USD6 (M4) Find, evaluate, synthesise and use information from a variety of sources (Background Research)

Links to assessment criteria for the cohort of learners
Author1
(no date)

ILOs

- Analyse an exemplar and a key text from your research project to reverse engineer your own reading and writing process.
- Reflect on how to demonstrate criticality in your background research section through synthesising ideas and sources.

Key text could be a source text or their own production
Author1
(no date)

We added reflect on as the context does not always allow for the students to produce in the session but the task sequence should end with a reflective 'take away' element
Author1
(no date)

Task 1

Activity 1

Highlight the key words in the learning outcomes.

What do they mean and why are they important for your research project?

Activity 2

We will read paragraph 7 of the introduction to examine the paper's contribution to the existing research and how the paper/ writer(s) has built on existing research through critically analysing this existing research.

1. Read paragraph 7 and identify the purpose of the paragraph through underlining language which indicates this purpose.

2. Read the paragraph again and identify the claims the paragraph is making. Identify the strengths of the claims too, are some claims expressed more certainly than others? Why has the writer done this?

3. How does the evidence in the previous paragraphs lead to these claims? Can you see a link with the evidence and the certainty expressed within the claim?

Edit post meeting: Can you locate the evidence which lead to these claims in the previous 6 paragraphs of the introduction?
Author1
(no date)

This paper **aims to** bring together advances in both wake steering and multirotor research to introduce a new degree of freedom to wind farm control.
less strong than 'e.g. brings together' – reflects boldness of ambition?
Paragraphs 2 and 3 deal with wake steering. Paras 4,5,6 deal with multirotor turbines.
It is proposed that wake steering is applied to individual rotors of a multirotor turbine such that the wake can be expanded, channelled or redirected to reduce

downstream losses.
central claim of the paper- not yet tested but assertive/optimistic
Not supported by previously discussed evidence, this claim is yet to be proven.
In regards to wake modulation, a yawed multirotor turbine **can be** compared with rotor coning, in which single-rotor turbine blades are angled in the streamwise direction, as illustrated in Figure 1. Whilst coning is primarily a load alignment strategy in which cantilever blade loads are converted to tensile ones,49 **it can be seen** in Figure 1 that this method also allows some control of wake expansion.
relatively strong claims to make the comparison with an existing technology
Supported by the diagram, rather than previous discussion
However, since this design is still very much at a conceptual stage, **there exist several practical issues surrounding its implementation**.
This claim looks forward rather than backwards.
Details of rotor mounting **may be** challenging, and the extent to which benefits of a fully redesigned turbine outweigh its cost **has been questioned**.50
modal verb 'may' to indicate **possibility** of implementational challenges, and doubts around cost-effectiveness attributed to others.
This claim casts some doubt on evidence presented in p3 & p4, presumably in order to put forward a more critical argument which takes account of challenges.

By comparison, rotor yaw is already a mature technology, currently utilised in adjusting single-rotor turbines to the incoming wind.
strong, factual claim
backed up by the evidence presented previously, (routine use of yaw control in single-rotor turbines discussed in para 2)

Therefore, rotor coning is not examined in this paper; however, what is proposed is that multirotor turbines **may be able to deliver a similar type of wake control**.
modal verb 'may' to indicate area of doubt which the paper seeks to address

Overall, claims are less strong where they relate to the central claim of the paper. At this 'introduction' stage, there is more room for doubt/speculation-which the subsequent sections will try to address.
More established technologies (rotor coning) are referred to with more certainty and the novel proposal dealt with in this paper is introduced with more caution.

I think when we discussed the role of this paragraph, we thought it might be to summarise what is known so far in this area. Whilst the first sentence does refer explicitly to the two areas explored (wake steering in paras 2&3 and multirotor research in paras 4-6) the claims in the rest of the paragraph are largely related to the proposal which will be tested in the paper, and accordingly they are quite tentative in nature.