**Brainstorming notes for each column (“criteria and their respective marking schemes”) for JB Poline assignment**

**March 21st 2024**

**1:30 pm - 2:30 pm**

**Attendees:**

Lydia,

Alina,

Matthew,

Ioan

Monica

Fritz

Ryan

Notes:

**Lydia:**

- Instead of “total” column of previous criteria columns, reproducibility column: “could someone in this field successfully re-do this study”. Opinion piece. In markdown, in the report could be on discussion in terms of reproducing (yes or not enough information so no).

- Gives more to discuss

- Are there vast differences between reproducibility between fields?

**Final column:**

**Can those trained in the field can reproduce the study given the appropriate resources?**

**Very likely**

**Likely**

**Possibly**

**Not likely**

**Very unlikey**

**And then see degree of correlation with the other 4 columns (criteria).**

**Column 1: Data availability and accessibility**

*Numerical score out of 3:*

**3/3 - Unfettered Access**

Immediate access, no perceived barriers

*e.g. link provided to online cache of study data, free databases used, supplemental data provided, etc.*

**2/3 - Access with Barriers\***

Access but uncertain timeline

*e.g. confidentiality, approving agency or subscription delays*

**1/3 - Unsatisfactory Access**

Uncertain access and uncertain timeline

*e.g. must contact authors or journal*

**0/3 - No Access**

Cannot get access (realistically)

*e.g. no contact information provided, broken data links*

***\*Not necessarily a bad thing!***

**Column 2: Quality of experimental design**

*Categorical score using yes/no check points:*

Is the objective of the study clearly defined?

Are the conclusion clearly supported by the collected evidence?

Are statistical results displayed and do the statistical results clearly support observations made from the collected evidence?

*3/3 checks = Excellent*

*2/3 checks = Satisfactory with room for improvement (describe in body of article)*

*1/3 checks = Poor*

*0/3 checks = Unsatisfactory*

**Column 3: Description of study protocol**

*Categorical score using yes/no check points:*

3a) Methods write up

There is a portion of the Methods Section to describe the analysis or experiment that provides evidence to support the conclusion.

*e.g.*

~~The portion of the Methods Section describing each analysis is approximately proportional to the weight of the analysis contribution to the study.~~

The method protocol is detailed and clearly written.

*e.g. order of steps taken, concise,*

3b) Population or data under study/collected

The data or sample population under study are clearly defined for each analysis.

*e.g. Sample size, metadata*

The source of the data/population is clearly defined.

*e.g. from database collection, approving agency, collected from previous experiment (or from the same study), which cell line, cite other study that you got data, etc.*

Data pre-processing or processing is clearly defined.

*e.g. missing data, outliers, data removed, sub-populations, data sets narrowed down based on different targets, biological and/or technical replicates, blinding, randomization, etc.*

3c) Tools and resources

The tools that directly contribute to the collected evidence are identified.

*Note: literally just the name of the tool like “scanning electron microscope” or “R”.*

The tools are also clearly defined in detail.

*e.g. make/model of equipment, supplier/developer, supplier/developer location, software name, version numbers, etc.*

The parameters are defined for each tool that directly contribute to the collected evidence.

*e.g. settings, limitations, modifications, software changes, updates, adaptations, extensions, bugs/debugging, packages, etc.*

*3/3 checks = Excellent, 2/3 checks = Satisfactory with room for improvement (describe in body of article), 1/3 checks = Poor, 0/3 checks = Unsatisfactory*

**Column 4: Tool availability and accessibility**

*Numerical score out of 3:*

**3/3 - Unfettered Access**

Immediate access, no perceived barriers

*e.g. no license needed, free online software, code/program available online (i.e. github, other repo).*

**2/3 - Access with Barriers**

Access but uncertain timeline

*e.g. confidentiality barriers, approving agency or subscription delays.*

**1/3 - Unsatisfactory Access**

Uncertain access and uncertain timeline

*e.g. must contact authors or journal, internally developed software or equipment that is not freely accessible.*

**0/3 - No Access**

Cannot get access (realistically)

*e.g. no contact information provided, broken links.*