WRITING A LITERATURE REVIEW
Guiding questions to support planning, revising, and refining of a *literature review* *

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1. **What is the focus and aim of your review? Who is your audience?**

   The aim of this literature review is the use of cybersecurity tools in controlling political disinformation on Facebook.

   The audience is intended as either academics in Cybersecurity/Social Science and/or policymakers.

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2. **Why is there a need for your review? Why is it significant?**

   Major shifts in modes of communication tend to disrupt previously reliable sources for information – the Gutenberg Press did this in the 16th century (Dittmar, 2011) and Social Media has done so in the 21st. The difference here is that, while the Gutenberg press plunged Europe into religious chaos for the next two centuries, social media use has disrupted almost every informatic medium regarding any topic (Bradshaw & Howard, 2019). Such has ushered in a new era in previously dictatorial, information-poor regions, such as North Korea and the Middle East, yet has also disrupted previously sound media such as newspapers and television news stationsscholar in democratic societies.

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3. **What is the context of the topic or issue? What perspective do you take? What framework do you use to synthesise the literature?**

   Context: Fake news is shared on Facebook frequently, with older, more conservative users being among the most prolific (Jennings & Stroud, 2023). Facebook has a responsibility, given its place is the news marketplace, to limit or erradicate the spread of 'fake news' on its feed. These can come as posts from users, advertisements, and hypertext news stories.

   Perspective: Machine learning is utilised by Facebook, but specific datasets and algorithms are not. This literature review aims to discuss popular ML algorithms and to compare the use of algorithms with different preprocessing and feature selection (Gupta & Kaur, 2022).

   Framework: My intentions with this paper mostly align with the aim"to highlight research possibilities that have either been explicitly identified by other authors or have possibly been overlooked in the past" (Dawson, 2015: 108)

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4. **How did you locate and select sources for inclusion in the review?**

   I used Google Scholar, and then made sure the journals were peer-reviewed, save for arXiv.

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5. **How is your review structured?**

   An overview of political misinformation in social media will first be introduced, tracing the history of the topic until now. Subtopics relevant to the overall theme of the review will then be discussed, including areas of weakness or oversight, and a final section to sum up findings and suggest future research.

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6. **What are the main findings in the literature on this topic?**

   Main findings: machine learning is a more reliable detector of fake news than manual detection, and it is less resource and time intensive (Gupta et al., 2022). That said, the algorithms are not adept at parsing nuance and sarcasm, and the variables chosen during preprocessing affect the results of the algorithm –

one study can find an algorithms success to be 90% while another can find it at 60%.

What are the main strengths and limitations of this literature?

7.
Strengths: use of statistical verification along with accuracy testing.
Limitations: studies do not often list the variables extracted during preprocessing, which impacts the algorithm

Are there any discrepancies in this literature?

8.
Yes, various studies have different results for the same algorithm – this is rarely addressed in the literature.

What conclusions do your draw from the review? What do you argue needs to be done as an outcome of the review?

9.
While machine learning is an asset in fake news detection, it's limitations should not be ignored for time and labour saving primacy. It may be best to implement different algorithms meant for specific types of news.

* As with other sets of guiding questions in this book, select those questions that are relevant to your context, add others as appropriate, and decide the order in which you will address them to communicate effectively with your audience.

Source: Healey, M., Matthews, K., & Cook-Sather, A. (2020) *Writing about learning and teaching in higher education: Creating and contributing to scholarly conversations across a range of genres*. Center for Engaged Learning Open-Access Books, Elon University. 142-152.

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References

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