et al., 2020). A clear example of the dangers of fake news arose during the 2016 U.S. presidential election, when foreign state actors weaponised such information to influence election outcomes (U.S. Intelligence Committee, 2019). Ongoing and widening gaps between political parties, such as between Republicans and Democrats in the United States, can exacerbate the impact of false information (Druckman, 2022). Individuals who report hating their political opponents are more

likely to spread false political news (Osmundsen et al., 2021). Worsening political partisanship, combined with contemporary media infrastructure, which exacerbates outrage, mis/disinformation, and conspiracism, has produced a toxic environment in which democratic norms and processes are under increasing threat, not only from foreign adversaries, but from within the democratic institutions themselves. Thus, an updated IL framework that takes these dynamics into account is necessary.

2.2 Information warfare and conspiracy theories

Political processes around the world, both in major democracies and non-democracies alike, have been dramatically impacted by the problems of online information and its relationship to empirical reality. For example, global instabilities are currently being exacerbated by disinformation campaigns, known broadly as “information warfare,” waged by foreign state actors such as Russia or China (Lanoszka, 2019). Of course, information warfare has a long history and is often a prominent approach to international confrontations, brought about by nations attempting to manage assets and resources within the information space (Farwell, 2020), but the rise of the internet as the predominant mode of communication has elevated information warfare as an effective tactic to destabilise nations. We have already seen a resurgence of dedicated disinformation campaigns by Russian agents leading up to the 2024 U.S. elections (Swenson, 2024). Mis/disinformation has spread across Europe with an outsized impact on democratic norms and values (Conrad et al., 2023). Bad information has also played an impactful role in destabilising the internal coherence of political parties in Africa, as technologies such as deepfakes have been leveraged by competing factions but also have produced new modes of social justice activism (Cahlan, 2020; Roberts, 2024).

With this epistemological crisis as the backdrop, online conspiracy theories have flourished in the post-truth society by offering alternative explanations for current political and economic instabilities. Conspiracy movements, such as QAnon, have developed advanced understandings of information infrastructure (Rothschild, 2021). Leveraging the networked potential of imageboards and social media to establish horizontal activist networks, these movements developed sophisticated recruitment tactics known as “redpilling”, which use feelings of anger and fear to encourage conspiracist ideation. Redpilling refers to the film *The Matrix* in which the main character, Neo, is offered a choice between awakening to the existence of the Matrix (the red pill) or choosing ignorance that all experience is an illusion (the blue pill). This has become a prominent metaphor for conspiracist epistemologies in which “awakening” to the operations of the conspiracy is an essential mode of knowledge about the world (Hannah, 2021a; Marwick & Furl, 2021; Marwick & Partin, 2022). Within the QAnon community, “do your own research” has become a mantra with dramatic impact on social cohesion and political processes around the world (Ballantyne et al., 2024). Because of the power of the internet to connect communities, America has now exported QAnon to a global audience hungry for alternative explanations for current events (Farivar, 2020; Scott, 2020). While QAnon advocates may believe they are practicing a form of IL in doing their own research, the data they compile is already manipulated to fit existing ideological paradigms. Developing more sensitive instruments to combat such misguided IL efforts is necessary to respond tactically in the post-truth society.

To understand and potentially intervene in these online information disorders, we theorise possible alternatives to the age-old emphasis of inculcating critical thinking as a panacea for bad information. Due to a confluence of social factors and information infrastructure, critical

thinking no longer seems feasible as a standalone approach (Hannah, 2023). Instead, we focus on the information consumer's emotional responses to information and attempt to develop approaches that tamp down negative affective dimensions of information through innovative approaches more attuned and sensitive to the unique dynamics of the current information age.

3. Approach

To address the aforementioned problems, we assembled an interdisciplinary group of scholars at Purdue University and the University of Missouri to develop an updated framework for IL that is suited for the current information environment. Our team consisted of three professors, in communication, information studies, and computer science, and two graduate students, in political science and psychology. This team met regularly with the purpose of identifying problems and solutions related to IL. To begin our group meetings, we discussed existing frameworks for IL as well as the challenges presented by the current informational environment. We also read and discussed existing literature during each day of these meetings. We then theorised potential solutions based on our unique disciplinary perspectives. A note taker summarised our discussions each day. At the end of these meetings, we finalised our new framework. This overall approach has been suggested as potentially transformative for learning within research teams (Brown et al., 2023). Collectively, this new framework distils our joint understanding of the emotional, social, technological, and political aspects of digital information consumption.

Central to our collaboration was the notion that individual disciplines are only able to tackle a facet of the problem based on disciplinary mores and approaches. Instead of addressing these information challenges from one discipline (Singh, 2023), we firmly believed that interdisciplinarity was essential for theorising this framework, because each discipline brings its own research methodologies and epistemologies (Hérubel, 2023). Hicks et al. (2024) described the collaborative process in theorising as craft, "a slow and organic process of collaborative interpretation," in which thinking, collecting, sharing, and writing occur through collective osmosis. In this project, such a craft meant disciplinary conversations and engagement with the notion of IL, which is a specific set of practices and theories not consistently understood across disciplines. Interdisciplinary discussions and engagements with IL frameworks opened a space for each team member to offer unique disciplinary interpretations of those frameworks. Synthesising our perspectives provided insights about information challenges that helped us find an approach derived from our various expertise.

4. Our proposed solution

In developing a new framework for IL in the current post-truth time, we do not mean to suggest that existing frameworks are without value. Instead, we theorise new possibilities that can complement and enhance existing frameworks of IL and address problems immanent within the post-2016 internet ecosystem. For example, the ACRL's framework was first drafted in 2015, and much has changed since then. With the rise of extremist, far-right political movements sanctioned by mainstream candidates around the world, as well as the lingering spectre of the January 6th insurrection in the United States, the need for a more sensitive instrument designed explicitly with the current information environment in mind is manifest. Our intention is to contextualise information practices within our contemporary moment, encouraging mindful reflection on information seeking behaviour while maintaining healthy scepticism toward

information production and dissemination. This is no easy task given the mercurial nature of information and ideology today.

One major conclusion from our meetings was that mindfulness should be included as the foundation for critical thinking rather than relying strictly on reason as a universal good. This is reflected in the first principle of our new IL framework (see Appendix). Scholars have previously argued for the role of mindfulness in IL (see Aytac & Mizrachi, 2022; Endacott et al., 2018; Potter, 2004), but it has not been widely implemented in public-facing guidelines or resources for consumers. We believe that shifting the core emphasis from critical thinking to mindfulness may provide a new tactic for dampening the affective dimensions of conspiracism and the algorithmic bias in favour of sensational content online. While such attention to the emotional valences of political belief may not prevent conspiracism and extremism, we believe it will be far more effective than focusing entirely on inculcating traditional IL as an epistemological orientation toward reason and critical thinking.

It is important to note that mindfulness may also be vulnerable to conspiracism. Over the past few years, conspiracist and extremist rhetoric and ideology has permeated health and wellness communities at an alarming scale (Baker, 2022), such that commentators have now begun labelling such beliefs “conspirituality” (Beres et al., 2023). While Baker (2022) found that health influencers encouraged their followers to trust their intuition and “native expertise” (Baker & Rojek, 2020) to recognise informational “truth”, our framework focuses on recognising emotional responses to information. Unlike traditional IL frameworks, where the goal is to teach individuals how to reason critically under the assumption that such critical thought necessarily leads to healthier information behaviour, a framework centred in mindfulness is dedicated to the idea that reflecting on our information consumption can reduce *affective* responses to information. We believe this approach can lead to better mental health and information behaviours while slowing the spread of mis/disinformation and conspiracy theories. The time is ripe for a new IL framework that is more responsive to the political moment and takes into consideration the dynamics of the hyper partisan and emotionally volatile online environment in which bad information is produced and circulated (Peacock et al. 2021), responding especially to the rage-baiting inherent to mis/disinformation.

4.1 Mindfulness

Mindfulness is the intentional awareness that occurs when an individual attends to situations using openness and discernment, drawing particular attention to the present moment (Shapiro, 2009). Using mindfulness when consuming information can tamp down knee-jerk affective, often negative, responses to partisan news and misinformation (Sivek, 2018). This process of mindfulness asks information consumers to pause and reflect on the information they are consuming, which has been shown to improve learning and retention and reduce emotional reactions (Aytac & Mizrachi, 2022). Incorporating this “pause” as a way of reflecting on the emotional experience of receiving new information may be an effective way to develop more thoughtful, less reactionary responses to that information.

Mindfulness has been applied in several domains, including in workplaces, healthcare, schools, and the military (Creswell, 2017). Mindfulness exercises have proven effective in reducing stress and anxiety (Hofmann et al., 2010; Kabat-Zinn et al., 1992). They can also increase immunity to infectious diseases and cancer (Carlson, 2007; Witek-Janusek et al., 2008). Regular mindfulness practice can even bring about changes in a person’s brain structure

(Williams, 2010). People with higher levels of mindfulness also have increased awareness of their bodily sensations (Sala et al., 2024). Mindfulness exercises often include breathing techniques that help reduce affective responses (Arch & Craske, 2006; Cho et al., 2016; Doll et al., 2016; Metz et al., 2013). Remembering to take a breath and scan the body for emotional responses to information can be a possible path to healthier information consumption.

Narrowing to the topic of interest in this article, some mindfulness research has focused on media use, in particular. For example, mindfulness can improve positive affect through an increased tolerance of ambiguity and increased complexity in thinking (Le et al., 2012). Other scholars have suggested that greater scholarly focus on mindfulness could help in understanding how individuals select and use news media (Timmerman, 2002) and how to support democratic behaviours (Hyde & LaPrad, 2015). Importantly, research on political news use also shows that dispositional mindfulness reduces problematic news use; that is, greater mindfulness means less political hostility in information consumption (McLaughlin et al., 2024). Thus, our new framework encourages information users to pause and reflect on the information infrastructure itself (that is mindfulness).

4.2 The effect of affect

It is insufficient, however, to expect awareness of the information infrastructure alone to produce real changes in the *affective* dimension of information. Certainly, such awareness is important, but the reality is that most individuals who get sucked into extremist beliefs or conspiracist rabbit holes are well aware of the limitations of mainstream media. They often have sophisticated, if inaccurate, understandings of how information is produced, packaged, commodified, politicised, and by whom. Thus, our framework combines the critical understanding of information as a site of political contest with a mindfulness approach meant to encourage reflection on the affective dimensions of information and belief. We know that emotional responses to information increase its engagement on social media (Horner et al., 2021). And anger, in particular, leads to lower critical thinking during information processing and a higher reliance on heuristics (Bodenhausen et al., 1994; Huddy, 2007). Recognising that our contemporary information ecosystem is designed to stimulate responses from consumers, we argue for mindfulness as one possible response to the creation of extremist “affective publics” (Papacharissi, 2015).

To address this, our framework emphasises mindful awareness of affective responses to information. We recommend that information consumers always keep in mind what information is asking them to feel, do, or believe. Recognising the ways in which information can be packaged or manipulated with the explicit purpose of soliciting negative emotions as part of their financial objective can help consumers be more cautious when those feelings are aroused. Furthermore, it is important for all information consumers to contemplate and understand their own motivations and political beliefs. Individuals’ beliefs can alter the way they choose to consume, interpret, or remember information (for example through partisan motivated reasoning, see Leeper & Slothuus, 2014 and Hennes et al. 2020). It is possible for individuals to become fixated on information, particularly that which is affectively stimulating, allowing it to cloud their ability to assess current and ongoing situations. Keeping in mind what matters for an individual’s day-to-day life can help. Mindfulness clearly plays a role here as well.

Additionally, individuals should work to increase their intellectual humility, or the awareness of one’s fallibility. Greater intellectual humility has been shown to increase people’s abilities to detect political misinformation (Koetke et al., 2022), in part, due to its metacognitive aspects

(see Porter et al., 2022). Along these lines, increasing metacognition can decrease enjoyment of partisan news and cause news consumers to opt out of future partisan news content (Hoewe et al., 2023b). Asking information consumers to reflect on why they are feeling angry or sad or afraid may provide a space for reflection about one's personal emotional wellbeing and raise awareness of manipulation and emotional coercion espoused by some content creators.

4.3 Understanding information

Our framework does not try to shift people's pre-existing beliefs. We ask information consumers to consider their own motivations and biases and how they are impacted by the current information environment, which is focused on evoking emotions and catering to individuals' specific perceptions (for example political leanings). We ask consumers to keep in mind that opinion and news are distinct. Good sources of information will clearly indicate whether what they have published is opinion or news, and it is important to emphasise that opinions are not raw data. Just because someone presents their opinion as a fact does not mean it is devoid of bias or ideology. Encouraging consumers to see the semiotic gap between data and information (Hannah, 2021b), between the underlying facts and the interpretation, can open a space for reflection and pause. Also, some information may be distributed purely for political entertainment. It could be designed to stimulate a particular politicised audience. Whether or not this information is also educational will depend on the motivations of that information's creators.

Our framework also urges information consumers to understand that information is "multiple," that it is never as simple as it is presented by commentators and viewers. Information can encapsulate the subjective perspectives of its author. It can defy singular true/false labels but should be evaluated based on multiple dimensions such as temporal availability, as well as political and commercial interests. We still recommend that information consumers use various fact-checking sources to confirm information, but also promote other modes of engagement with information that recognise how information is curated and disseminated for entertainment purposes, which may use anger, fear, and anxiety as motivational tools.

We encourage individuals to check for a code of ethics for that source of information. Good, ethical sources of news should have a code of ethics, as argued by Hoewe & Sherrick, (2020). Our new framework also promotes an understanding that information can change over time. Scientific theories and current event information will evolve as more information comes to light. During the COVID-19 pandemic, many turned to conspiracy theories as explanatory mechanisms for changing scientific consensus, betraying a lack of awareness of the scientific process (Knight & Butter, 2023). While there are many complex historical and personal reasons why Americans are sceptical of medical authority, including travesties perpetrated against the American people, from the Tuskegee experiments (Brandt, 1978) to the CIA's psychological experiments with MKUltra (Ross, 2007), conspiracism and mis/disinformation about changes to public health policy, this conspiratorial turn had a dramatic impact on the effort to fight the pandemic. As such, knowing that information might change over time without malign underlying reasons, and flexible thinking around the evolution of scientific consensus, is essential in navigating complex informational events.

Information consumers should also recognise that information and politics are never independent of one another. That is, different sources of information will have different political motivations, meaning that information is a priori political. One of the essential problems with the ACRL framework is that it presents a utopian vision of IL as apolitical and universal (Hannah,

2023). The best media outlets work to inform a democratic citizenry and show little political bias, while the worst intentionally harm people by advancing conspiracy theories and disinformation as part of an extremist political agenda and white supremacy (Bond, 2023). Our framework urges news consumers to remember that good sources of information should not overtly try to persuade you; their primary motivation should be to inform the public.

But we also encourage information consumers to question the role of power, ideology, and money in information production and dissemination. This principle is especially important because conspiracy theories themselves are predicated on such critical awareness, but they misapply such a critique. While critical scholars have long understood the nuances of the relationship between media, money, and ideology (Arning, 2013; Kojola, 2017), the public should understand how to think carefully about such issues without resorting to conspiracy theories. Understanding the processes by which information is created also means understanding that information is an interpretation of data. The presentation of information, particularly in its bad forms of mis/disinformation, can be misleading. Locating the data from which the information came can help to confirm conclusions.

5. Conclusions

This IL framework is designed to showcase mindful approaches to information in the hopes that individuals will become more conscious and reflective of their information consumption practices. While we do not believe this framework will be a panacea for mis/disinformation or conspiracy theories, we anticipate that inculcating mindfulness may tamp down the affective dimensions of information seeking behaviours and that this may have a salutary effect in the long term.

Rather than getting caught up in the “culture wars,” which have become a proxy for political partisanship in the cultural domain and which may steer attention away from more pressing issues, we ask information consumers to consistently reflect upon their emotional health when seeking and consuming information. We believe that mindfulness practice, including recognising affective responses to information and taking a breath to let them go, when combined with many existing media and IL principles, may prove more attractive than conspiracy theories, given its abilities to improve overall health. We hope that developing this new IL framework in light of the current information environment, can serve as a starting point for both scholars and the general public to better understand and respond to IL challenges as they impact their emotional wellbeing and mental health. While this will not prevent mis/disinformation or conspiracy theories from appearing and spreading, such a framework may at least slow the process and improve democratic health through more productive deliberation among citizens in the current information society.

Implementing this mindfulness IL framework is a bit more complicated. Information disorders have had a massive impact on the public sphere, and such frameworks could be useful for public interventions but must be tested (de Zeeuw, 2024; Beene & Greer, 2021). Of course, such a framework could be used in higher education settings, and members of our team are already seeking such opportunities to test the underlying assumptions of this framework through grants and new partnerships, but such an approach is necessarily limited. Indeed, one of the most visible weaknesses of the ACRL’s IL framework is that it is designed exclusively for higher education. An updated IL framework should be designed “for the people,” where it can be deployed as a bulwark against extremism and conspiracism. To that end, we plan to test this

framework in local communities to determine if non-partisan, empathetic approaches to information challenges can have a positive impact on information consumers beyond university settings. While it will take time and patience to develop better IL practices among all of us, we believe the time is right for this new approach to IL, based on mindfulness and reflection on information consumption.

Declarations

Ethics approval

Ethical review was not considered necessary in alignment with the Purdue University's guidance on the conduct of ethical research.

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AI-generated content

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Appendix

A Mindfulness-Based Information Literacy Framework for the Current Information Environment

1. Mindfulness should be the foundation of critical thinking.
 - a. Practice deep breathing when encountering political information. (Incorporate brief, daily mindful breathing when possible.)
 - b. Pause and reflect before reacting to information.
 - c. Recognize when negative emotional responses begin and consider why you're having that response.
 - d. Know that anxiety and fear feed conspiracism and extremism, and anger reduces thoughtfulness.
2. Understand your own motivations and political beliefs as you seek information.
 - a. Continually ask yourself: Are my beliefs altering the way I am interpreting things?
 - b. Think about the bigger picture by asking yourself: What do I care about? Does this matter for my day-to-day life?
3. Work to increase intellectual humility.
 - a. Use increased metacognition—thinking about your thinking—to facilitate greater intellectual humility and more mindful information use.
4. The current information environment is driven by emotions and perceptions.
 - a. Know that opinion is not news. Good sources of information will clearly demarcate what they've published as either news or opinion.
 - b. Recognize when information is purely political entertainment.
5. Information is always multiple.
 - a. Confirm information across multiple sources.
 - b. Check facts with non-partisan sources of information.
 - c. Find the code of ethics; good news sources will have one.
6. Information changes over time.
 - a. Keep in mind that theories may change as situations evolve.
 - b. Remember that scientific breakthroughs necessarily involve temporal change.
7. Information is not independent of politics.
 - a. Think about the political motivations behind the sources of information you use.
8. Information dissemination is often motivated by power and money.
 - a. Consider what sources may gain (or lose) by disseminating the information.
9. Think about what information asks you to do or believe.
 - a. The primary motivation for non-partisan information creators should be to inform their audience.
10. Information is an interpretation of data.
 - a. Information can be presented in ways that are misleading. Seek the data for confirmation.