

THE MEDIA, BOTS, TROLLS AND KIDS: THE THREAT OF MISINFORMATION IN THE INFORMATION LANDSCAPE

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Bianca Bertalli considers the ‘media minefield’ and the benefits of collaborative teaching to facilitate students’ media literacy...

The internet has revolutionised the way people seek and use information. It has enabled faster and easier communication, facilitated the global trading of goods and ideas, and integrated access to information with everyday life. These rapid changes are reflected in classroom practice, where technology has transformed the tools available to teachers and students (Haleem et al., 2022). However, as access to information has grown, so has the proportion of misinformation available to consumers. Fake news, algorithm powered bots and organised troll groups are some of the common channels of misinformation likely to be encountered by today’s students.

Classroom teachers and teacher librarians play a key role in teaching students how to critically evaluate information. By developing collaborative practices in inquiry learning, teacher librarians can align learning with this need and support colleagues through an unprecedented era of online content creation and consumption (Australian School Library Association [ASLA], 2019; NSW Department of Education, 2022).

MISINFORMATION VS DISINFORMATION

The term ‘misinformation’ infers an overarching invalidity of information, however other fundamental components are also at play in online content. Misinformation can be shared or spread unwittingly, or it can be categorised as ‘disinformation’ and deliberately circulated for financial gain or political advantage (Australian Communications and Media Authority, 2023; Harrison and Leopold, 2021). Ranked by severity, in terms of the negative social, economic, and environmental impact, mis/disinformation ranked 16th out of 32 imminent global risks identified by the World Economic Forum (2023). Worryingly, when considered in a long-term 10-year projection, mis/disinformation advances to 11th position. While the impact on young people has not yet been widely examined, the prospect of mis/disinformation as a global threat is particularly concerning, given that it ranks well ahead of dangers such as terrorist attacks or the use of weapons of mass destruction (World Economic Forum, 2023, p 11).



THE MEDIA: FUSION OF FACT AND OPINION

The emergence of ‘alternative facts’ and the recurrent sharing of unchecked information throughout the COVID-19 pandemic highlighted the prevalence of misinformation in the media. It also increased concern globally on the cause and effect this may have on young people (Howard, Neudert and Prakesh, 2021). False news and media bias have the potential to undermine confidence in political personalities and influence democratic processes (Hobbs and McKnight, 2014; Nettlefold and Williams, 2018). The way news media is framed can underrepresent, misrepresent or purposefully exclude specific groups of people (Meehan et al., 2015; Moyer, 2022).

Mis/disinformation can also ignite and spread polarising ideas and threaten ‘social cohesion’ (World Economic Forum, 2023, p 24). Harrison and Leopold (2021) acknowledge that while political agendas are often the driving force behind media, financially incentivised click-bait headlines also make it tempting for media to give precedence to content that will draw readers in, rather than present accuracy.

The often-imperceptible fusion of fact and opinion across news media, combined with the reach and saturation of a small number of news corporations, places Australian school students at risk of information overload without a way to critically evaluate their way out (Nettlefold and Williams, 2018).



In a study of 1,000 Australians aged 8-16 years, Notley and Dezuanni (2020) found that despite an 8% increase in news consumption since 2017, there was only a 2% increase in the number of students who felt they could distinguish fake news from real news. Even though the broad consensus of teachers agreed that engaging with news in a critical way is important for students, only 1 out of 5 Australian students said that they had been taught how to decide whether a news story was credible (Nettlefold and Williams, 2018; Notley and Dezuanni, 2020).

BEWARE THE BOTS

Through carefully created algorithms, internet ‘bots’ (originating from the word ‘robot’) have changed the way information is curated for search engines and can deliberately alter the way in which information is prioritised for viewing (Head et al., 2020; Nettlefold and Williams, 2018; Rogers-Whitehead et al., 2022). Bots and algorithms are neither good nor evil, as their function and impact are determined by those who designed them (Head et al., 2020; Lutkevich and Gillis, 2022). They do, however, have the power to alter the flow of data and influence an internet user’s experience (Alemanno, 2018; Rogers-Whitehead et al., 2022).

It has been estimated that bots make up more than two-thirds of internet traffic (Barracuda, 2021; Rogers-Whitehead et al., 2022). For example, over a 6-month period in 2020, COVID-19 related tweets were collected and analysed. Carnegie Mellon University (CMU) researchers found that 82% of the 50 most influential retweeters were in fact bots (CMU, 2020). This inundation of mis/disinformation and polarising messaging spread by bots can have alarming consequences, including risks to public debate and democracy or increased hostility, violence or crime (CMU, 2020; Howard et al., 2021).

While students prefer search engines, such as Google, as their primary source of research information, they often have a misplaced trust in it, believing that search results are provided, or fact checked, by a human employee (Dring, 2014; Lane and Van Bergan, 2018; The Office of Communications [OFCOM], 2017). Instead, web-crawler bots provide a curated list of website suggestions in response to search queries and, although students may believe sources are listed in order of validity, bots order results based on other factors, such as the frequency of visits to a site or the quantity of pages that link to a site

(Cloudflare, n.d.). Google also lists paid search results that can be difficult for students to distinguish (OFCOM, 2017).

Complex algorithms further construct an individual's online experience from data harvested through each engagement. The way in which algorithms present increasingly extreme viewpoints through 'Watch Next' suggestions on YouTube (Moyer, 2022) or other algorithm-driven content, such as personalised news feeds, advertisements or friend suggestions, makes it difficult for students to separate fact and fiction online (UNICEF, 2021). Rogers-Whitehead et al. (2022) warn that, as children grow and more seamlessly engage with technology, they will become 'even more accustomed to outsourcing their information seeking and "truth" to devices' (p 7).

CROSSING THE TROLL BRIDGE

The internet dominates the channels that humans use to communicate and share information, and while propaganda is not a new concept, content specifically created to propagate ideologically-driven conflict has grown exponentially. When a student views an idea or message frequently, they often misinterpret this as an indicator of truthfulness (Moyer, 2022; Howard et al., 2021). At times, these messages are created by trolls, people who intentionally initiate hostility and conflict, often using mis/disinformation as their chosen weapon (Bradshaw and Howard, 2017; Howard et al., 2012).

The efficacy of organised troll groups in gaining political influence was investigated in an Oxford University study by Bradshaw and Howard (2017), who coined the phrase 'cyber troops' to describe 'government, military or political party teams committed to manipulating public opinion over social media' (p 3). They found that, across at least 28 countries, coordinated efforts were made to engage in social media platforms to sway or stifle discussions or consciously spread disinformation.

PRACTICAL SOLUTIONS: A COLLABORATIVE APPROACH

Inquiry learning, including media literacy, is fundamental to the [Australian Curriculum](#) (ACARA, n.d). The rationale in the [Media Arts](#) learning area, for example, states that: 'students learn to be critically aware of ways that the media are culturally used and negotiated, and

are dynamic and central to the way they make sense of the world and of themselves' (para. 3). More specifically, subject content descriptions provide scaffolds to assist students' deep learning. For example, the content for [Year 4 HASS](#) (Humanities and Social Sciences) is driven by a number of 'inquiry questions' and divided into two strands: 'knowledge and understanding', and 'inquiry and skills'. In particular, the 'researching' and 'analysing' skills require students to 'locate and collect information and data from different sources,' and 'identify different points of view and distinguish facts from opinions.' In various iterations that differ in complexity, the same questions and skills drive student learning in HASS from Foundation to Year 7.

In NSW, across the range of syllabuses, and at all stages, students are required to independently research and analyse information in various online and offline contexts, making it crucial that they are given the opportunity to develop skills that enable them to critically engage with information. The [Stage Statements for Geography K-10](#) (NESA, n.d.), for example, provide a continuum of learning focused on inquiry and students' ability to effectively consume and produce information. Lane and Van Bergen (2018) note that, as students compare, contrast and critically evaluate sources through the inquiry process, they become more adept at identifying mis/disinformation.

Despite universal recognition of the importance of media literacy, the current combined responsive efforts of media policy, regulation and educational practices to facilitate media literacy are predicted to fall short in addressing the projected global threat of mis/disinformation (World Economic Forum, 2023). However, with information technology acting as the 'primary driving force behind education reform' (Haleem et al., 2022, p 1), the need to increasingly assess the validity of information presents teachers and teacher librarians with a powerful, collaborative opportunity.

Teacher librarians can support classroom teachers and help bridge the knowledge gap to teach students media literacy skills (Nettlefold and Williams, 2018) by providing both in-context instruction shaped around the Information Fluency Framework ([NSW Department of Education, n.d., PDF 900 KB](#)) and curriculum-aligned resources. Britannica Education (2024), for example, offers a freely available online [Media Literacy Guide](#), which unpacks

media literacy metalanguage and provides helpful activities to encourage students to develop their critical information literacy across various platforms. Similarly, the ABC Education's (2024) [Media Literacy](#) online hub of videos and interactive activities covers a broad range of topics, including social media, news bias, media ethics and fact checking.

Misinformation presents a ubiquitous threat for our young people. It is essential that classrooms and school libraries operate as spaces where information, innovation, and inclusion are deeply valued and fabrications, alternative facts and fake news are widely challenged. Working together, teachers and teacher librarians have a responsibility to cultivate students' media literacy skills, develop inquiry-based models of learning, and foster practices that continuously build the information fluency of students.

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