Reproducibility Survey 2.1

41 responses

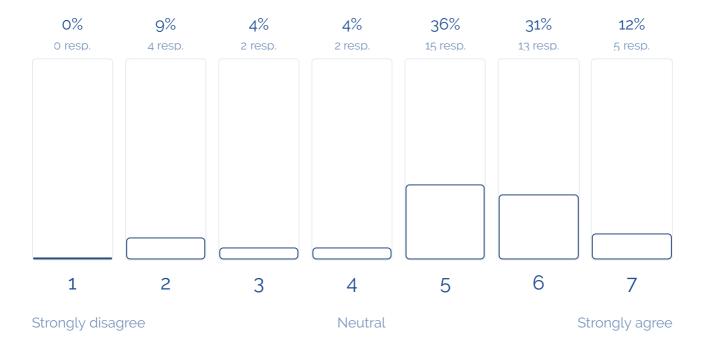
Could you let us know a bit more about your working environment? Please select all options that are relevant to your work:

41 out of 41 answered

Fundamental research	87%/ _{36 resp}
nvesting in new technologies	31%/ _{13 resp}
Lab management	31%/ _{13 resp}
Pharmaceutical development	12 %/ ₅ resp
Quality Assurance	12%/ 5 resp
Quality Control	12 %/ ₅ resp
Activity screening	9%/ _{4 resp}
Toxicity screening	9%/ ₄ resp
Allocating resources to research	7 %/ 3 resp
Solubility screening	2%/ _{1 resp}
Other	7% / Powere

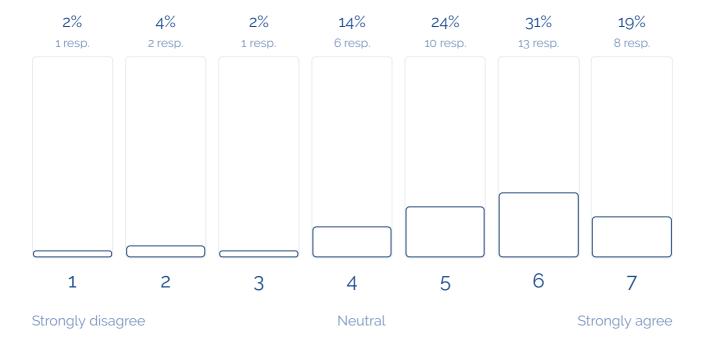
If research is irreproducible, that is often caused by **selective reporting** of the original research. 41 out of 41 answered

5.1 Average rating



If research is irreproducible, that is often caused by **pressure to publish** of the original research. 41 out of 41 answered

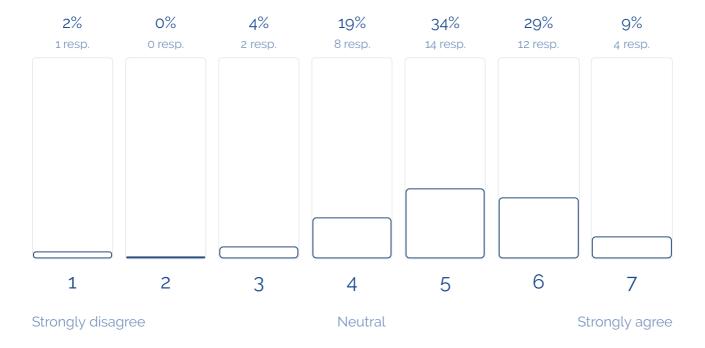
5.3 Average rating



If research is irreproducible, that is often caused by **low statistical power or poor analysis** of the original research.

41 out of 41 answered

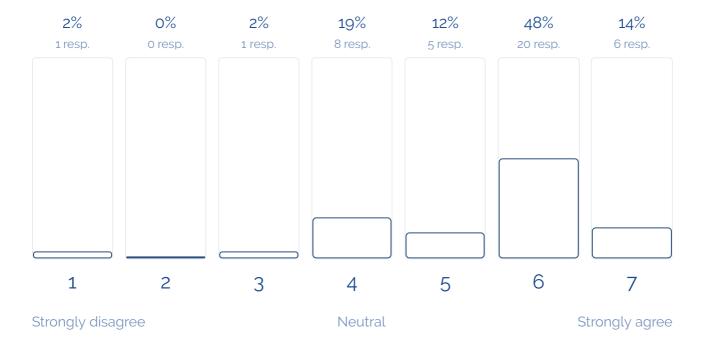
5.1 Average rating



If research is irreproducible, that is often caused by **lack of replication of the original research** in the original lab.

41 out of 41 answered

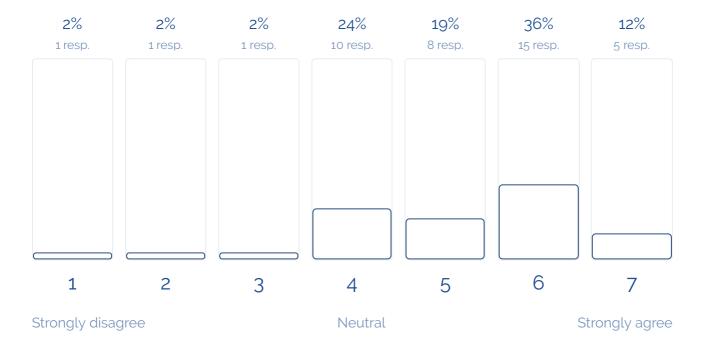
5.4 Average rating



If research is irreproducible, that is often caused by **insufficient monitoring or mentoring** of the original research.

41 out of 41 answered

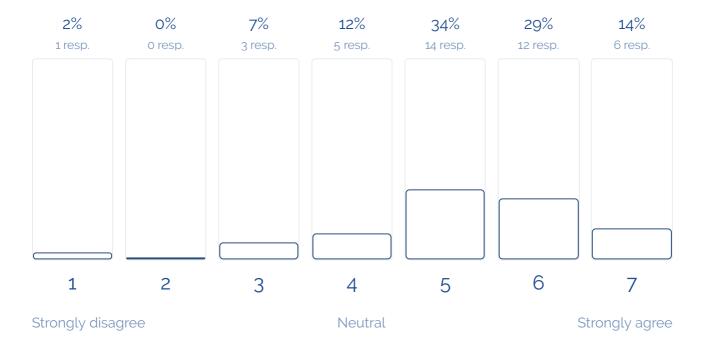
5.1 Average rating



If research is irreproducible, that is often caused by **unavailable documentation of methods** of the original research.

41 out of 41 answered

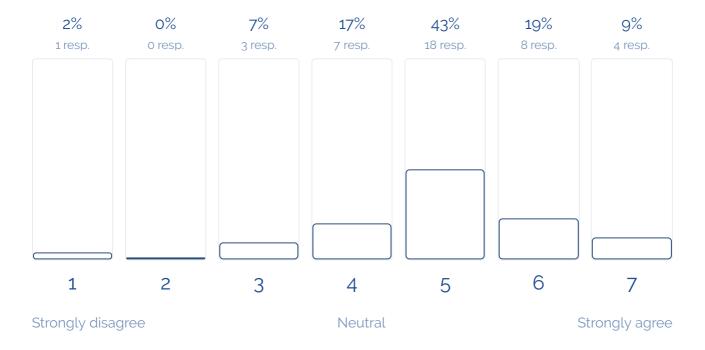
5.2 Average rating



If research is irreproducible, that is often caused by **poor experimental design** of the original research.

41 out of 41 answered

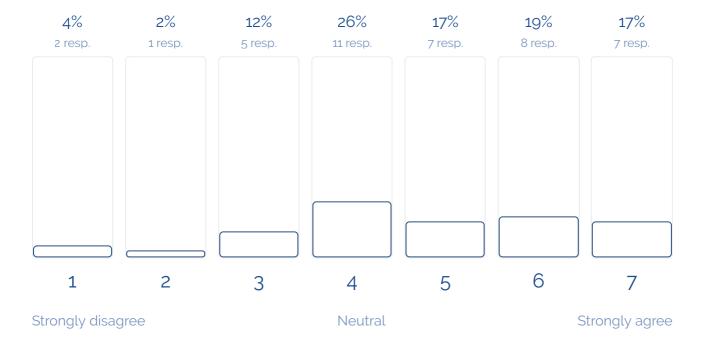
5.0 Average rating



If research is irreproducible, that is often caused by **lack of access to raw data** from original research.

41 out of 41 answered

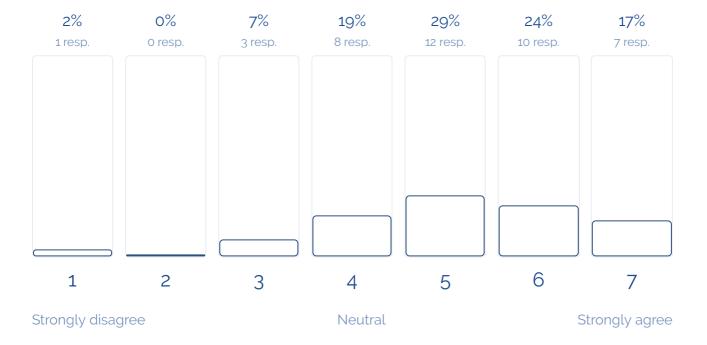
4.8 Average rating



If research is irreproducible, that is often caused by **low standards for documentation** of the original research.

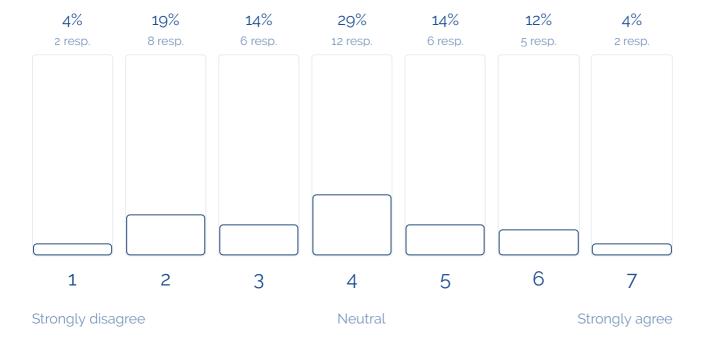
41 out of 41 answered

5.1 Average rating



If research is irreproducible, that is often caused by **fraudulent behavior** of the original scientists. 41 out of 41 answered

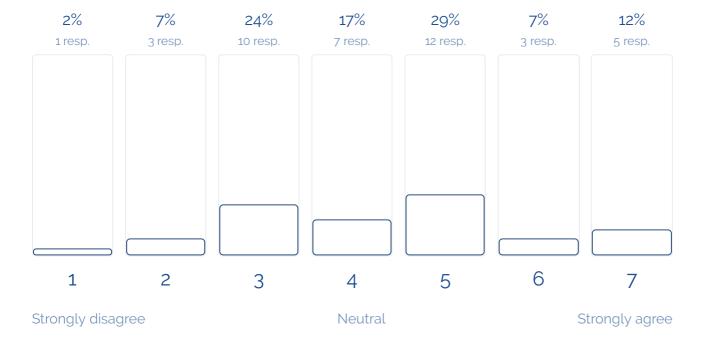
3.9 Average rating



If research is irreproducible, that is often caused by **insufficient peer review** of the original research.

41 out of 41 answered

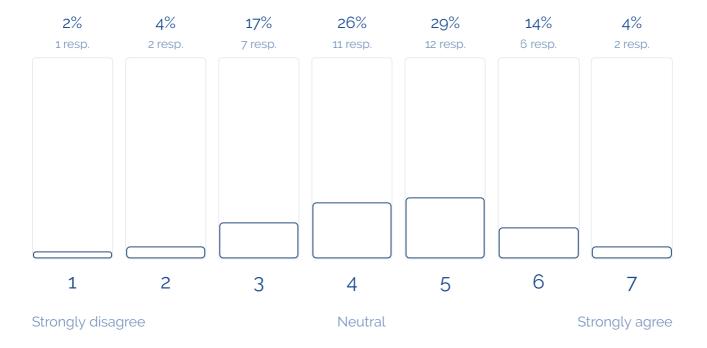
4.3 Average rating



If research is irreproducible, that is often caused by **variability of standard reagents** of the original research.

41 out of 41 answered

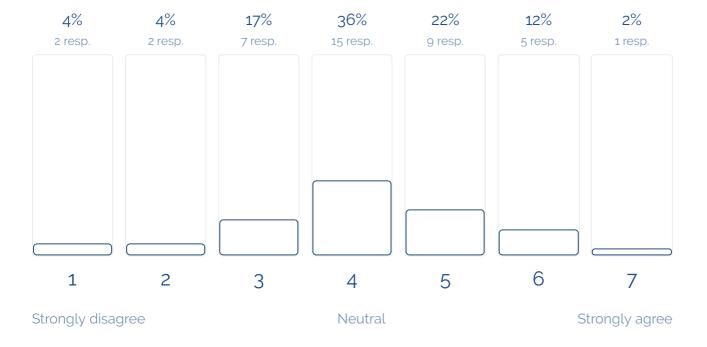
4.4 Average rating



If research is irreproducible, that is often caused by **lack of knowledge and skills** of the original researchers.

41 out of 41 answered

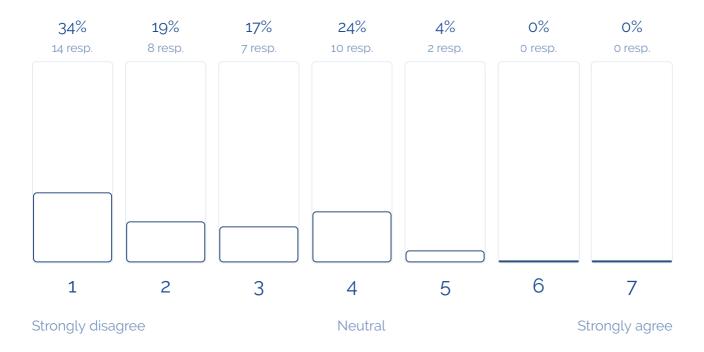
4.1 Average rating



If research is irreproducible, that is often caused by **bad luck** of the original researchers.

41 out of 41 answered

2.5 Average rating



Do you spend more than 1 day a week working in the lab?

41 out of 41 answered

Yes	92 %/ _{38 resp.}
1	
No	7 %/ _{3 resp.}
2	

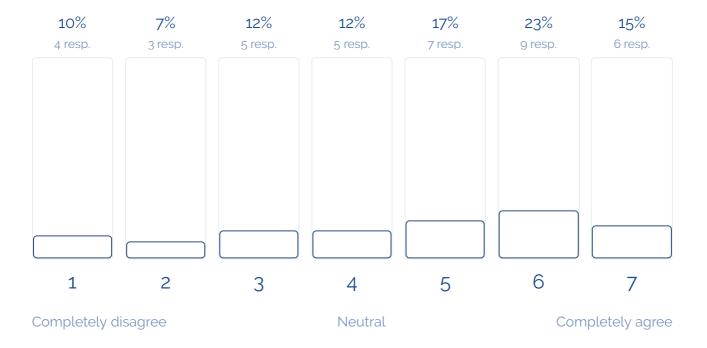
	ge part of your position to check whether research in the la r diligently?	b is conducted properly, safely
41 out (of 41 answered	
1	Yes	53 %/ 22 resp.
2	No	46%/ ₁₉ resp.
	nany years of lab involvement do you have including educa of 41 answered	tion?
1	more than 15 years	41 %/ ₁₆ resp
2	1-5 years	25%/ _{10 resp}
3	6-10 years	23%/ g resp

4

The materials (consumables, containers, glassware, tubes) I work with have had no significant impact on the results I generated in the last 6 months.

39 out of 41 answered

4.5 Average rating



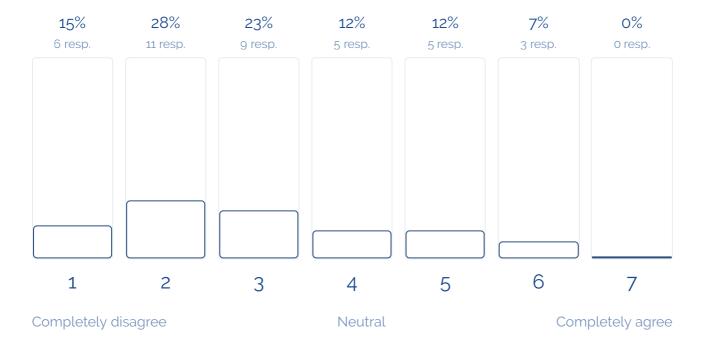
What problem(s) with materials do you think affect your results? 37 out of 41 answered

1	Low quality materials	62%/ _{23 resp.}
_		
2	Contamination of materials	56%/ _{21 resp.}
3	Bad logistical handling (transportation or storage) of materials	45%/ ₁₇ resp.
4	Outdated materials	37%/ 14 resp.

The samples (cells, DNA, RNA, Proteins etc. for measurement) I work with have had no significant impact on the results I generated in the last 6 months.

39 out of 41 answered

3.0 Average rating



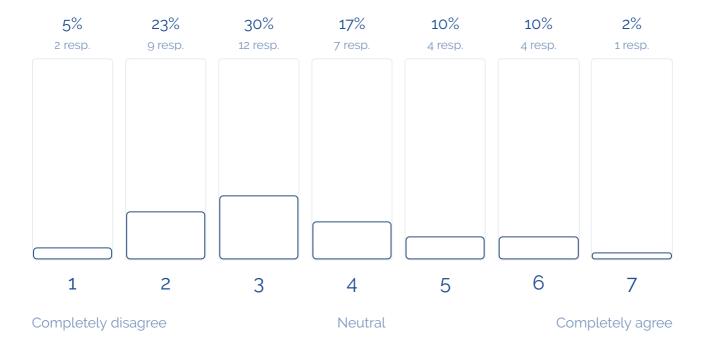
What problem(s) with materials do you think affected your results? 39 out of 41 answered

1	Bad logistical handling (transportation or storage) of materials.	48%/ _{19 resp.}
1		
2	Bad handling by other lab technicians.	41%/ ₁₆ resp.
3	Contamination of cell lines in the cell banks	33%/ ₁₃ resp.
4	Contamination of other samples	33%/ ₁₃ resp.

The reagents (buffers, solutions ect.) I work with have had no significant impact on the results I generated in the last 6 months.

39 out of 41 answered

3.5 Average rating



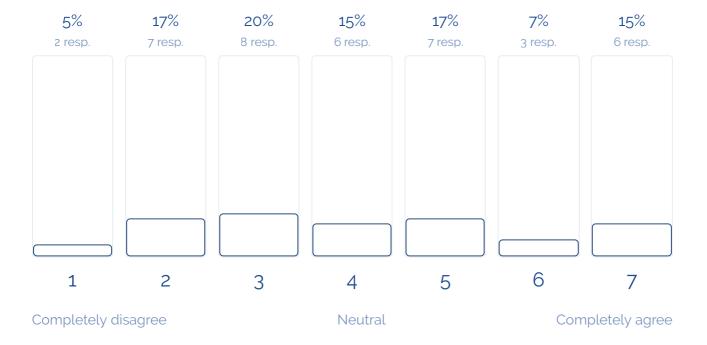
What problem(s) with materials do you think affected your results? 39 out of 41 answered

1	Low quality reagents	53%/ 21 resp
2	Bad logistical handling (transportation or storage) of reagents	48%/ ₁₉ resp
3	Outdated reagents	46%/ ₁₈ resp
4	Contamination of reagents	35%/ 14 resp

The equipment (centrifuges, PCR machines, electrophoresis systems, sequencers etc.) I work with have had no significant impact on the results I generated in the last 6 months.

39 out of 41 answered

4.1 Average rating



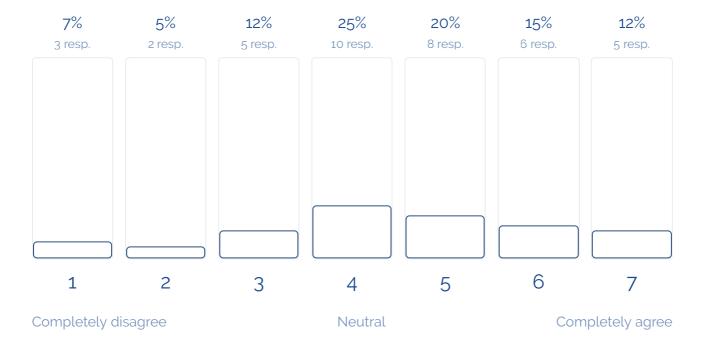
What problem(s) with equipment do you think affected your results? 38 out of 41 answered

1	lab	57%/ 22 resp
2	Not calibrated often enough	57 %/ 22 resp
3	Equipment was used/set wrong by others in the lab	50%/ ₁₉ resp
4	Low quality equipment	23%/ g resp
5	Equipment comes from a brand that isn't trusted	5%/ 2 resp

The documentation methods used in my lab have not significantly impacted the reproducibility of my results in the last 6 months.

39 out of 41 answered

4.4 Average rating



What problem(s) regarding documentation do you think affected your results?

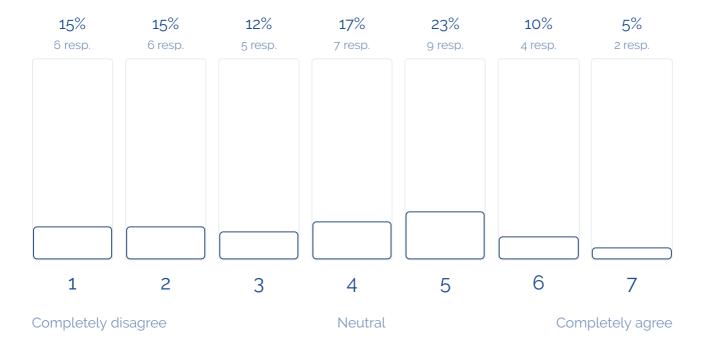
37 out of 41 answered

Documentation is often incomplete	86%/ _{32 resp}
Other people in the lab don't abide documentation rules	56%/ _{21 resp}
There is not enough review of documentation to guarante correctness	ee 51%/ _{19 resp}
It is very hard to access the right documentation of passe experiments	ed 48%/ _{18 resp}
Equipment was not cleaned properly by others working in lab	n the 32%/ _{12 resp}
Documentation is in paper format	29%/ _{11 resp}

Contamination caused by inadequate cleaning/servicing of tools and the work-space are the main source of errors in the life sciences.

39 out of 41 answered

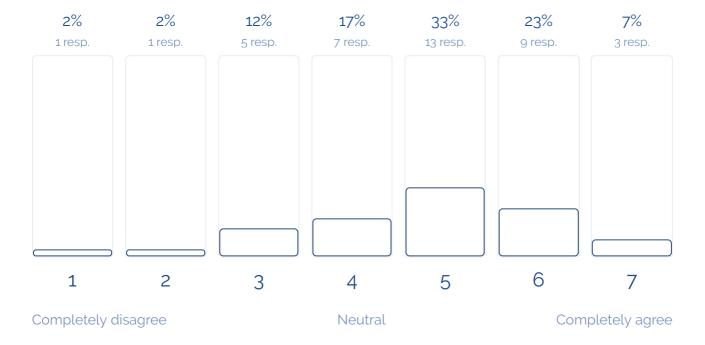
3.7 Average rating



Human errors in accurate protocol execution are the main source of errors in the lab where I work.

39 out of 41 answered

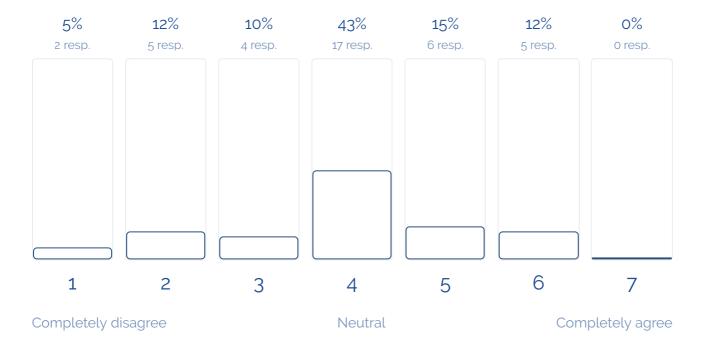
4.8 Average rating



Concentration errors caused by **inadequate liquid handling** is the main source of errors in the lab where I work.

39 out of 41 answered

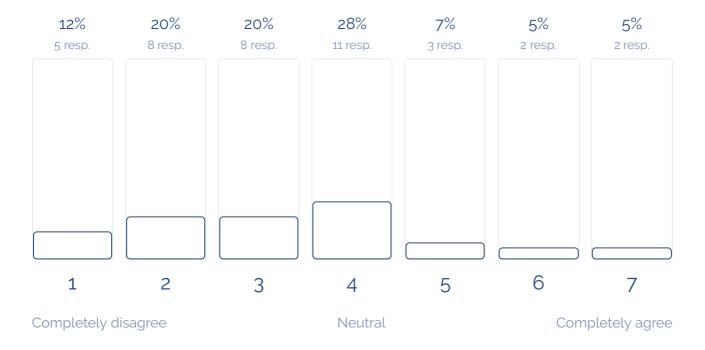
3.9 Average rating



Stability issues caused by **inadequate storage facilities** are the main source of errors in the lab where I work.

39 out of 41 answered

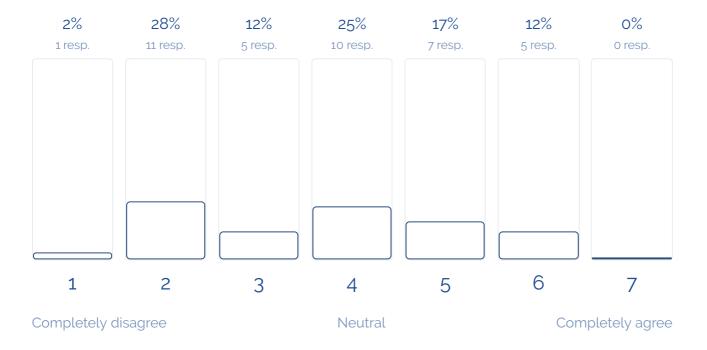
3.3 Average rating



Stability issues caused by **inadequate handling of samples and reagents** are the main source of errors in the lab where I work.

39 out of 41 answered

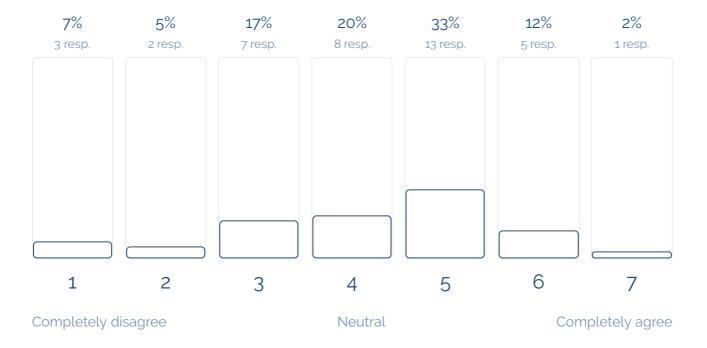
3.7 Average rating



Documentation errors caused by **human input errors in the documentation system** are the main source of errors in the lab where I work.

39 out of 41 answered

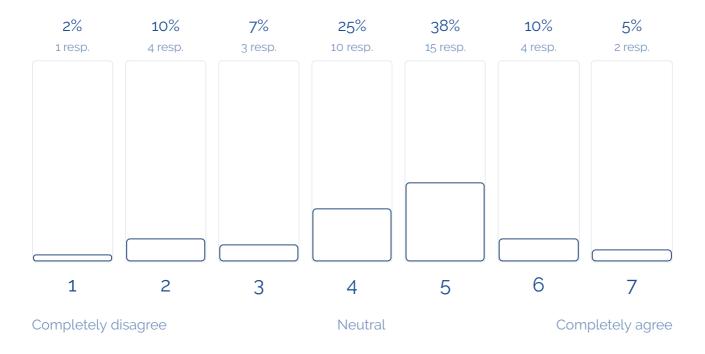
4.2 Average rating



Documentation errors caused by an **inadequate documentation system** are the main source of errors in the lab where I work.

39 out of 41 answered

4.4 Average rating



Does your position require you to estimate the value of scientific discovery and inventions? (i.e. Are you an investor, adviser, head scientist, CEO/CSO, etc.?)

41 out of 41 answered

1	Yes	9%/4 resp.
2	No	90% / _{37 resp.}
2		

Could you describe more about what activities you engage in within your working environment? Please select all relevant statements:

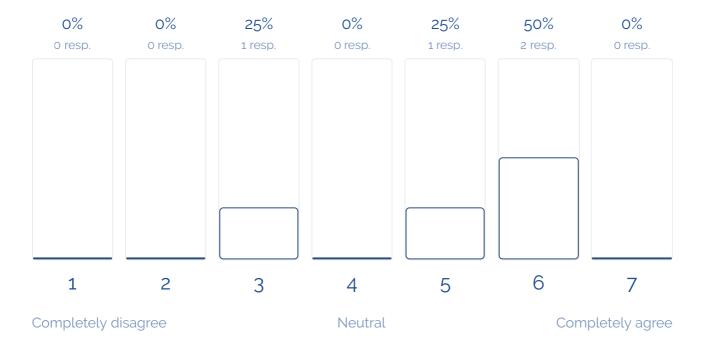
4 out of 41 answered

	Advising others about which technological advancements to pursue	50%/ _{2 resp.}
2	Choosing which technological projects to engage in or not	50%/ 2 resp.
3	Investing my own money in new technologies	50%/ 2 resp.
ļ	Assessing the risk whether a new technology will make it to market or not	0%/ o resp.
	Patenting technologies from private research	0%/ o resp.
	Patenting technologies from public research	0%/ _{0 resp.}

The documentation of prior research as been thoroughly checked by myself or and people I trust when I evaluate a project's chance of success.

4 out of 41 answered

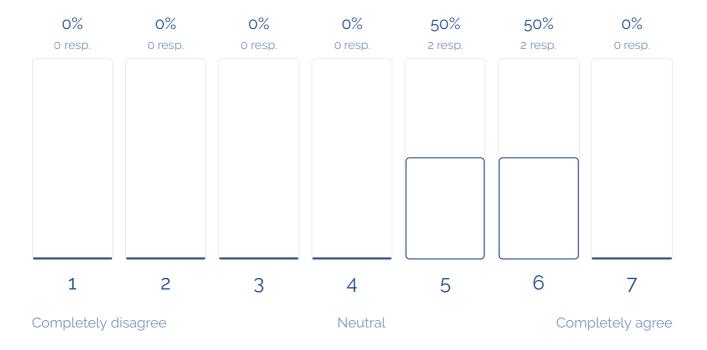
5.0 Average rating



The trustworthiness of the researchers involved in prior research has been confirmed when I evaluate a project's chance of success.

4 out of 41 answered

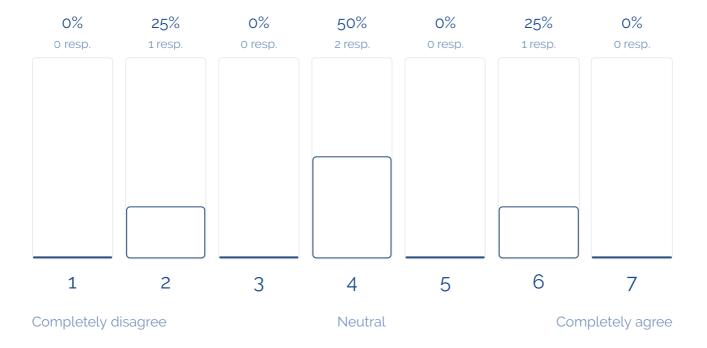
5.5 Average rating



The used methods of prior research are confirmed to be standardized in the industry when I evaluate a project's chance of success.

4 out of 41 answered

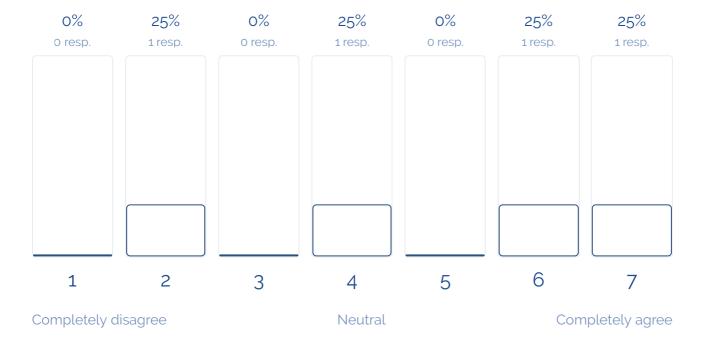
4.0 Average rating



The laboratory environment that prior research has been conducted in has been checked for reproducibility issues when I evaluate a project's chance of success.

4 out of 41 answered

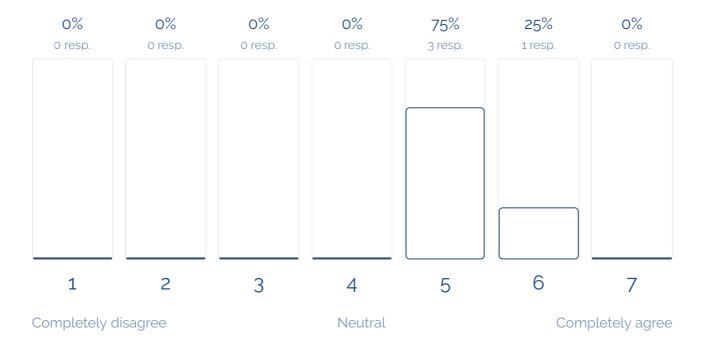
4.8 Average rating



I ask scientists in the relevant field to help evaluate prior research when I evaluate a project's chance of success.

4 out of 41 answered

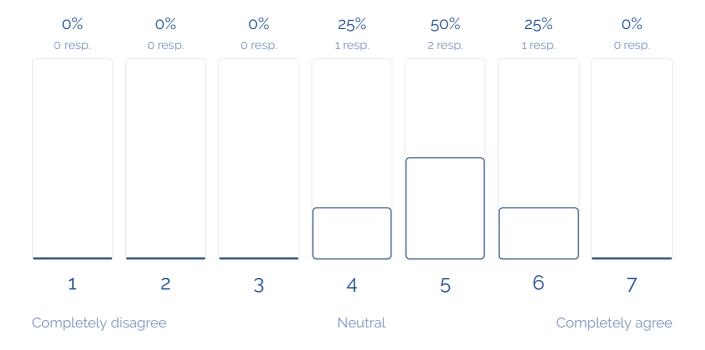
5.2 Average rating



It is confirmed that protocols used in prior research are relevant to further research when I evaluate a project's chance of success.

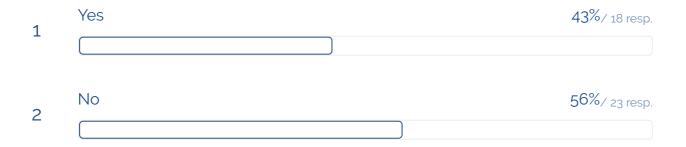
4 out of 41 answered

5.0 Average rating



Have you peer reviewed any articles/papers in the last 3 years?

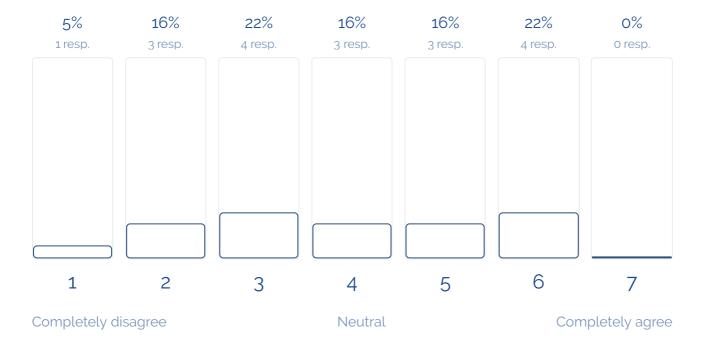
41 out of 41 answered



Papers I peer review generally **only reference other publications that are completely relevant to the research I am reviewing**.

18 out of 41 answered

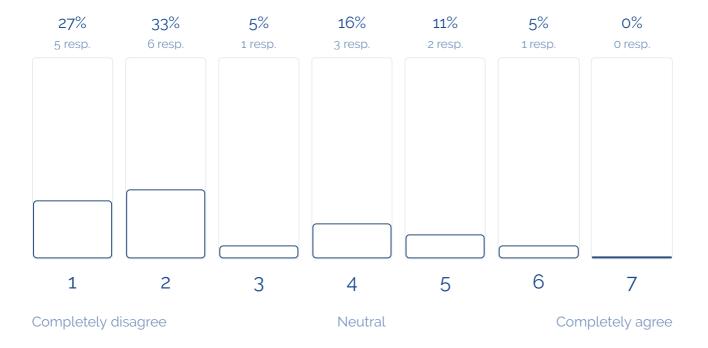
3.9 Average rating



Papers I peer review are generally accompanied by a copy of the raw data in a generally accepted format.

18 out of 41 answered

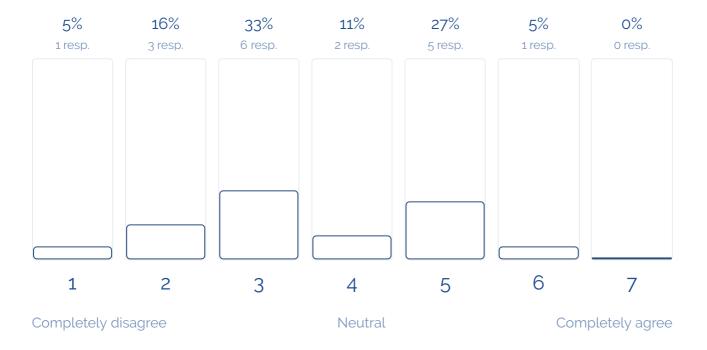
2.7 Average rating



Papers I peer review are generally accompanied by a good explanation for why the used methods were used for this research.

18 out of 41 answered

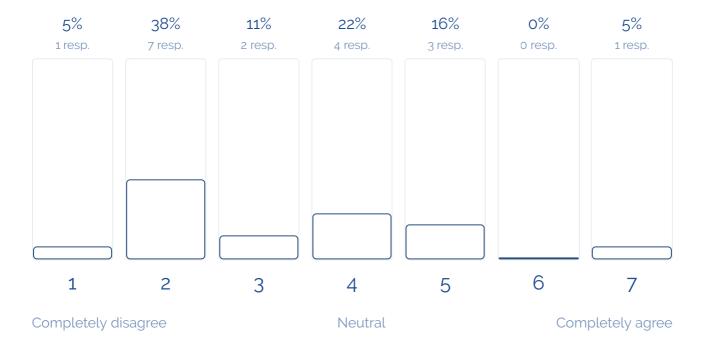
3.6 Average rating



Papers I peer review is generally accompanied by a good explanation for why specific data points were excluded from the raw data.

18 out of 41 answered

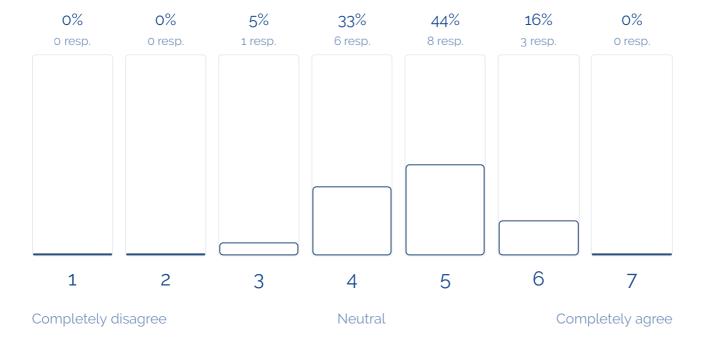
3.3 Average rating



Papers I peer review is generally **draw logical conclusions from the available data**.

18 out of 41 answered

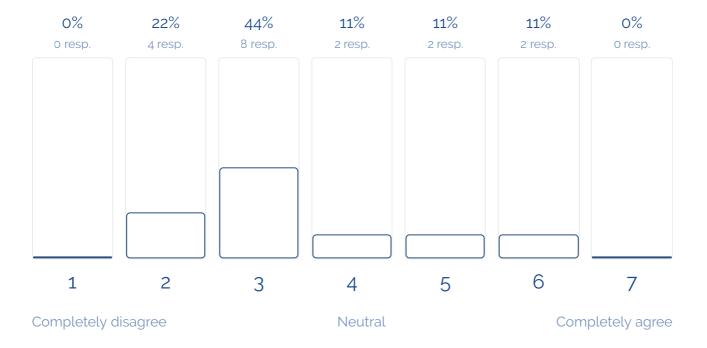
4.7 Average rating



Papers I peer review are generally realistic about the potential applications and limitations of a discovery when discussing them.

18 out of 41 answered

3.4 Average rating



Papers I peer review generally make any code that is used for extrapolating data or generating results publicly available.

18 out of 41 answered

3.5 Average rating

